Customer Documentation and Training Home

Customer Documentation and Training

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1 Department Mission and Objectives

Mission: Provide NetCracker documentation delivery and client training delivery services.

1.1 Objectives

- Maintain NetCracker products guides
- Support design documentation authors with stylic guidance
- Maintain library of standard training courses
- Deliver client training, both standard and buisiness specific
- Deliver built-to-solution user instructions and job aides
- Support pre-sales phase regarding trainings and documentation questions

2 Department Deliverables

- NetCracker TOMS, RBM, ICOMS documentation releases, both standard and business specific: Guides, Concepts, What's New (Release Notes)
- NetCracker TOMS, RBM, CM, AM, DDS, ICOMS training documentation and delivery, both standard and business specific
- NetCracker HTML online help
- Documentation and training delivery efforts and cost estimates

3 Suggestions and Improvements

Course name: Description: Suggest New Course
Course name: Problem description: Part: Exercise: Report Course Issue
Course name: Improvement description: Suggest Course Improvement

4 Department Goals 2015

4.1 Documentation

- TOMS Concepts and TOMS API documentation projects are completed
- Moving to NetCracker BASS wiki for procedural support is completed
- Move RBM documentation release planning and task progress tracking to Jira, TMS and SMS
- TOMS documentation componentization project is complete

4.2 Training

- Introduce TMForum Business Process Framework in at least 50% of the training courses

5 Department Goals 2014

5.1 Documentation

- Fill gaps in TOMS API, integration, concepts documentation
- Establish a permanent link between Technical Writers and TOMS design specifications (FDS, DMS, UIS, REQs, IM) authors
- Complete movement to NetCracker JIRA tools for documentation tracking and NetCracker BASS wiki for procedural support
- Reconcile styles of TOMS, RBM, ICOMS, NetProvision documentation
- Reconcile differences of scenarios in TOMS user documentation and training documentation
- Complete Confluence for Documentation Feasibility Pilot and migration to wiki

5.2 Training

- Increase the number of End User and/or Advanced User(Administrator) new user feature trainings on existing accounts to at least 6
- Increase the number of RBM trainings delivered by TOMS trainer, TOMS by ICOMS trainer, RBM by ICOMS trainer, TOMS by RBM trainer to one or two each
- Increase percentage of TOMS user guides reused as training handouts to 20% for both standard and business specific documentation
- Decrease volume of non-reusable business specific training content to 10%
- Launch NetCracker Certification Portal

6 Roles and Responsibilities

6.1 CDT Tasks for Assessments (en)

- TOMS user manuals development as part of TOMS product projects
- Developer manuals development: API Integrating Guide, Developer Guide
- Writing TOMS product CRs
- Authoring TOMS training courses
- Authoring RBM training courses
- Authoring ICOMS training courses
- Delivery of trainings (TOMS, ICOMS, RBM) and building expertise in accompanying telecom business processes and telecom business in general
- Delivery internal employee training
- Training delivery management
- RBM user manuals development as part of TOMS product projects
- ICOMS user manuals development as part of TOMS product projects
- CDT internal operations:
    - Style Guide
    - BASS articles
    - Assembly апв publishing
    - Training servers maintenance
- Internal CDT projects: TOMS TW componentization
- Working on TOMS GA releases
- Training RFP responses
- TW assessment of product projects
- Assessments of product CRs
- Pre-sales work, writing proposals
- Coaching:
    - Peer coaching
    - Newcomer support
- Corporate Social Responsibilities

6.2 CDT Tasks для Assessment (ru)

- Разработка пользовательской документации TOMS, продуктовые проекты
- Разработка документация девелоперского уровня: API Integrating Guide, Developer Guide
- Реализация продуктовых CRs
- Авторство курсов TOMS
- Авторство курсов RBM

- Авторство курсов ICOMS
- Проведение тренингов (TOMS, ICOMS, RBM)/наработка экспертизы в соответствующих областях продукта и телеком-бизнеса
- Проведение внутренних тренингов
- Тренинг деливери менеджмент
- Разработка пользовательской документации RBM, продуктовые проекты
- Разработка пользовательской документации ICOMS, продуктовые проекты
- Внутренние операции CDT:
    - Style Guide
    - Статьи на BASS
    - PDGS
    - Эталонные учебные сервера
- Внутренние проекты: TW-компонентизация
- Работа на платформенных релизах TOMS
- Ответы на RFP по тренингам
- Оценки продуктовых проектов
- Оценки продуктовых CRs
- Pre-sales работа, подготовка пропозалов
- Коучинг:
    - Peer coaching
    - Поддержка ньюкамеров
- Корпоративная общественная работа

6.3 Training Delivery Manager

EN

Sign-In Sheets

It is the responsibility of the Training Delivery Manager to ensure that the trainer or invited instructor brings back the sign-in sheets for each day of a delivered training, including 4-hour training days.

Failure to provide sign-in sheets causes an issue, as Finance may not invoice and recognize revenue without a proof of delivery. Sign-in sheets must be collected from Trainer and uploaded to the training folder on FTP. Original copies must be kept in the Training Department's archive.

In the class, sign-in sheets are collected by:

- CDT Trainer
- Invited Trainer, in case the training is delivered by an employee from outside CDT

For Webex-based trainings, the trainer must use a Webex menu command to download the list of participants who attended the teleconference bridge. Sign-in sheet **template** can be downloaded from this page Training Delivery Forms.

6.3.1 Position Requirements & Responsibilities

6.3.1.1 Requirements

- Customer facing experience
- Flexibility and adaptability in work
- Ability to manage multiple training and documentation development or delivery projects

6.3.1.2 Responsibilities

- Performing training efforts estimations
- Receiving training requests, keeping training requests alive
- Communicating with the delivery (project) team and the customer for scoping and planning
- Communicating with the customer to discover and set expectations
- Staffing training delivery projects
- Managing training and documentation development or delivery projects
- Collecting, processing, analyzing and reporting client feedback
- Getting list of training participants before the training
- Issuing training certificates

6.3.2 Position Guidelines

Guideline 1

Training Delivery Manager is responsible for preparation of the following documents:

- Training SOW (unless the delivery team prefers to write the SOW using established forms or templates). Format – DOC.
- Resource plan. Format – XLS.
- SOW Approval Checklist. Format – XLS.

The documents above should be prepared in a timely manner and without delays that may jeopardize client communications.

Guideline 2

Training Delivery Manager is responsible for the clarification of the training expectations with the client and understanding the goals of the training.

Training program should fit the goal of the training.

Guideline 3

If an invited trainer, that is employee from another department (for example, IT Deployment for a System Administrator training), is to deliver the training, it is Training Delivery Manager's responsibility to properly brief the trainer on:

- the agenda
- the scope of training to be delivered
- the attendees
- etc.

In addition, it is the responsibility of the Training Delivery Manager to check and verify that the trainer:

- Has good communication (and technical!) skills by the trainer (what the client can expect for their money)

Guideline 4

It is the responsibility of the Training Delivery Manager to ensure all environment and access pre-requisites are checked and verification is successfully completed *before* the trainer goes onsite.

Guideline 5

If a Training Delivery Manager (TDM) is to be out of the office, it is the TDM's responsibility to hand over managed training events to another TDM. TDM has to make sure the backup TDM is not off for vacation for he entire duration of the replacement period.

6.4 Position Requirements & Responsibilities

6.4.1 Requirements

- Platform experience in teaching
- Worked with technical and business audiences

- Able to engage the audience
- Able to handle mixed skill-level audience (slow and advanced users)
- Knowledge of student progress assessing techniques
- Capable of asking questions, review questions/tests, organizing games, reading faces
- Capable of working with each individual in the class
- Able to analyze client's business and map skills taught back to students' world
- Able to handle short, week-long, or extended trips
- Self-directed/motivated in keeping current with new technology
- Outstanding spoken English skills
- Ability to travel for up to 50% of time

6.4.2 Responsibilities

- Client training delivery at client or Netcracker training facility
- Knowledge of the product and the accompanying business areas to a level providing user acceptance of the product
- Writing training courses, preparing and testing training labs, practical assignments
- Keeping current with new Netcracker products and technology
- Awarding certificates to training participants
- Collecting Sign-In sheets
- Collecting Evaluation Forms and improving training effectiveness
- Creating Training Report (administrative assistance may be provided by Liudmila Lanovaia)
- Ready to travel up to 50% of time

6.5 Position Requirements & Responsibilities

6.5.1 Requirements

- Understanding Instructional Design process (ADDIE or similar model)
- Knowledge of sound design practices (user-centric, task/knowledge breakdown, adult learner principles, practical/results focused)
- Knowledge of most telecom business areas or ability to search, find and apply information
- Understanding of typical user's business tasks as applied to a course or ability to quickly learn and understand them
- Ability to analyze information and outline course structure
- Ability to identify key points and highlight objectives of a course
- Understanding quiz writing techniques
- Excellent written English language skills

6.5.2 Responsibilities

- Develop product training courses
- Approve training documentation

- Maintenance of training lab server supporting practical training courses
- Build communication network, identify necessary staff
- Establish communication with NetCracker Product Management and Sales team

6.6 STW (Lead TW)

STW is a project role.

6.6.1 Technical Writer Assignment Policy

Guideline 1

At least 2 (two) writers must be assigned to a documentation project. If 1 FTE (1 full time writer) only is required for a project, then still two writers are assigned, each 50%. The remaining 50% of the writers' time are occupied by other projects.

Reason: sharing work/expertise amongst writers and team.

6.6.2 Project STW Role Responsibilities

6.6.2.1 Project Assesment

- Estimate the work effort.

Guideline 2

If the TW LOE is not estimated at the project start and the STW is unable by some reason to perform TW LOE assessment immediately, the STW must assign a backup to perform project TW assessment instead of them.

Guideline 3

If the TW LOE is not estimated at the project start the STW should check the dates of project readiness for documentation development and assign technical writers for 15 m/d beginning from the the proper date.

6.6.2.2 Project Start

- Assign Technical Writer project tasks and set due dates.
- Set up a project kick-off meeting.
- Notify all design documentation authors about Design Documentation - Product/Solution writing guidelines.

- Notify all design documentation authors about NetCracker **UI** Style Guide requirements, see Netcracker UI Elements.

6.6.2.3 On-going

- Conduct regular sync-up meetings. Can be as often as needed, fo example every 1, 2, 3, 5 days.
- Track % progress reported by TWs.
- Track LOE submitted by TWs.
- Provide coaching and personal mentoring.
- Contribute to project as Technical Writer.
- Analyze % Complete/LOE Estimated/Due Date ratio, overall and by task.
- Identify risk of exceeding estimated LOE, set up meeting/s with TW to analyze what causes the risk.
- Identify risk of not meeting the due date, set up meeting/s with TW to analyze what causes the risk.
- Escalate risks when necessary.
- Attend Release management stakeholder meetings.
- Monitor TW Feedback Process.
- Check existence and organize validation and integration of What's New information on product projects and product change requests.

6.6.2.4 Project End

- Create and fill out the project checklist in Product Project Checklists.
- Provide project TW team performance feedback. Perfromance feedbacks may be used during annual appriasal process.
- Report lessons learned and suggest process improvements.

6.7 Technical Writer

6.7.1

https://bass.netcracker.com/pages/viewpage.action?pageId=246383212

6.7.2 Project TW Role Responsibilities

6.7.2.1 On-going

- Attend all meetings set up by TW Lead.
- Report % progress to TW Lead on project tasks assigned by Documentation Lead. Reporting can be done on a daily basis if not otherwise indicated by TW Lead.
- Analyze task % complete/LOE estimated/due date ratio.
- Report any blocking issues to TW Lead.
- Prioritize work as directed by TW Lead.
- Follow all Style Guide requirements.
- Complete Writer Checklist for the written content and then provide it to Editor for editing. Incorporate all received editorial comments back into content.

- Focus on personal growth, pay attention to self-development and education.
- Provide TW Feedback.
- Peer review of documents created by other TWs.

6.7.3 Position Requirements & Responsibilities

6.7.3.1 Requirements

- 2+ years of experience in similar role
- Excellent written English skills
- Technical background
- Ability to write highly readable technical text in English
- Ability to analyze information and structure a document
- Knowledge of typical composition of a technical guide book
- Ability to quickly acquire missing knowledge of subject area

6.7.3.2 Responsibilities

- Write technical user documentation
- Report design documentation language and formatting issues to documents authors
- Approve technical documentation
- Perform documentation efforts estimates
- Build communication network, identify necessary staff
- Establish communication with NetCracker Product Management and Sales teams

6.8 Instructional Designer

Job responsibilities

- Work as a part of the Client training and documentation team working on client training courseware
- Creating new Out Of Box (OOB) Netcracker product training courseware including PPTs, Workbooks, Handouts
- Upgrade existing OOB training course materials as per the new Netcracker product releases
- Upgrade existing OOB training course materials as per the new NC corporate templates (PPTs and Workbooks)
- Interaction with Training Delivery Managers, Account SMEs and Trainers to understand the training scope and create training materials accordingly
- Design the training courseware including the flow and topics to be included.
- Participate in training material review with the account SMEs and other stakeholders
- Follow Instructional Designing best practices to create standard and good quality training materials
- Creating self-paced training content right from small modules to a full-fledged training course
- Work on multiple training projects, with the ability to switch between them as required

Job requirements

- 6-8 years of Instructional Designing experience
- Experience working on Telecom domain projects is a must!
- Experience writing content for BSS/OSS solutions
- Excellent Communication and Presentation skills
- Experience on e-learning methodologies and tools such as Captivate, Storyline
- Technical education background will be preferred
- Willing to travel abroad to customer sites as and when required
- Ability to work with multiple team both within and outside the training organization

7 Policies and Procedures

7.1 Sizing and Metrics

7.1.1 Writing Benchmarks

7.1.1.1 Writing Speed for Developing Technical Documentation

Netcracker benchmark, use this one for estimations: 1.6 hours to 2 hours per page.

Industry standard benchmark, just as an FYI, do not use for estimations: 1.25 hours to 1.5 hours per page.

7.1.1.2 Page Size

250-300 words per 1 page

7.1.2 TW Assessments

https://bass.netcracker.com/pages/viewpage.action?pageId=471699087

Direct link to the form of creating assessment ticket on PSUP

Guideline 1

When assessing TOMS TW work, a mandatory decomposition of scope* by product components and then by readership is made. Example:

1. *Product component: Residential Order Entry*
   Affected files: UG, API IG
   LOE: 15

2. *Product component: Product Offering Catalog*
   Affected files: UG
   LOE: 7

If Product component is currently absent in the list of product components on Project (it will be developed during the project), put the word **New!** next to its name. Do the same, if you create a new document type for an existing product component. Example:

1. *Product component: Trouble Ticket Management **(New!)***
   Affected files: UG, API IG
   LOE: 14

2. *Product component: Product Offering Catalog*
   *Affected files: UG, API IG **(New!)***
   LOE: 23

Guideline 2

LOE estimation should contain man-hours for proof reading and editing the documentation by a native English speaker (Netcracker employee). English editing should take 10% of the total documentation development time.

7.1.2.1 Editing

Guideline 3

- Add 10-15 % to the LOE estimations
- Include Adam Bramhall as TW in the project team and project plan
- Allow 5+ days for editing

If you are unsure of the length of time required for editing, please consult with Adam Bramhall, who can provide a high-level estimate on number of days for a particular document set.

* Analysis and decomposition of the scope for product components must be done using the so-called Configuration Management plan (the example below; can be expanded to full screen). It is created by R&D. If the CM Plan is not provided, it is necessary to ask product PM, who requested the assessment, to give the list of affected product components and their versions.

7.1.3 eLearning

Types of eLearning

eLearning is also known as Computer Based Training (CBT). E-Learning can be:

- Set of HTML files with embedded videos and presentation and visual aids
- Screen cast videos with narration
- Screen cast videos without narration

Development LOE

1 hour of CBT is 120 hours of work. It includes:

1. For each 5-10 minutes video, designing the scenario
2. Designing where to insert visual aids, such as zoom-in, zoom-out, ‘mouse clicks’, etc.
3. Setting up the data sample on the server for each scenario
4. Writing narration script
5. Recording
6. Editing the record
7. Adding visual aids

7.1.4 Translation

7.1.4.1 Translation

Guideline - Ownership of translation

For translations done by translation agencies, the onwer of the process is Project Management team.

For translations done by the KMR department, the owner of the process is the CDT department and specifically the Training Delivery Manager responsible for the solution (custom) user documentation deliverable.

7.1.4.2 Translation Agencies

Agency	From	To	Price per word	Quote
https://www.lexic.ca/	English	Canadian French	CAD 0.24-0.32	
http://www.textualis.com/fr/	English	Canadian French	CAD 0.24-0.26	
http://ctctraduction.ca/	English	Canadian French	?	
724traducciones@gmail.com	English	Spanish	USD 0.085	

7.1.4.2.1 Translation estimation: LOE or Budget?

There are two options:

- KMR (estimation in LOE)
- Translation agency (estimation in $ and LOE)

The table below represents a preferable choice in different cases:

KMR	**Translation Agency**
• OOB materials translation (as it can be used by many projects) • When we have to deliver OOB materials and customized materials after that (KMR uses automated translation, which allows to decrease LOE on 30%/ reuse OOB translation) • When we have enough time • It is easy for project to increase LOE instead of budget (PM can provide such information)	• Big volume of solution specific materials/ documentation and short time slot for translation • Uncommon language (like Italian, Portuguese, etc.) • It is easy for project to increase budget instead of LOE (PM can provide such information)

7.1.4.2.1.1 Additional rules:

- Don't use CIS translation agencies, as they translate our documentation from English to Russian, and only after that from Russian to required language.
- If you use translation agency service, don’t forget to include LOE for translation validation by KMR
- To choose a translation approach contact PM and discuss options. Perform all estimations by yourself at pre-sales stage. During the project, TDM can ask PM to solve all issues with translation agency, but don’t rely on PM blindly. Monitor situation and progress, double check results, dates, etc.
- Remember, that translation rates increase every year. That’s why there is no sense to put in estimation the lowest price. It will be higher to the date when the translation should be performed.

7.1.4.2.1.2 How to calculate LOE/ price:

####### 7.1.4.2.1.2.1 KMR. Pre-sales stage of a project

1. Estimate approximate volume of materials for translation in words (not pages)
    a. Assemble OOB materials for modules included in scope of the solution and calculate the word count:
        i. For OOB guides the actual word count can be estimated
        ii. For unwritten Solution-Specific materials OOB word count can be used to estimate approximate effort assuming that Solution-Specific materials will be of pretty much the same volume as OOB
        iii. If OOB and Solution Specific materials of the same modules are in scope of translation, take into account effort reducing 30% reuse from OOB (only in case of translation via KMR)
2. Apply translation speed metric: 1150 words = 1 m/d (average speed of translation from a foreign language to TW's native language)
3. Take into account possibility of reuse (30%)

4. Add 30-40% contingency to final LOE for materials update

After project Design phase and TW assessment, provide LocalizationGroup with updated information and receive updated LOE estimation as well as dates from them.

7.1.4.2.1.2.2 Agency. Pre-sales stage of a project

1. Find local agencies and send them a request to receive translation quote. Place you request in several agencies to find out necessary information sooner. Moreover, you will have some information to compare.
2. Be ready, that agency will ask you to send an example of a text to estimate efforts and make a quote. Prepare something in advance.
3. Add LOE for KMR tasks: up to 4m/d for composing Glossary and 1 m/d per course for validation

7.1.4.2.1.2.3 Examples:

Agency – TodayTranslations, UK.

www.todaytranslations.com

Translation of 240.000 words from English to Italian costs about £ 24.360 – £ 31.200 with VAT and takes 59 work days. The price depends on an option (translation without proofreading or Translation with proofreading.

Translation without proofreading: text will be translated and proofread by one qualified, native-tongue linguist. This is advised for files that are for internal purposes or where the client has capacity to review internally.

Translation with proofreading: following translation by a qualified linguist, the text will be reviewed and compared with the original source by a second, independent native-tongue linguist.

7.1.4.2.1.3 Spanish

Translation Agency Brochure

7.2 Links

	Server	Navigation
Library of standard Netcracker courses	sps3.netcracker.com	http://SPS3 > Corporate > NetCracker Product Release Trainings
Netcracker Training Catalog	bass.netcracker.com	http://bass/ > Documentation and Trainings > Netcracker Product Training Catalog
Training events tracking system	sms.netcracker.com	http://sms/ > Dashboards > Trainings by Manager http://sms/ > Dashboards > Customer Trainings
Policies and Procedures	bass.netcracker.com	http://bass/ > Solution Management Support > Customer Documentation and Training
Resource planning and tracking	sms.netcracker.com	http://sms/ > Tempo > Client Trainings

7.3 Content Development

7.3.1 User Documentation

7.3.1.1 Product Component Version Creation

Guideline 1

Avoid creating development branch versions. Instead, determine on the versions graph or from the developer the trunk version, in which the development branch was/will be merged.

Guideline 2

The goal is to maintain in doc.netcracker.com the key versions. There is no need, nor it is feasible to keep absolutely all versions in doc.

The key versions are:

- Merge points
- Versions included in the major Netcracker releases, such as Netcracker 10.5, 11, and so on

To create a new version of a product component in Confluence, send the following information to Andrei Denesh:

Source Version hyperlink	https://doc.netcracker.com/display/productlifecyclemanagement009005001021/PLM+Environments
Source Devline (full)	
Does the Source Version have unresolved inline comments? (yes/no)	NO
Is there a later Branch version in doc.netcracker.com after the Source version?	

Target Version	*9.5.1.25*
Target Devline (full)	
If Target Devline is NOT trunk, where will it be merged according to the developer or the product component's Responsible Person? *look up the name on project.netcracker.com	*NA*
Version tree link *use MS Internet Explorer	https://project.netcracker.com/solutions/npts/misc/version_graph.jsp?policy=9131301834113537522&objects=9140726671713572364

7.3.1.2 Поиск функциональной разницы между двумя любыми версиями продуктового компонента

Данный отчет https://project.netcracker.com/report/reports.jsp?report=9140840360413110180&parent=9140840360413110180&object=3061174500013916931 показывает дельту всех Issue.

Для технических писателей интересны issues, влияющие на пользователя, например изменение UI или поведения пользователя вследствие изменившегося поведения системы. Задача может возникнуть, например, для быстрого обновления документа до запрашиваемой версии.

Также этот инструмент активно используется в работе для GA-релизом, когда мы доводим все документы со состояния, зафиксированного в Feature Freeze эксельнике группы Release Management.

Местонахождение инструмента: **project.netcracker.com** > **Operations** > **Reports** > *TW Reports* > *Issues Between Two Versions of Product Component*

7.3.1.3 RBM Guide Owners

Guide	Owner	Secondary Owner	Generation	Contributors
RBM Release Notes				Several contribute
RBM Extension Release Notes	Carmeline Mario	Unknown User (wangw[left])		
Installation/Upgrade guides	Unknown User (kpai4020[left])			
Secutiry	Unknown User			

Guide	Owner	Secondary Owner	Generation	Contributors
	(kpai4020[left])			
Third-Party Tools		Unknown User (kpai4020[left]) (plus support)		
RBM System Parameters (scope includes head features and ACPDs and PRs)	Unknown User (devans7_dis[left])	Unknown User (ggup7372[left])	Unknown User (wangw[left])	
VI and TAP3 System Parameters	Unknown User (ggup7372[left])			
Online Helps (RBM and TAP3)	Carmeline Mario	Unknown User (kpai4020[left])		
Glossary	Unknown User (devans7_dis[left])	Carmeline Mario		
Message Interfaces	Carmeline Mario Unknown User (ggup7372[left])	Julie Busken (support)		
RBM Schema Document				
Stored Procedures		Unknown User (kpai4020[left]) (support)	Unknown User (wangw[left])	
Error Messages	Unknown User (devans7_dis[left])	Unknown User (kpai4020[left])		
Bill Data	Unknown User (ggup7372[left])			
ECA and Web Services		Unknown User (kpai4020[left])		
Plug-ins and Plug-in Interfaces	Anthony F Popp			
System Processes	Julie Busken			
Concepts	Anthony F Popp	Julie Busken		

7.3.1.4 3 Types of Topics

Требование

Соотношение типов топиков Task, Concept, Reference в любом продуктовом или солюшен документе должно стремиться к **33% / 33% / 33%**.

7.3.1.4.1 Типизирование информации и соотношение типов в документации

Существует три выделенных типа топиков: ***Таск***, ***Концепция*** и ***Справочник*** (*Task*, *Concept*, and *Reference*). В файле .DOCX каждый тип топика обязательно содержит элементы Заголовок (Heading 2, H2, Heading 3, H3), Пролог с метаданными (это поля контекста, See Also, Index), и Тело – body (стиль Body Text). Элемент body может содержать элементы абзац, таблица, список нумерованный или маркированный, и диаграмма/иллюстрация.

Назначение типов топиков:

- Топик *Task* предназначен для процедуры, которая описывает как выполнить задачу (accomplish a task). Топик типа Task перечисляет шаг за шагом последовательность действий, которую воспроизводит пользователь, чтобы получить нужный результат.
- Топик *Concept* – информативный и содержит цели и задачи, определения, правила и подходы (definitions, rules, and guidelines).
- Топик *Reference* предназначен для описания синтаксиса команд, инструкций программирования (command syntax, programming instructions), а также другие справочные материалы. Этот топик обычно содержит детализированный, основанный на фактах (factual) материал.

7.3.1.4.2 Примеры документации

- https://confluence.atlassian.com/display/JIRA/JIRA+Documentation
- https://wiki.almworks.com/display/structure/Issue+Structure

7.3.1.5 File Naming Conventions

Guideline 1

Content is published to support.netcracker.com only as PDF files.

Guideline 2

Content is published to sps.netcracker.com only as **Custom Link to Document**. See https://doc.netcracker.com/display/ALLDOC/Publish+to+SPS3+Tutorial for details.

Guideline 3

SPS3 naming convention:

NC.{**AG**|**UG**|**IG**|**DG**}**.***Module abbreviation***.***Product component name X.X.X.X*[**fix** *XX*]

7.3.1.6 Guide Definitions

7.3.1.6.1

https://bass.netcracker.com/pages/viewpage.action?pageId=446899815

7.3.1.6.2 Administrator Guide

- Book title, not document type. Book title: always only **NetCracker Administrator Guide.pdf**, i.e. it is displayed as a book on NetCracker in bulk.
- Class of described tasks – Administration of the system as a whole, close to the Application Administrator course. The central task – is troubleshooting of the system and system components in the build. Monitoring of vital system parameters, health, bringing the "patient to life". Logs, parameters fine tuning, special reports, user actions monitoring, performance.
- AG of product component – is a Unit in the book.

7.3.1.6.3 User Guide

- Document type and book title. For example **NetCracker Customer Information Management User Guide.pdf**
- It is displayed on each TOMS-module separately (for TOMS-module NetCracker Framework is displayed as a book on NetCracker in bulk: **NetCracker User Guide.pdf**)
- UG of product component – is a Unit in the book.

7.3.1.6.4 Configuration Guide

Read Content Matrix.

7.3.1.6.5 API Integration Guide

- Document type and book title
- It is displayed on each TOMS-module separately (for TOMS-module NetCracker Framework is displayed as a book on NetCracker in bulk: **NetCracker Integration Capabilities Overview.pdf**)
- If the product component has Public API, then it has the corresponding Unit. For example, “Unit - Notification Management API.pdf” or «Unit - Integrating with Product Catalog.pdf»

7.3.1.6.6 Developer Guide

-
    - Document type and book title
- It is displayed on each TOMS-module separately (for TOMS-module NetCracker Framework is displayed as a book on NetCracker in bulk: **NetCracker Developer Guide.pdf**)

Glossary

- Separate document, for example, "NetCracker Glossary.pdf", "Network Planning & Design Glossary.pdf"
- It is displayed on each TOMS-module separately (for TOMS-module NetCracker Framework is displayed as a book on NetCracker in bulk: **NetCracker Glossary.pdf**)
- Absent in the product component

7.3.1.7 What's New Information for Product Projects and Product Change Requests

When developing product documents in scope of **product projects** and **product change requests** (**CRs**), writing the **What’s New** text on the given project/CR is mandatory.

When composing the What’s New text, its author should focus on *product change's business value*. For instance:

WHAT'S NEW

The ability to place controls on the widget toolbar along with buttons was introduced. The toolbar controls can represent visual values of the specified parameters or perform some actions bound to them.

Guideline 1

When writing TW's What's New text, developers' What's New information, which provides technical details on product components, can be used. This technical information is subject to re-writing with the purpose of declaring explicitly how the described product change is useful for NetCracker's customers' business.

CDT specialists who are **responsible** for **preparing** the What's New text:

Product CR:

- **Technical writer** assigned for developing product documentation on the CR—*writes* the What's New text on the **CR**.

Product Project:

- **Technical writer** assigned for developing product documentation on a certain task in scope of the project—*writes* the What's New text on the **project task**.
- **Product Project Documentation Lead**—*integrates* results (What's New description) of all documentation development activities on the **entire project**.

JIRA systems used for writing and checking the What's New text:

Product CR:

- https://psup.netcracker.com/browse/PDCR— The **What's new** field in CR ticket's **Documenting** sub-task.
  The value of this field is mandatory to fill in when resolving the sub-task and this value is automatically copied to the CR ticket's **What's New** field.

Product Project:

- https://psup.netcracker.com and https://tms.netcracker.com—Comments in tickets and sub-tasks of project's documentation-related tasks.

CDT specialists who are **responsible** for **checking existence** of the What's New text in the JIRA systems:Product CR:

- **Product Project Documentation Lead**

Product Project:

- **Product CR Documentation Lead** (Evgeniy Osintsev)

CDT specialists who are **responsible** for **checking validity** of the What's New text in the JIRA systems:Product CR:

- **CDT TW peer reviewer**, who is assigned by **Product Project Documentation Lead**

Product Project:

- **CDT TW peer reviewer**, who is assigned by **Product CR Documentation Lead** (Evgeniy Osintsev)

Important!

Only after the What's New text is prepared and validated, the documents prepared and validated on the given CR or project task are assumed to be *ready for acceptance*.

As each NetCracker TOMS Suite product release is integration of results of particular product CRs and projects, storing the *atomic* What's New description in tickets on CRs and projects lets Product Management team members efficiently compile pertinent **What's New in NetCracker *release_number*** document versions that correspond to requirements of a particular customer the document is intended for.

7.3.1.8 Product Project Kick-Off Procedure

7.3.1.8.1 Шаг 0.

Приходит Project Start уведомление от Антона Терехова.

7.3.1.8.2 Планирование TW работ

Process Guideline

1. Andrei Denesh создает новую Version в проекте Netcracker Product Project на SMS. Название Version совпадает с названием продуктового проекта. В имени Version версии указывается код NC.PROD.xxx проекта. В поле Description указывается имя продуктового PM, имя ответственного за проект от отдела CDT, имена технических писателей.
2. STW (Senior TW, TW Lead проекта) – это Evgeniy Osintsev Elena Markina Alexandra Vokhmyanina Natalia Simonova Alexandra Kodrianu
3. STW *вначале и сразу* планирует ресурсы в календаре TOMS TW в Tempo.
4. (Опционально) Продуктовый PM создает тикеты, они же Work Items, на документационные работы в PSUP или TMS системе.
5. Если продуктовый PM пропускает шаг выше, то STW создает

тикет(ы) типа **New Feature** в проекте документационного суппорта PSUPTW.

7.3.1.8.3 Kick-Off встреча по Design Doc Style Guide
Ответственный: Natalia Simonova

В день старта продуктового проекта

Ответственный за SG Kick-Off должен:

1. Получить от продуктового PM проекта имена всех программистов и бизнес-аналитиков, которым будут поручаться документационные задачи по дизайн документации или "Configuration Guide".
2. Автору "Configuration Guide" и "Developer's Guide" выслать ссылку на Netcracker Style Guide убедиться, что автор прочитал SG, по меньшей мере, в части "English", "Formatting", "User Documentation".
3. Убедиться, что все авторы дизайн документации ознакомились с правилами оформления Design Documentation - Product/Solution.
4. Убедиться, что все авторы дизайн документации знают о возможности выборочной проверки документов FDS, DMS, UIS, REQs, IM с возможной отправкой результатов PM, BA, LM. Процедурная поддержка – Alexandra Pilyugina.

Следующий шаг – непрерывный TW Feedback Process.

7.3.1.9 Product Project Completion Checklist

English (Russian below)

1. Does the What's New note exist and comply with the template and SG guidelines?

- ☐ Yes
- ☐ No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- ☐ Yes
- ☐ No

3. Has Style Guide compliance check been performed? Was the SG

knowledge and usage feedback provided to the writer?

- Yes
- No

4. Do all final product component versions exist in Confluence?

- Yes
- No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- Yes
- No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- Yes
- No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- Yes
- No

8. Are all unresolved comments resolved for every product component space?

- Yes
- No

9. English grammar and style is checked (Adam Bramhall)

- Yes
- No

Russian

1. What’s New заметка написана и соответствует шаблону и требованиям SG?

- Да
- Нет

2. Ссылка на What' New страницу прикреплена через {JIRA} макрос к тикету, на который комитились работы?

- Да

- Нет

3. Style Guide compliance check проведен? Дан фидбек писателю (в свободной форме) по его знанию SG?

- Да
- Нет

4. В Confluence присутствуют все те версии продуктовых компонентов в которых закрылся проект?

- Да
- Нет

5. Факт наличия описания фич в документации проверен по спискам сиаров (они все есть в проектном WBS)?

- Да
- Нет

6. На все новые добавленные страницы в Confluence добавлена строка контекста Netcracker?

- Да
- Нет

7. Все URL (.url) выложены на SPS3 > Corporate > Product Documentation?

- Да
- Нет

8. Все unresolved комментарии закрыты в спейсе каждого продуктового компонента?

- Да
- Нет

9. Проведена проверка английского языка (Adam Bramhall)?

- Да
- Нет

7.3.1.10 SDN/NFV Doc Completion Checklist

English (Russian below)

1. Has Style Guide compliance check been performed? Was the SG

knowledge and usage feedback provided to the writer?

- Yes
- No

2. Are all unresolved comments resolved for every product component space?

- Yes
- No

3. English grammar and style is checked (Adam Bramhall)

- Yes
- No

Russian

1. Style Guide compliance check проведен? Дан фидбек писателю (в свободной форме) по его знанию SG?

- Да
- Нет

2. Все unresolved комментарии закрыты в спейсе каждого продуктового компонента?

- Да
- Нет

3. Проведена проверка английского языка (Adam Bramhall)?

- Да
- Нет

7.3.1.11 Developer Documentation

Guideline

Не допускается помещать в пользовательскую документацию любого типа, включая UG, AG, API IG, перекрестные ссылки на Developer Guides.

Пример недопустимой ссылки: "For more information, refer to *Reports Engine. Developer's Guide*."

7.3.1.12 What's New процесс

Tip

Для повышения качества what's new заметки используйте правила и рекомендации, приведенные в разделе What's New Style Guide-а.

7.3.1.13 PSUP

7.3.1.13.1 Политика дат Due Date и Estimate Complete Work Date в проекте PSUPTW

Process Guideline 1

Due Date на тикетах PSUP носит не информационный оценочный характер, а показывает точно, когда должны быть закончены работы. Каждый просроченный тикет – это проблема.

Применяются следующие правила:

- Перенос Due Date необходимо обосновать **в комментарии** к тикету.
- Перенос Due Date на тикете, который имеет отношение к внешнему deliverable с известной датой, невозможен.
- Дата Due Date не должна переноситься более **2-х** раз.

Process Guideline 2

Комментарий о переносе даты Due Date в тикете должен говорить почему принято решение о переносе дате.

Пример шаблона:

«Дата перенесена по причине…»

Process Guideline 3

Если тикет в состоянии *Unresolved,* то дата **Estimate Complete Work Date** не может быть в прошлом. В этом случае эта дата может быть сегодня, в будущем или не указана, если задача еще не запланирована.

7.3.1.13.2 PSUP Statuses

7.3.1.13.2.1 Значение статуса Oh Hold

Статус "On Hold" показывает, что в настоящий момент Reporter решает, отменить ли работы и закрыть тикет или нет. Тикет может быть переведен в статус "On Hold", только если появилась вероятность отмены данной работы, но не вероятность переноса работы.

Если работы по тикету приостановлены, так как, например, их блокируют незавершенные работы бизнес-аналитиков по дизайну или работы программистов по исполнению, то такой факт фиксируется не статусом "On Hold", а коррекцией полей **Estimated Start Work Date** и **Estimated Complete Work Date** и возвратом тикета в статус "Open".

Правильная трактовка:

- «Поставить работу на паузу» = **Open**
- «Обождите, может быть тикет вообще отменится» = **On Hold**

7.3.1.13.2.2 Значение статуса Resolved

Статус "Resolved" сообщает *Reporter*-у о том, что работа над контентом завершена и контент доступен в общеизвестном хранилище. Другими словами, статус "Resolved" является *внешним*, и кнопку **Resolve** следует нажимать *после* того, как завершено необходимое ревью, тестирование, и контент сохранен в Confluence или в папку учебного курса на **SPS3**.

Peer review и SME review проводятся до перевода тикета в статус "Resolved". Для SME review используется статус "Technical Review". Для peer review отдельного статуса нет.

7.3.1.13.2.3 Значение статуса Technical Review

Статус "Technical Review" не означает, что задача выполнена.

Статус тикета "Technical Review" не может быть оправданием просроченного тикета. Просроченный тикет в статусе "Technical Review" просрочен так же, как если он в статусе "In Progress", "Open" и так далее.

Ответственность за окончании этапа technical review и резолв тикета несет *Assignee*.

7.3.1.13.2.4 Запросы в документационную часть продукта NetCracker

Для всех запросов в продукт **в части документации** создан и работает проект **PSUP Documentation and Online Help**.

Вопросы, которые обрабатывает данный PSUP процесс:

1. Запросы с имплементационных проектов, а также с продуктовых проектов, на продуктовую или потенциально продуктовую – gap – пользовательскую документацию. Запросы могут касаться как интегрированных, то есть “продуктизованных”, продуктовых компонентов, так и еще не интегрированных компонентов. Запрос оформляется, как **New Feature,** и он проходит цикл оценки сложности работы (LOE), цикл планирования работ (Scheduling TW), и цикл прогресса работ. Примеры: «нужен Guide», «нужен API Developer Guide», «нужно описание public API компонента», «нужна документация к продуктовому компоненту».
2. Запросы с имплементационных проектов на продуктовую дизайн документацию по одному из пяти наименований: FDS, DMS, UIS, REQs, IM. При необходимости заводим, в свою очередь, тикеты на профильные продуктовые направления, то есть другие PSUP проекты, и линкуем с ними тикет CDT.
3. Запросы на информацию – «где описано то-то и то-то».
4. Дефекты в продуктовой документации или online help – неверная информация, языковые неточности, сбои оформления, отсутствие полагающегося контента.

При поступлении в личную почту любого запроса, который классифицируется, как один из вышеперечисленных, необходимо просить реквестора завести, пользуясь командой **Create PSUP Ticket**, тикет в “PSUP Documentation and Online Help”. Можно выбрать

компонент "Documentation". Команда доступна через меню **psup -> More -> Product Support**.

Если репортер выбрал неверный тип тикета или выбрал "Task", как наиболее generic, то Assignee классифицирует тип и изменяет его на правильный с помощью команды меню **More Actions -> Move**. Правила классификации тикетов см. ниже.

7.3.1.13.2.5 Классификация PSUPTW тикетов

Тип запроса	Тип тикета
Запрос с продуктового проекта на оценку	Task
Запрос с имплементационного проекта на оценку документации к продуктовому гэпу	Task
Внесение в документ новой фичи, создание нового документа	New Feature
Исправление дефекта в документе (неточность, неверная информация, сбой оформления)	Bug
Предложение по улучшению известного документа	Improvement
Сборка и публикация документации	Task
Подготовка документации для релиза Release Notes (What's New)	Task
Вопросы, типа, "Где лежит документ?"	Information

7.3.1.14 Writer Checklist

7.3.1.14.1 Completeness and Consistency

- ☐ All lists, figures, tables, and code blocks are appropriately introduced.
- ☐ All higher level sections contain brief introductions to signpost the topics below.
- ☐ All lower level headings contain information relevant to the headings directly above them, for example, Deleting Customer Accounts is not placed directly below Creating Customer Accounts.
- ☐ All H1 headings or below that contain subsections include at least two subheadings. That is, there are no headings with only one subheading directly below them. A page may contain just one H1 level heading as long as there is some text between the page title and the H1 heading.
- ☐ The words “below” and “above” are not used to reference upcoming or preceding text, graphics, or sections. There is no guarantee that the referenced places will fall on the same page. Instead, use something like “the following” or “the previous”.

7.3.1.14.2 Grammar, Punctuation, and Spelling

- ☐ Capitalization is applied consistently throughout the document.
- ☐ Headings are constructed in parallel form and use title capitalization.
- ☐ Lists are constructed in parallel form and the first letter of each list item is capitalized.
- ☐ Figure and table captions use title capitalization.
- ☐ Proper nouns like the names of Netcracker product components and catalogs are capitalized, for example, “Asset Management” and “Product Offering Catalog”.
- ☐ Common nouns like “order item” and “sales order” are not capitalized.
- ☐ Noun modifiers are in the singular form, for example, “line access numbers” and not “lines access numbers”.

- [ ] Serial commas are used. (A comma is placed after the second to last item in lists of three or more items to separate the final item from the words “and” or “or”.) The heading above this list contains a serial comma.
- [ ] A spell check has been run for the document.
- [ ] There are no sentence fragments besides those that are used sparingly in lists or tables.
- [ ] Sentences beginning with a prepositional phrase are used only when placing deliberate emphasis or expressing relationships about time, location, or causality.
- [ ] There are no sentences that end with a preposition. Exceptions can be made to this rule if avoiding a terminal preposition creates awkwardness.
- [ ] Each numbered step in step-by-step tasks is written as an imperative. If needed, outcomes or explanations for particular steps are provided in sentences directly after the corresponding imperative and not as separate list items.

7.3.1.14.3 Formatting

- [ ] Bold, italic, and monospaced formatting are correctly applied to all elements of the document, including code, links, parameter names, UI labels, and error messages, as defined in Document Conventions.
- [ ] Parameter values, drop-down list values, and link text for hyperlinks are enclosed in double quotes.
- [ ] Block-level macros, including note blocks, code blocks, and graphics, are not used within lists or tables.
- [ ] Bulleted or numbered lists are not used within tables.
- [ ] Nested lists are not used. All list items, whether bulleted or numbered, are at the same level.
- [ ] Numbered lists are used where the order of list items matters, including step-by-step procedures and descriptions of flows or processes.
- [ ] Bulleted lists are used where the order of list items does not matter.
- [ ] Note blocks contain the word “Note” added as the title of the macro and not in the note box itself. This also applies when entering the appropriate title for the Info, Tip, and Warning macros.
- [ ] Note, Info, Tip, or Warning blocks do not contain more than three bulleted items.

7.3.1.14.4 Images

- [ ] The font size of text displayed in screenshots is roughly equal to the Confluence superscript font size.
- [ ] If set to a specific number, the width of images is not greater than 580px.

7.3.1.14.5 Links and References

- [ ] All links to other parts of the current guide point to entire pages or articles.
- [ ] Documents do not contain links to subsections of pages or to external guides or spaces.
- [ ] All references to Netcracker guides other than the current guide are given as plain text references (not links) in the following format: *Netcracker Attributes and Types Configurator Administrator Guide*, "Creating Attributes."
- [ ] All links to other parts of the current guide use the verb "see" directly before the link text.
- [ ] All references to Netcracker guides other than the current guide use the verb "refer to" directly before the guide name.

7.3.2 Courseware Development

7.3.2.1 Training Courseware Requirements
EN | **RU**

7.3.2.1.1 Требования к внешним тренингам. Краткое описание

О разделе

Данный раздел содержит краткое описание требований к внешним тренингам. Только материалы, соответствующие описанным требованиям, принимаются для использования в сессиях внешних тренингов.

7.3.2.1.1.1 Требования к курсу
Курс должен соответствовать следующим требованиям::

1. Как в презентации, так и в упражнениях должны быть заявлены цели обучения.
2. На титульном слайде презентации и в Disclaimer части упражнений должна быть заявлена X.X версия релиза.

7.3.2.1.1.2 Требования к лекции
Лекция должна соответствовать следующим требованиям:

1. Презентация должна быть основана на шаблоне “NetCracker Course Template 2013"
2. Должна быть взята последняя версия шаблона с sps3.
3. Презентация должна быть структурирована разделителями.
4. Если курс не содержит практики, лекция должна обеспечивать периодическую смену активностей (лекция > демонстрация > лекция > бизнес-игра > лекция > задача > лекция > вопросы-ответы > …). Отдельная лекционная часть не должна длиться дольше 30-40 минут.

7.3.2.1.1.3 Требования к практической части
Практическая часть должна соответствовать следующим требованиям:

1. Документ должен быть основан на шаблоне “Training Guide Template 2013 (A4 and Letter)”.
2. Должна быть взята последняя версия шаблона с sps3.
3. Формулировки и описания интерфейсных элементов должны соответствовать заявленным в “Training Documentation Style Guide” на sps3
4. Для маркировки объектов, создаваемых в ходе тренинга должен использоваться идентификатор пользователя “UID”, набранный курсивом. Идентификатор “Color” использоваться не должен.
5. Должна быть заявлена X.X версия релиза. Версия заявляется в Disclaimer части сразу за титульным листом.
6. Должны использоваться только дефолтные* объекты. Дефолтные объекты предоставляются командой разработки соответствующего компонента или добавляются в системную конфигурацию NCU Training Server с **NPTS**. Пререквизиты (подготавливаемые заранее данные) не используются – только объекты, доступные сразу после установки инстанса/компонента.

7. Упражнения должны быть структурированы в соответствии со структурой презентации.
   Презентация должна содержать слайды-разделители, заявляющие необходимость выполнить упражнения из «Части X» соответствующего документа с упражнениями.
   Выполнение упражнений используется как один из способов смены активности.

* Дефолтные объекты – *продуктовый* компонент на NPTS, содержащий стандартный OOB сэмпл с данными. Например, customer accounts с готовыми service instances, devices, спецификации в Product Catalog, и тому подобное.

7.3.2.1.1.4 Требования к проверке знаний

Проверка знаний должна соответствовать следующим требованиям:

1. В разделе Tasks учебного пособия (Training Guide) должны находиться задания и ответы на задания
2. В разделе Self-Review Questions учебного пособия должно содержаться 7-10 вопросов на проверку усвоения материала.

7.3.2.2 Training Bug Fixing Procedure

RU | EN

7.3.2.2.1 Исправление дефектов в продуктовых тренингах через внутреннее тестирование

Любой фидбек необходимо анализировать и принять решение, как улучшить учебную документацию, либо какие изменения сделать в процессе. Сотрудники NetCracker, изучающие систему по материалам CDT, также рассматриваются, как QA первой линии.

7.3.2.2.1.1 Процесс

Процесс баг-фиксинга тренинговой документации:

1. Приходит тикет в проект PSUPTW на компонент "Training Documentation". Assignee по умолчанию – Elena Markina
2. Предложить пользователю workaround (SLA: **4** часа), оперативная помощь – Anastasiya Uvarova
3. Тикет не закрывается: триаж – Anastasiya Uvarova, координатор Elena Markina
4. Дефект оценивается и планируется в календаре, координатор Elena Markina
5. Пользователю и CDC сообщается дата устранения дефекта – исполнитель Elena Markina
6. Если это дефект процесса, вопрос передается в CDC и тикет закрывается, как Not a Bug – исполнитель Elena Markina

Пример

Проблема:

Из-за того, что пользователь зашел не на ту закладку, он не видит нужной кнопки, и пользователь заводит тикет на дефект.

Решение:

Правильно

Вносится правка в текст учебный курса. Что-то выделяется жирным, где-то добавляется Note, восклицательный знак, вносятся

дополнительные уточнения. Новые учащиеся обращают на это внимание и не совершают схожей ошибки.

Неправильно

Пользователю объясняют какие шаги переделать или переделывают шаги за пользователя. Тикет закрывается.

7.3.2.2.1.2 Классификация дефектов

- **Дефект сервера –** Assignee: Unknown User (bolshakova[left]) или Anastasiya Uvarova ИЛИ **Миша Косаткин**
- **В курсе отсутствует материал –** Assignee: автор учебного курса
- **Ошибка в документации –** Assignee: автор учебного курса
- **Нечеткая формулировка из-за плохого английского –** Assignee: автор учебного курса
- **Ошибки нет, но критически важный шаг в инструкции не выделен, сливается с текстом –** Assignee: автор учебного курса
- **Дефект процесса** (развёртывание сервера, устаревание сервера, рассинхронизация сервера и документации и т.д.) – Assignee: **TBD**

Проблема не должна решаться локально в обход данного процесса.

7.3.2.2.2 Goal

The goal of this document is to define response and resolution terms for product support issues registered in PSUP Tracker system.

7.3.2.2.3 Definitions

- Only **working hours and days** are included to calculation of Response and Resoution. Working hours are 10-19 MSK. E.g., for ticket with 4 hours response time created at 6 p.m. on Tuesday, response should be provided by 1 p.m. on Wednesday. Support during non-working time should be ordered by project team at least in a week in advance and will be billed to a project.

- **Priority** is the relative importance of the issue which is set by **reporter**. It is determined by ticket's impact on **project activity or customer** (not by urgency) and should be selected using Customer Impact column (see below). Response on the ticket is always given according to priority set by reporter. After initial assessment **priority can be changed** by product group in agreement with reporter, and resolution will given according to the new priority.

- **Blocker** or **Critical** tickets can be changed to **Major** by product group if reporter didn't provide explanation why this issue is critical and what is the customer impact.

- **Response** period for **Information** ticket type is the period when answer on the raised question should be given. For other ticket types (**Bug, Improvement** etc) ticket should be reviewed and transferred to **Request Accepted, In Queue** or **Assessment** status. In

calculation the ticket time spent in the statuses isn't considered: Hold, Additional Info Required.

- **Resolution** period is time from the moment of opening of a ticket until delivery of a solution. In calculation the ticket time spent in the statuses isn't considered: Hold, Additional Info Required, Resolve.

- **Due Date** reflects the requirement of the project for delivery terms. Initial value corresponds to a priority in SLA (Change of DueDate at justification and coordination of the parties is allowed). Every change of Due Date or Priority to the more restrict value is allowed by the Activity lead (in the ticket comment or by the phone to the PSUP manager).

- **Activity lead** - the person who is responsible for the project, its stream or another lead (TM, Group/QA/Dev lead)

- Implementation Engineering can provide a short list of implementation projects that have higher priority than other projects because of their current phase or critical situation (names and GP codes).
    - All Blocker, Critical and Major tickets from these projects must be addressed before working on tasks from any other projects.
    - Blocker and Critical issues reported before the end of working day, must be reviewed and responded the same day, even if there are not enough working time left on response.

- Automatic bulk processing of PSUP tracker:

  1) All tickets with the "Resolved" status will be closed in 2 weeks if the project team does not close or reopen them.
  2) All tickets with the "Hold" and "Additional Info Required" statuses will be closed if there is no activity on them within 3 months (status change).

7.3.2.2.4 SLA

Priority	Response, work-hours	Resolution, work-days	Customer Impact	Product side response
Blocker	2h	3d	Blocks development/testing of the whole project stream, production code can't run or customer service is affected. No workaround is available. The impact must be explicitly described by Activity lead (in the ticket comment or by the phone to the PSUP manager)	Assign to developer with high expertise, involve as much resources as necessary to resolve ticket ASAP. Drop everything in progress, treat ticket with highest priority until solution is ready.
Critical	4h	5d	Blocks development/testing or has a major impact on product's functionality. Workaround is available, but there is still an impact on project's productivity. Customer impact must be explicitly described - why this issue is critical?	Assign to developer with high expertise, drop all current tasks. This should be developer's only task until solution is ready.
Major	8h	8d	Has a significant impact on product's	Plan accordingly to

Priority	Response, work-hours	Resolution, work-days	Customer Impact	Product side response
			functionality but not a showstopper. Has a workaround.	resolve ticket until specified due date. Lower-priority tickets should be postponed.
Normal	12h	15d	Regular issue, some product's functions are affected but not critical or there is an acceptable workaround.	Complete current task and all higher-priority tickets before working on this one. Request necessary information in advance, pay attention to due date.
Minor	16h	40d	Not significant or rarely used functions are affected under specific circumstances, impact is relatively low. Easy workaround is available.	Work on this task when there are no high-priority tickets in the queue.

7.3.2.3 NetCracker OOB Course Authors

See a complete list in NetCracker Product Training Catalog.

7.3.2.4 Course Files

Guideline 1

Контент курса не должен разноситься по нескольким файлам. Лекционная часть курса должна быть помещена в один файл Power Point, практическая часть курса – в один файл MS Word. Должно соблюдаться правило "одина страница курса в каталоге–один контент–один файл".

Причины:

1. Разделенный контент создает путаницу как среди людей заказчика (каждый такой файл человек интерпретирует, как отдельный курс), так и среди внутренних новичков NetCracker и персонала Career Development Center.
2. В программу тренинга всегда включается курс полной длительности. Если в редких случаях заказчик настойчиво ставит ограничение по дням тренинга, и программа не умещается, то только для данного конкретного принимается решение чем пожертвовать и что оставить и затем делается подгонка файлов.

Guideline 2

Название PPT-файла должно совпадать с названием курса в каталоге

тренингов NetCracker Product Training Catalog (при сохранении файла в формате PDF добавить "Slides" к имени).

Название DOC-файла практической части курса (упражнений) должно совпадать с названием курса в каталоге тренингов NetCracker Product Training Catalog.

Название DOC-файла теста должно повторять имя файла упражнений, плюс слово *Quiz*. Название DOC-файла теста с ответами – соотвественно, *Quiz with Answers*.

При сохранении PPT-файла в формат PDF необходимо добавить к его имени слово *Lecture*.

Guideline 3

Имя папки курса на SPS3 должно совпадать с названием курса в каталоге тренингов NetCracker Product Training Catalog.

Пример для курса COM 9.0:

Курс в каталоге тренингов – Customer Order Management. Ему соответствует папка курса "//sps3/corporate/NetCrackerProductReleaseTrainings/NetCracker Product Release Trainings/NetCracker Release 9.0 Training Courses/**Customer Order Management**"

Guideline 4

В библиотеку учебных материалов на SPS3 может загружаться только корректно оформленный контент. Контент оформлен корректно, если он:

- Не содержит tracked changes
- Не содержит Comments
- Не содержит фразы, выделенные желтым маркером
- Не содержит неоконченный предложений
- Не содержит текстовых пометок красным шрифтом на русском, например "Здесь еще необходимо проверить."

7.3.2.5 Content Design

Guideline1

- У двух разных курсов не может быть одинаковая презентация (лекция).
- У двух разных курсов не может быть пересечения по контенту.

Guideline 2

Если в каталоге две разные страницы описания курсов, то у них должны, как минимум, быть разные Description, Skills Taught, Agenda.

Guideline 3

Для каждого курса должен быть составлен список приобретаемых навыков – Skills Taught.

Например, если мы хотим научить разработке (development), то заявляем такие цели. Если не хотим учить разработке, то заявляем, чему тогда хотим научить (ради чего организуется тренинг, ради чего участники тратят свое рабочее время на этот курс).

7.3.2.6 Target Audiences

Guideline 1

В задачи администратора входят только задачи *troubleshooting* и *maintenance*.Основная задача – триаж проблемы пользователя и ее разрешение, как правило, без внесения изменений в функционал. Задача NetCracker — соответственно, научить администратора, какие инструменты ему для этого предлагаются.

Guideline 2

Ни один курс для администратора не может и никогда не должен рассматриваться, как "developer light".

Guideline 3

Если необходимо создать курс, посвященный конфигурированию, без разработки, то это будет курс также *для пользователя*, в данном случае — продвинутого.Не должен вводить в заблуждение факт, что администраторы-заказчики NetCracker часто совмещают роли продвинутого пользователя и администратора.

7.3.2.7 Writing Course Goals and Objectives

RU | EN

7.3.2.7.1 Задачи курса. Требования к формулировке

Данный тренинг разработан для тренировки навыков составления целей и задач к учебным курсам.

Writing Course Goals and Objectives: Download

ЗАДАЧИ КУРСА – это формулировка того, что сможет выполнять слушатель после завершения процесса обучения. Для этого необходимо использовать глаголы, отражающие конкретные действия слушателя, и чтобы эти действия были легко измеримыми.

Прочтение задач курса дает слушателям понимание того, что они выучат, какие действия смогут выполнять после прохождения тренинга, как будут оцениваться их достижения, и что будет свидетельствовать о достижении ими поставленных задач.

Задачи должны звучать узко, четко, осязаемо и конкретно.

Существует простая формула написания задач для обучающего курса. Необходимо прописать следующие составляющие:

1. Участников курса.
2. Конкретные и легко измеримые действия слушателей, которые они смогут выполнять по окончании обучения.
3. Особые условия, с которыми слушатель будет сталкиваться в процессе выполнения задач.

Действия слушателей (Behaviors) для описания задач можно разделить на 2 категории:

- Умственную деятельность
- Физическую активность

Для формулировки “Умственных” задач и описания когнитивного поведения слушателей используется классификация Андерсона. Согласно этой классификации, когнитивный процесс состоит из 6 этапов. Каждый этап включает в себя серию измеримых видов деятельности.

- Запоминание: перечислить, изложить, найти, указать, воспроизвести, выбрать, подобрать.
- Понимание: объяснить, изложить основные принципы, передать другими средствами, сравнить, описать.
- Применение: решить, показать, подсчитать, использовать, выполнить, исследовать, расклассифицировать.
- Анализ: исследовать, определить, отделить, схематически представить, распознать, сравнить и противопоставить, объяснить, исследовать.

- Оценка: прийти к выводу, выбрать, решить, подтвердить, аргументировать, произвести оценку, определить.
- Создание: создать, составить, спрогнозировать, спланировать, построить, разработать, сформулировать.

Условие (Condition) накладывает определенную степень сложности на достижение слушателем тех задач, которые наметил инструктор. В условии описывается, что будет использовать слушатель для выполнения действий, какие ресурсы и учебные материалы будут ему доступны, а какие – нет.

Например,

- *using a predefined workflow process;*
- *in the Service Catalog;*
- *using the collected data;*

Вот хороший пример “Умственных” задач, содержащий описание тех инструментов, которые применят слушатели для демонстрации приобретенных знаний и навыков.

- *At the end of the course, the administrators will be able to:*
  specify BAM alerting configuration ***using a predefined workflow process.***

Вводные фразы для формулировки задач:

- Upon successful completion of this course, (…) will be able to:
- After completing the course,
- After course completion,
- At the end of the course,

Для наглядной демонстрации хорошей и плохой формулировки задач, приведем примеры задач из некоторых готовых обучающих курсов.

At the end of the course, administrators will be able to:

- explain the **main aim** of the BAM component **without aid of references** – плохое описание действия и плохое условие
- locate the **necessary objects** in Service Catalog – плохое описание действия и хорошее условие
- create, configure and apply activity definitions using **the training guide** – хорошее описание действия и плохое условие
- specify BAM alerting configuration using a predefined workflow process – хорошее описание действия и хорошее условие

Таким образом, при написании задач курса разработчикам следует максимально конкретизировать их и избегать употребления нечетких и размытых понятий, которые универсально применимы для формулировки задач любого курса.

7.3.2.8 Training Sample

Внимание!

Наполнять базу своими данными "в лоб" опасно, так как эти данные могут быть перезатерты при очередном обновлении сервера, либо будут потеряны при переходе в environment следующего GA релиза, если их не перенесут вручную.

Если курс требует наличия большого количества данных в базе, отсутствующих "из коробки", то необходимо выполнить действия ниже.

Попытаться решить проблему одним из способов:

- Убедиться наверняка, что в системе нет нужных объектов "из коробки". Поговорить с разработчиком на эту тему.
- Получить продуктизованный сэмпл от продуктовой группы как плагин, и заказать у Unknown User (bolshakova[left]) установку такого плагина на production environment.
- Обратиться к разработчику же с вопросом, какие данные использует он для внутреннего тестирования запрограммированного им функционала.
- Обратиться в QA с таким же вопросом.

Если и только если ни один из способов не дал положительного результата, то необходимо на **development** environment изготовить базу данных для курса для данного релиза и затем продуктизовать ее в плагин (SQL, ZIP и т.п.) для установки в **production** environment силами Unknown User (bolshakova[left]). Необходимо использовать инструментарий R&D и группы Export/Import, например, позволяющий собрать данные (объекты) из разных локаций, таблиц, баз данных и упаковать их в общий плагин.

7.3.2.9 Development of Training Test

https://bass.netcracker.com/pages/viewpage.action?pageId=279250393

Training Test is a document that helps assess knowledge acquired by training participants. It contains questions of various types and has rules of result calculation. A basic requirement to test questions is to write them in such a way that testing and result calculation could be done in automated way.

7.3.2.9.1 Basic requirements

- A new test is created on the basis of the **Quiz Template.docx** template in the following folder SPS3 > Corporate > NetCracker Product Release Trainings > Course Templates.
- Questions of all types should be suited for automated testing.
- The number of **multiple choice** questions should make up at least 80% of the total number of test questions.
- The number of questions depends on the course duration: 4 hours - min 60, 8 hours - min 90, 16 hours - min 120 questions.
  Note. Questions can be similar in content and differ only in statement.

7.3.2.9.2 Requirements

A good test should at least have these features:

- contain "pitfalls";
- challenge a student and make him think;
- avoid English words allowing ambiguous interpretation;
- fully conform to NetCracker terminology and the course itself;
- as clearly as possible articulate "Short Answer" questions.

7.3.2.9.3 Examples

Question type	Question	Answer
Short Answer	What operation is used to suspend processing the trouble ticket?	Hold Ticket
True/False	Customer Problem Management is part of Customer Information Management.	FALSE

Question type	Question	Answer
Multiple Choice	How are customer incident ticket comments added?	1. ☐Automatically 2. ☐Manually 3. ☒Both

7.3.2.9.4 Examples of question adaptation for automated testing

Question type	Question	Comment	Transformation option
Short Answer	What entities are used in the System to configure the search? Answer: search profiles	What if user inputs “search profile” and the system will count it as a wrong answer? Example of using this question type: Which city has Eiffel tower? **Paris**	Change type to 'Multiple Choice': Answer 1. ☐Search edit box 2. ☒Search profile 3. ☐Search results table
Short Answer	What attribute defines automatic maintenance ticket closure?	User can answer "End Date attribute".	1. Make a question specific: What is the name of the attribute that defines..." 2. Change type to 'Multiple Choice': Answer a. ☒End date b. ☐Start Date c. ☐Status
True/False	Password content and lifecycle is managed via Security Policies? Answer: TRUE	Childish and too easy question with an easily guessable answer.	Change type to 'Multiple Choice': Answer 1. ☒Controlling password content 2. ☐Include users to groups 3. ☒Managing password life cycle 4. ☐Restrict access to some objects and UI elements

7.3.2.10 При апгрейде OOB учебного курса используем следующее:

1. Файл *What's New X.X*. Из него узнаем о новых фичах в интересующем модуле*.
2. Варианты этого же курса для других заказчиков. Из них берем интересные бизнес-примеры, отраслевые примеры, кейсы применения, кейсы использования. Примеры обезличиваем. На этих примерах иллюстрируем интересующий модуль со всех возможных углов зрения. Речь идет как о практике, так и о теории.

   Как найти варианты курса:

   - Поиском прошедших тренингов в SMS по лейблу курса. Пример запроса для CIM: issuetype in (Training, "Training Event") and "Course Labels" = CIM and "End date (expected)" < now(). Далее находим папку тренинга на FTP и оттуда забираем контент.
   - В папке курса на SPS3. Вариант курса лежит в подпапке с названием кастомера. Пример для CIM 9.3: https://sps3.netcracker.com/corporate/NetCrackerProductReleaseTrainings/NetCracker%20Product%20Release%20Trainings/Forms/AllItems.aspx?RootFolder=%2Fcorporate%2FNetCrackerProductReleaseTrainings%2FNetCracker%20Product%20Release%20Trainings%2FNetCracker%20Release%209%2E3%20Training%20Courses%2FCustomer%20Information%20Management
3. UG и AG модуля из SVN (самые последние версии).

Такой подход позволяет нам а) всегда иметь самые свежие фичи, и б) иметь хорошие обстоятельные курсы по 8 часов и более вместо 4-х часов.

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* TOMS-модуль

7.3.2.11 OOB Training Courses Checklist for Instructional Designers

1. What's New article is examined and the updates included in training course

- ☐ Yes
- ☐ No

2. The training course materials are uploaded to sps3 https://sps3.netcracker.com/corporates/NetCrackerProductReleaseTrainings//NetCracker%20Product%20Release%20Trainings/Forms/AllItems.aspx

- ☐ Yes
- ☐ No

3. The training course folder contains lecture in PPT format

- ☐ Yes
- ☐ No

4. The training course folder contains exercises in DOCX format

- ☐ Yes
- ☐ No

5. The training course folder contains quiz in DOCX format

- ☐ Yes

- No

6. The training course folder contains (optional) zipped non-product sample if any created

- Yes
- No

7. The training course description is actualized on BASS in training catalog https://bass.netcracker.com/display/NCPTC

- Yes
- No

8. The technical review us done by SME

- Yes
- No

7.3.2.12 Training conduction and preparation methodology

This video contains the methodology of customer training preparation and delivery : https://bass.netcracker.com/display/VID/Training+methodology

7.3.3 Online Help Engine

The Online Help engine is contained in two JSP files:

/help/topic.jsp

SVN repository: https://svn.netcracker.com/TextualUI/

Component: Textual UI

/help/applethelp.jsp

SVN repository: https://svn.netcracker.com/GUI_Core/

Component: GUI Core

7.3.4 Solution User Guides

How to Use Test Cases for Custom UGs

- All solution specific guides should be based on project test cases.
- Technical writer should copy the test case to doc.netcracker step by step. Test cases should be constructed in natural sequence and should describe the execution of a more or less large operation.

- Technical writer should add introduction to the module and description.

7.4 Editing

- Estimating Editing Needs
  - Generating Estimates for New Documents
  - Generating Estimates for Existing Documents
    - Generating Word Counts in Confluence
    - Generating Word Counts in Microsoft Word
    - Generating Word Counts in Adobe FrameMaker
    - Generating Word Counts in Microsoft PowerPoint
    - Calculating Estimates for Online Help
  - Determining the Level of Edit Required
    - Standard Editing
    - Light Editing
  - Editing Rate Factors
    - Code Blocks
    - Document Condition
    - Document Complexity and Type
    - Editor Experience
    - Graphics and Tables
    - Familiarity with Subject Matter
    - Testing
    - Writer Experience and English Language Skills
- Scheduling Editing Needs
  - Factoring Editing into Documentation Plans
  - Project Planner Responsibilities
  - When to Estimate Editing
  - Problems with Last-Minute Edits
  - Standard Notice Period
  - Editor Responsibilities
  - Writer Responsibilities
  - Resolving Comments
- Submitting Editing Requests
- References

7.4.1 Estimating Editing Needs

7.4.1.1 Generating Estimates for New Documents

To estimate the number of hours required to edit a new document or set of documents:

1. Calculate 10–15% of the time allocated for the writing phase.
2. For a standard edit, schedule approximately 15% of the time allocated for the writing phase. For a light edit, schedule approximately 10% of the time allocated for the writing phase.

Example: If you schedule 100 hours for writing a new document or set of documents, and you determine it requires a standard edit, allocate 15 hours for editing.

7.4.1.2 Generating Estimates for Existing Documents

The process of estimating editing needs for existing documents is the same for specific updates as it is for entire documents.

To estimate the number of hours required to edit an existing document or set of documents:

1. Calculate the total number of pages or words that need to be edited.
2. Determine the level of edit required. For more information, see "Determining the Level of Edit Required" below.
3. Divide the total number of pages or words involved by the appropriate value in the **Pages per Hour** or **Words per Hour** column of the **Editing Rates** table below.

Example using page count: If the document is 200 pages in length and you determine that it requires a standard edit, the lower end of the range is 20 hours (200/10) and the higher end of the range is 33 hours (200/6).

Example using word count: If the document is 60,000 words in length and you determine that it requires a light edit, the lower end of the range is 24 hours (60,000/2,500) and the upper end of the range is 40 hours (60,000/1,500).

Editing Rates

Level of Edit Required	Pages per Hour	Words per Hour
Standard Edit	6–10 pages	1,500–2,500
Light Edit	12–16 pages	3,000–4,000

7.4.1.2.1 Generating Word Counts in Confluence

Before generating a word count in Confluence, you must first find the page IDs of the guides, sections, and pages you want to create the word count for.

To find the page ID of a particular guide, section, or page in Confluence:

1. Navigate to the guide, section, or page you want to generate a word count for.
2. In the top right corner of the browser window, click the ellipsis button.
3. From the drop-down menu, select **Page Information**.
4. The 8-digit page ID is displayed at the end of the URL in the address bar of the browser.

To generate a word count in Confluence:

1. Prepare a list of the page IDs for the content you want to generate a word count for.
2. From the **Space tools** menu in the bottom left corner of the browser window, click **Overview**.
3. Click the **Words Count** tab.
4. In the **Input Page name (or Page ID) for word count** field, enter or paste the required page ID.
5. If necessary, select or deselect the **Count words in child pages** check box.

6. Click **Add Item**.
7. If necessary, repeat Steps 4–6 to add further pages.
8. Click **Start Count**. The total word count of the added page IDs is displayed.

7.4.1.2.2 Generating Word Counts in Microsoft Word

In Word, the current word count is shown in the bottom left corner of the application window by default. Copying and pasting content from another application into a blank Word document can be a quick way to generate a word count.

7.4.1.2.3 Generating Word Counts in Adobe FrameMaker

To generate a word count in FrameMaker:

1. From the **File** menu, select **Utilities** > **Document Reports**. The Document Report dialog is displayed.
2. From the **Report** list box, select “WordCount”.
3. Click **Run**. The total word count of the document is displayed.

7.4.1.2.4 Generating Word Counts in Microsoft PowerPoint

1. From the **File** menu, select **Info**.
2. From the **Properties** drop-down menu, select **Show Document Panel**.
3. The **Document Properties** panel is displayed, showing the total word count.

7.4.1.2.5 Calculating Estimates for Online Help

For editing online help documents, each topic (new or updated) can be considered roughly equal to a single page in a user guide.

7.4.1.3 Determining the Level of Edit Required

7.4.1.3.1 Standard Editing

A standard edit involves editing for language, grammar, punctuation, consistency, completeness, and conformity with the style guide. A minimal amount of rewriting, restructuring, and reformatting is required.
(Standard editing is also referred to as copyediting.)

7.4.1.3.2 Light Editing

A light edit involves quickly scanning a final draft or version of a document for obvious errors in spelling, grammar, punctuation, and consistency. It is generally only appropriate for content that has already undergone a first round of editing. A document submitted for light editing should be mostly free of errors and more or less in conformity with the internal style guide.
(Light editing is also referred to as proofreading.)

7.4.1.4 Editing Rate Factors

A number of other factors can affect the amount of time required to complete an editing task.

7.4.1.4.1 Code Blocks

When estimating based on the number of words or pages, documents that contain a high proportion of code blocks might take less time to edit.

7.4.1.4.2 Document Condition

The better the condition of the document, the faster the editing process goes. Documents with a higher incidence of errors or deviations from the style guide, or both, can take significantly longer to edit.

7.4.1.4.3 Document Complexity and Type

The more complex a document is, the longer it will take to edit. User guides are generally quicker to edit than more complex (or more technical) guides like administrator guides and developer guides.

7.4.1.4.4 Editor Experience

As editors gain experience, they tend to edit content more quickly. A senior editor may be expected to edit at rates closer to the upper end of the range in the Editing Rate Table.

7.4.1.4.5 Graphics and Tables

When estimating based on the number of pages, documents that contain a high proportion of tables and graphics often take considerably less time to edit.

7.4.1.4.6 Familiarity with Subject Matter

Having a basic familiarity with the subject matter tends to increase the rate of editing. Conversely, unfamiliar subject matter can lead to slower rates of editing. Editing an updated version of a document that has previously been reviewed by the same editor is generally significantly quicker.

7.4.1.4.7 Testing

If testing is required, for example, to verify the accuracy of UI labels and step-by-step procedures, the editing process can take longer.

7.4.1.4.8 Writer Experience and English Language Skills

As writers gain experience, they tend to make fewer errors and produce higher quality documents. Documents written by non-native English speakers may take longer to edit, depending on the English language skills of individual writers.

7.4.2 Scheduling Editing Needs

> *A thorough and realistic schedule established at the beginning of the development cycle, with periodic due dates rather than a single due date at the end, distributes the responsibility for keeping a project on schedule on all collaborators rather than disproportionately on editors.—Rude & Eaton*

7.4.2.1 Factoring Editing into Documentation Plans

Documentation plans should factor in an appropriate amount of time for editing based on estimates that take into account all of the relevant factors described above. Last-minute editing can compromise quality and often does not leave enough time to satisfactorily resolve all of the issues identified.

7.4.2.2 Project Planner Responsibilities

Whoever is responsible for planning the project (documentation manager or team lead) is accountable for factoring in the editing stage in accordance with these estimating guidelines. This is part of the estimating process when a release manager approaches the documentation manager for a project plan and estimate for a documentation project.

7.4.2.3 When to Estimate Editing

The editing effort should ideally be determined at the inception of a documentation project when the documentation manager or team lead is approached for a project plan and estimate for a new documentation project.

7.4.2.4 Problems with Last-Minute Edits

If a document in need of comprehensive editing is submitted at the last minute, there may only be time to perform a cursory proofread to fix the most glaring errors. This means there may not be sufficient time to ensure the document conforms to the internal style guide or to check the overall organization, structure, and usability.

7.4.2.5 Standard Notice Period

All documents should be ready to edit at least one to two weeks before publication where possible. With appropriate planning, requests for large documents should rarely need to be sent for editing with only one or two days to complete the work.

7.4.2.6 Editor Responsibilities

The editor must schedule all active, planned, and approved editing projects in Tempo (except for small or short-notice requests). If the editor is overbooked, alternatives should be discussed with the documentation manager and the requesting manager or writer. Alternatives may include rescheduling, reducing the scope or level of edit, and adding editors.

7.4.2.7 Writer Responsibilities

Writers should take the time to review the changes and comments made by the editor to avoid repeating the same issues. Reviewing the changes made by the editor is also a good opportunity to ensure that no new errors are introduced.

7.4.2.8 Resolving Comments

A timely approach provides enough time for the editor to raise comments or questions and for the writer to respond. If the condition of a draft is such that it requires major rewriting, there should be time for the editor to return the document to the writer.

7.4.3 Submitting Editing Requests

Editing requests should be submitted with the following information where possible:

- The documents to be edited
- The scope of edit required
- The time estimated for the edit
- The due date for the documents
- The GP code for the project

Details such as the scope of edit required and the time estimated for completion may need to be negotiated with the editor, depending on the factors involved such as the complexity and condition of the document. The editor should sample the content once the request is received to provide a revised estimate if needed.

7.4.4 References

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Rude, Carolyn, and Angela Eaton. *Technical Editing*, 5th edition. New York: Longman, 2011.

Weber, Jean Hollis. "How Long Does Editing Take?" Technical Editors' Eyrie. Last modified November 17, 2001. http://www.jeanweber.com/newsite/?page_id=29.

7.5 Quality Policies

7.5.1 Content Quality Policy

RU

Guideline

За стандарт уровня качества принимается подход "одна итерация

ревью".

Шаг 1. Текст написан

Шаг 2. Ревьюер делает одно ревью

Шаг 3. Автор текста вносит исправления, устраняя недочеты

Шаг 4. Ревьюер принимает работу. Конец.

Допустимый уровень performance – 2 ревью. «Пинг-понг» между автором текста и ревьюером недопустим.

7.5.2 Quality Content Policy: Solution Trainings

Stated requirements are mandatory for all training materials. Course author is responsible for quality of developed materials and their compliance with requirements below.

Training Delivery Manager is responsible for quality control. If training materials do not compliance the requirements, the course author is obliged to correct materials without using any GP code.

7.5.2.1 Training development approach

1. Training Delivery Manager sends training development kick-off letter to course authors. The letter should contain: GP Code, Due Date, LOE for development per course, Link to a server, Links to project documentation, Detailed Training Agenda, agreed with project team, SME contacts
2. Training Delivery Manager organizes a meeting with course authors and project SMEs to: 1) review if OOB materials can be reused and in which part, what else can be reused; 2) set up communication rules (syng up meetings/ review session/ expectations: for example, who will configure prerequisites)
3. It's strongly recommended to create solution specific training materials based on test-cases, project demos, pre-sales presentations or from scratch. OOB materials can be used to enrich a course with theoretical part, but could not be a basis for solution specific course
4. 1 training day = 6 hours of training. Theoretical part (slides) should take no more than 50% of a training day (so up to 3 hours). The rest of time should be spent on demonstration, tasks, exercises, Q&A.
5. Course content should be independent on other courses in a training session. In other words, no courses (and results of its practical part) should be used as a prerequisite for other courses. Exception: customer requirement to create training session with cross-modules scenarios. In this case, Training Delivery Manager should design Detailed Training Agenda based on this concept and confirm all E2E scenarios prior training development. The Library of Business Processes can be used.
6. Minimal mandatory set of materials:
7. Workshops: presentation with practical tasks, demonstration scripts for a trainer (as a separate file or as notes in the presentation), handout materials with parameters for participants, exported preconfigured objects
8. Training: presentation, training guide, exported preconfigured objects
   * Notice, that tests development is a standard part of any course, and if customer require tests there won't be any additional LOE for that.
9. Training Delivery Manager should track training materials development progress. Recommended points of control: after first day, each 1/3 of planned development time, a

day before due date, due date. TDM KPI for final materials review is up to 3 hours per 1 day training content.

10. If more than 2 SME reviews are required, it means that materials do not compliance with requirements and the course author is obliged to correct them without using any GP code
11. If it's impossible or hard for unfamiliar with solution trainer/ TDM to deliver a training using developed materials, the materials are assumed to not compliance with requirements and the course author is obliged to correct them without using any GP code

7.5.2.1.1 Training Presentation

General requirements

- Training presentation must contain such sections as: Agenda, Course Objectives, Self-Review Questions
- Actual corporate template should be used with correct year, Netcracker version
- Naming of the course and its sections should meet topics' names in Detailed Training Agenda
- Notes section content under a slide should be relevant to the slide.
- Notes should be written in language of the presentation or in English. No Russian notes, no duplicates!
- Correct grammar and spelling (slides, notes)

Training format specific requirements

- Training presentation for Workshops should contain slides with high-level steps (like general workflow) for each scenario. Example of level of scenario: "how to create and activate Business Customer Account". Under the slide with scenario course author must specify all parameters' values, write comments, what is mandatory/ optional

7.5.2.1.2 Practical Part (Training Guides, Handouts, Demonstrations)

General requirements

- All scenarios of exercises, practical tasks and demonstrations should be meaningful for participants (it means that they should represent a real-life operation scenario)
- Minimal mandatory level of detailed for scenario description: 1) Start point (navigation path to the object/ button), 2) Set of mandatory parameters with values, 3) expected result
- Demonstration duration is up to 10 minutes.
- Practice part should use migrated data as much as it possible and be customer specific (no generic naming, infrastructure of irrelevant country, technologies, etc.). It's prohibited to include steps of creating those infrastructure that would be migrated.
- Each topic in a course agenda should contain at least 1 demonstration and 1 practical task for participants

7.5.3 Training Delivery Quality

Guideline

Success indicators (out of 5):

- 4 for Trainer is a very good result, above 4 is excellent. 4.5 and above is outstanding.

- 3.5 is the minimum to consider a training successful.

7.6 Training Policies and Guidelines

7.6.1 Training Lifecycle Continuity Policy

Guideline

The training lifecycle continuity policy applies to the training delivery projects.

The training lifecycle continuity policy means that the Training Delivery Manager who prepared the RFP training response and estimation becomes responsible for the implementation of this training program in the future.

In other words, the lifecycle looks as follows:

RFP Estimation > Training Delivery

7.6.2 TRN vs IM vs SLS Code

Guideline 1

Use of 'temporary' codes is not allowed.

Correct course of action if there is no GP code in time, while preparation or even delivery must start is:

1. Request Project Code Management Group to create a new customer**.TRN.**sow code.
2. Request OSG (Operations Support Group) to open code for time submission. The OSG will contact all necessary approves and open the code to the employees.

Guideline 2

For GP code creation and utilization, use conditions below:

- For Scheme **B** use ONLY customer**.TRN.**sow code.
- For Scheme **A** use both customer**.TRN.**sow and customer**.IM.**sow codes.

7.6.3 Training vs Workshop

7.6.3.1 Семинар или воркшоп?

В NetCracker существует две разновидности тренингов: семинар и воркшоп. Ниже рассматриваются различия в материалах, способе проведения обучения, роли инструктора в учебном процессе. Также даны рекомендации по выбору подхода.

7.6.3.1.1 Определения

- **Семинар в NetCracker** – это традиционный тренинг NetCracker, на котором участники слушают лекцию инструктора и получают Workbooks.
- **Воркшоп в NetCracker** – это интенсивный курс с акцентом на практику, в котором участники повторяют все действия за инструктором.

7.6.3.2 Семинар (Training)

7.6.3.2.1 Материалы семинара

- Традиционный тренинг NetCracker
- Раздаточный материал содержит step-by-step Hands-On материалы – классические NetCracker упражнения
- Hands-on материалы разрабатываются, как методички
- Hands-on материалы пригодны для самообучения
- Исторически для создания hands-on упражнений в тренингах NetCracker широко использовались Sales Hands-ons, откуда был заимствован и адаптирован формат Сценарий–Шаг–Инструкция.

7.6.3.2.2 Проведение семинара

- Как правило, используется один проектор для показа и PPT, и демонстраций
- Теоретический рассказ проводится по слайдам
- Есть четкое разделение типов активности: лекция и практика

7.6.3.2.3 Роли инструктора и участников семинара

- Инструктор отлично разбирается в теоретическом материале лекции
- Акцент инструктора на PPT. Материалы с упражнениями участники читают сами.
- Лектор чередует активности – теория сменяется практикой
- При выполнении практических упражнений ожидается, что участники сами читают инструкции и пояснительный текст в Training Guides (учебниках)
- Во время практики инструктор привлекается, если у участника возник вопрос или затруднение
- Инструктор находит самого слабого участника и во время практики уделяет ему(им) основное внимание: находится поблизости или помогает постоянно.

7.6.3.2.4 Применение семинара

- OOB курсы

- Курсы, в которых практика несущественна
- Сейлз тренинги

7.6.3.2.5 Преимущества семинара

- Материалы тренинга пригодны для автономно обучения, например увлеченный участник может после завершения дня тренинга доделать практику, на которую у него не хватило времени в классе, или пройти ее еще раз в спокойной обстановке.
- Курс отчуждаемый: новый инструктор может изучить и использовать материалы, разработанные другим автором.
- Курсы, разработанные в формате семинара, пригодны для автономного обучения и широко используются в этом качестве внутри NetCracker.

7.6.3.3 Воркшоп (Workshop, Walkthrough)

7.6.3.3.1 Материалы воркшопа

В качестве раздаточных материалов тренинга могут использоваться также и Custom User Guides *и* OOB User Guides.

- Заранее определяются, именуются и прорабатываются сценарии (walkthrough) практики – **Tasks**
- Все названия Tasks перечисляются в детальной агенде с указанием их точных временных рамок
- Tasks оформляются в шаблоне Training Guide аналогично Exercises
- Внутри каждого Task могут быть иллюстрации из PPT, пояснительный текст, таблицы, основные шаги Steps, *но* не детальные инструкции
- В качестве раздаточного материала участники получают **Workshop Handout** и копию PPT

7.6.3.3.2 Проведение воркшопа

- Рекомендуется заранее бронировать *два* проектора и *два* экрана (или экран и светлую стену) у заказчика, и *два* ноутбука в NetCracker IT: один для PPT, второй для демонстрации системы. В качестве второго проектора можно также привезти портативный проектор из NetCracker.
- На экран 1 инструктор выводит очередной слайд, наглядно иллюстрирующий сценарий. На экране 2 участники следят за действиями инструктора, которые им необходимо повторять.
- Инструктор проводит интерактивное демо, ссылается на PPT
- Инструктор поясняет и комментирует *каждое действие* и убеждается, что все участники проделали действие, прежде чем переходить к следующему действию.
- Действие инструктора аналогично инструкции классического Exercise

7.6.3.3.3 Роли инструктора и участников воркшопа

- Инструктору отводится ведущая роль, так как, в отличие от семинара, участники не делают что-либо самостоятельно
- Инструктор – активный участник учебного процесса в течение всего учебного дня
- Участники должны постоянно обращаются к инструктору с вопросами, инструктор работает со всеми одновременно.

7.6.3.3.4 Применение воркшопа

- Кастомный курс, или OOB курс по неинтегрированному функционалу

- Заведомо одноразовый курс – функционал заведомо не станет *продуктовым* в обозримой перспективе
- Необходимые знания хорошо передаются через тренировку на практике
- Материалы для автономного использования не требуются по контракту
- Время или LOE на подготовку материалов ограничены

7.6.3.3.5 Преимущества воркшопа

- Устранение избыточных трудозатрат (LOE) – в основном, на детальное прописывание step-bys-steps – в случаях, когда они не нужны
- Участники, как правило, лучше воспринимают такой формат обучения
- Знания, полученные под непосредственным контролем и по указаниям инструктора, усваиваются быстрее, чем самостоятельно выполненные шаги, которые часто воспринимаются, как "clik-click-click"

Можно ли проводить OOB курс в формате воркшопа?

Да, можно. Проведение готового OOB курса в формате воркшопа приветствуется.

Можно ли сочетать семинар и воркшоп?

Да, можно. В одном тренинге можно проводить готовые курсы в формате семинара и проводить воркшопы по кастомному функционалу.

7.6.4 Knowledge Transfer

Knowledge Transfer – это мероприятие или серия мероприятий, нацеленная на передачу знаний и ноу-хау, накопленных на конкретном проекте, сотрудникам закачика.

KT не является тренингом в понимании NetCracker Training. KT всегда проводится кем-либо из проектной командой, как один из сервисов, предоставляемый компанией. Несмотря на то, что владельцем и менеджером запроса на такую активность является отдел CDT, тренера CDT не создают контент knowledge transfer и не проводят саму сессию, за исключением случаев, когда обладатель знаний, SME, не может в одиночку провести презентацию по причине незнания языка или из-за отсутствия presentation skills.

KT может указываться, как часть скоупа тренинг-SOW или любого другого SOW, например, имплементационного. При этом эта активность в SOW всегда указывается именно как "knowledge transfer", и никогда как "training". Это необходимо, чтобы избежать терминологической путаницы, различной трактовки, и как следствие, риска неверных ожиданий.

Расчет стоимости KT не ведется по методике расчета training quote, так как это не тренинг. Стоимость KT рассчитывается на основе фактически затраченных LOE на подготовку и проведение в нужном объеме людьми из проектной команды.

Примеры запросов на тренинг, которые в реальности классифицируются, как knowledge transfer:

1. Прокомментировать архитектуру решения, рассказать о том где, в какие моменты, и в каких точках происходит взаимодействие NetCracker с другими системами заказчика.

В данном случае knowledge transfer будут проводить Solution Architects проекта, разработавшие архитектуру решения.

2. Рассказать о нюансах интерфейсного адаптера, реализующего Interface Agreement, прокомментировать программный код. В данном случае knowledge transfer будут проводить программисты, написавшие программный код адаптера.

Guideline 1

Простой способ отличить KT от тренинга: если запрашиваемый курс есть в тренинг каталоге, то это тренинг. Если отсутствует, то это KT. Под курсом понимается и кастомизированный OOB и не-интегрированный (псевдо) OOB.

CDT проводит обучение *пользователей*, а пользователям не нужны курсы, где обсуждаются вопросы системной интеграции. И если обратить внимание на тренинг каталог, то он не содержит курсов по системной интеграции.

Guideline 2

Не следует путать knowledge transfer с **familiarization** тренингом. Familiarization тренинг может быть похож на knowledge transfer из-за своей возможной "нестандартности", однако familiarization тренинг всегда берется из каталога, хотя и может "подгоняться" под проект. Подробнее о familiarization тренингах и о рисках, связанных с ними, читай здесь Familiarization Training.

7.6.5 Training Delivery Team

Policy Guideline

Команда подготовки тренинга включает, как минимум, троих участников:

1. Менеджер OOB библиотеки – Elena Markina
2. Менеджер тренинга (Training Delivery Manager, TDM)
3. Тренер

Process Guideline 1

Зона ответственности 1. Менеджер OOB библиотеки:

- Контроль качества разрабатываемого OOB варианта курса
- Контроль соблюдения производственного процесса
- Контроль соответствия требованиям

Process Guideline 2

Зона ответственности 2. TDM:

- Контроль сроков получения продукта (курсов)
- Выявление рисков
- Действия по минимизации рисков

Process Guideline 3

Зона ответственности 3. Тренер:

- Собственная экспертиза в предметной области курса
- Повышение экспертизы заблаговременно, если необходимо
- Знание ответов на все потенциальные вопросы в классе
- Фидбек автору OOB варианта курса о дефектах курса

7.6.6 SoW Signature Date

This is a Lesson Learned.

Коллеги, появилась возможность связать SOW либо PO и наш тикет на тренинг. Если такая связь проставлено правильно, то в поле SoW Signature Date (from SoW) появляется дата. Таким образом, это поле становится неким флагом: если поле пустое тренер, никуда не едет, материалы не выдаем, сертификаты не оформляем; если поле заполнено – хорошей дороги и тренинга.

Таким образом, TDM обязан сделать следующее:

- Проставить ТОЧНОЕ-ПОЛНОЕ название SOW в SOW Title. Идеальный вариант если PM присылает СКАН подписанного SOW (можно без commercials). Таким образом мы знаем точно скоуп тренига, все допущения, название SOW и номер SOW.
- Узнать код, созданный для SOW, и проставить его в тикет.
- Удостовериться, что SOW Signature Date (from SOW) заполнено.
- Если поле пустое, попросить Andrei Denesh проверить (проставить) линк на подписанное SOW на sms.netcracker.com

Напоминаю, что без подписанного SoW никакие работы по тренингам не начинаются.

Важно! Для тренинга, опорным финансовым документов которого является PO, а не SOW, необходимо проставить ссылку именно на PO и убедиться, что в поле **SOW Signature Date** появилась дата подписания именно PO. Такая ситуация может возникнуть, если заказчик в принципе не подписывает SOW или если подробные условия проведения тренингов, включая цены, уже прописаны в каком-либо имеющемся контракте и наличие дублирующего контракта не обязательно.

Если SoW не подписано до начала тренинга, но проектные менеджеры просят провести тренинг, "т.к. SOW в работе и будет подписано со дня на день", то мы

- пишем запрос в Project Code Management Group на создание и открытие тренингового кода со всеми параметрами (name, duration, LOE, PM, tasks), с копией VP для подтверждения запроса.
- готовим и проводим тренинг под честное слово VP
- не можем закрыть тикет без получения SOW. Задача ТДМа в этом случае добиться от проектного менеджмента подписания SOW.

7.6.7 Training Completion Checklist

Print out this page (right click, "Print") and check every item on this checklist before making *Resolve* of an SMS JIRA training ticket.

- ☐ **GP Code** matches exactly the code used for this training
- ☐ **Delivery Date** matches the actual delivery date, the starting date in the detailed agenda and in the sign-in sheets
- ☐ **End Date** matches the actual finish date, the finish date in the detailed agenda and in the sign-in sheets

- ☐ **SOW Signature Date** is not empty
- ☐ **Duration in Class** matches the actual duration and equals *End Date* minus *Delivery Date*, except 4-hour trainings days
- ☐ **Number of Participants** matches the number taken from the sign-in sheets, that is the number of actually signed in participants
- ☐ **In-Class Support** matches exactly the person(s) name(s) who was supporting the delivery
- ☐ **Training Folder** exists and it is NOT the customer's folder but is another folder INSIDE the customer's folder
- ☐ **Training Folder** contains all training materials used for this training, including displayed (PPTs) and handed out materials
- ☐ **Training Report Folder** exists and contains this training's report properly filled out
- ☐ **Sign-In Sheet Folder** exists and contains sign-in sheet scans
- ☐ **Trainer** matches the trainer(s) who did the delivery

7.6.8 Detailed Training Agenda

RU

7.6.8.1 Ответственный: Training Delivery Manager (PDF), Trainer (раздача в классе)

Определение

Детализированная агенда это файл **PDF** содержащий, как минимум:

- Список дней тренинга в формате Day 1, Day 2 и т.д.
- Дату напротив каждого такого дня
- Названия курсов в каждом таком дне

Guideline 1

Любые обсуждения списка, очередности, состава, желательности/нежелательности курсов в детализированной программе должны закончиться строго до выдачи программы за пределелы отдела CDT. Факт отправки программы заказчику (нашего ПМ-а считаем также "заказчиком") считается точкой невозврата и об этом необходимо оповестить Солюшен Архитектора проекта.

Guideline 2

Детализированная программа тренинга должна высылаться заказчику в виде PDF минимум за *20* рабочих дней до начала тренинга.

Важно! Необходимо точно придерживаться графика, высланного заказчику. Причина: заказчик может командировать сотрудников из другого города специально, чтобы прослушать конкретный курс в конкретный день или даже половину дня.

Ответственность TDM -- получить подтверждение от ПМ, что заказчик ознакомился с программой.

Guideline 3

Детализированную программу тренинга необходимо распечатать на цветном принтере перед поездкой на сайт и вручить каждому участнику экземпляр перед началом тренинга. В случае вебинара детализированная программа должны быть прикреплена к приглашению на тренинг.

Guideline 4

Шаблон детализированной программы тренинга, Detailed Training Agenda, находится на странице Training Delivery Forms.

Рекомендуется детализировать программу тренинга до *30-, 45-* или *60-* минутных временных интервалов. Как мининум должны быть указаны начало и окончание учебного дня и временные интервалы между перерывами на кофе и обедом, например:

```
9:00 – 10:30 Название темы 1
```

- Подтема 1
- Подтема 2

```
10:30 – 10:50 Coffee break
10:50 – 13:00 Название темы 1 (опционально слово "cont.")
```

- Подтема 3
- Подтема 4

```
13:00 – 14:0 Lunch Break
14:00 – 15:30 Название темы 2
```

- Подтема 1
- Подтема 2

```
15:30 – 15:50 Coffee break
15:50 – 17:30 Название темы (опционально слово "cont.")
```

- Подтема 3
- Подтема 4

Причина: некотрые сотрудники заказчика в силу своей производственной занятости могут захотеть посетить только определенный курс, и не тратить первую половину рабочего дня,а прийти только на вторую.

7.6.9

https://bass.netcracker.com/pages/viewpage.action?pageId=467728557Responsible: Training Delivery Manager

Process Guideline 1

The list of participants must be requested and received from the organizer from the Client's side *not later than two weeks* before the training starts.

Process Guideline 2

Names of the participants are entered into Sign-In Sheet, in the version of the Sheet in the local language (English, Russian, Japanese, French, German).

The Sheet is printed in color on thick paper, number of copies must correspond to each day of the training.

The folder with the Sign-In Sheet template is available at: **\\ftp\ftp\Depts\SMS\CTE\Forms**

Process Guideline 3

Certificates are being prepared in accordance with the list.

If there are minor discrepancies in participants or names, additional certificates are printed and sent to the Customer after the training.

Process Guideline 4

Training Delivery Manager is also responsible for receiving of filled in Sign-In Sheets f*or each day of the training*, irrespective of whether CDT Trainer or Invited Trainer conducts the training.

Failure of providing filled in Sign-In Sheets is unacceptable, since these documents are used for the training conduction confirmation as well as for invoicing the Customer. Filled in Sign-In Sheets are collected by the Trainer in the class and are uploaded in the training's folder on FTP. Originals are stored in CDT archive.

In the class Sign-In Sheets are collected by:

- CDT Trainer
- Invited Trainer, in case the training is delivered by an employee from outside CDT

For Webex-based trainings, the Trainer must use a Webex menu command to download the list of participants who attended the teleconference bridge.

Process Guideline 5

In case if repeated sessions of the same training occur within one SMS ticket, we sum up all the participants of all the repeated training and show this number in N Participants. In N Participants fields a total number of

participants trained within one ticket is stated.

7.6.10 Remote Participants Policy

Guideline (RU)

Перед каждым тренингом Training Delivery Manager сообщает тренеру, будут ли на тренинге удаленные участники.

Если тренер получил от TDM информацию, что удаленных участников не планируется, тренер ни при каких обстоятельствах не подключает свой лаптоп к Webex, и при этом при возникновении такой просьбы в класес тренер просит обратиться к менеджементу проекта Netcracker и немедленно ставит в известность TDM.

Guideline (EN)

Before each training, Training Delivery Manager informs the trainer whether there would be remote participants on the training.

If the trainer is informed by TDM that there would be no remote participants, then the trainer under no circumstances connects his/her laptop to Webex. If at the same time such request arises in the class, the trainer asks the customer to talk with the Netcracker project management and immediately informs TDM about this.

7.6.11 Feedback Forms

Guideline

The goal is to collect 100% feedbacks.

- Feedback forms are collected in paper.
- Allow 15 minutes after the class to fill out the form.
- **Do not use soft copy during in-class training.** There is a risk that the form will not be sent back.
- Soft version can be used only to collect feedback of remote participants, joining via webex.

7.6.12 Sharing Materials with Customer

This is a Lesson Learned.

Guideline

Always share **both** course Exercises and course PPT when sending a course to a customer. Never split a course, never send just practical part (exercises) if the course also has a PPT slides deck. Looking at just the exercises customer may get wrong impression of the course contents and escalate.

As a rule, try not to send any courseware to a client before training starts. If needed, send 2 days prior to the event start, not earlier.

7.6.13 Printed Training Materials

Guideline 1

Выдавать на любой внешний тренинг любой курс из каталога Developer Training Catalog в электронном виде (PDF) недопустимо. Только в печатном виде.

В контракте не должность стоять soft или hard. Просто training materials.

Guideline 2

Use the following recommended language where possible:

```
Training materials shall be provided to each attendee during
training.
```

If the customer insists on explicit wording 'hard' or 'soft', then do not commit for *hard* copies before you make sure that the of number of users is less than 20.

Guideline 3

Provide hard copies in the proposal if the number of users is below or equals 20.

7.6.14 Developer Trainings

Guideline 1

Developer training can only be done under following conditions:

- No 3rd parties in the class
- Account Manager's written approval (email)
- NDA in place
- Printed copies of the training materials.

Guideline 2

Any Developer training should be proposed only upon receiving approval of Account Manager for Developer training delivery. So the steps are the following:

1. Customer requests for Developer training.
2. Account manager emails to the Training Delivery Manager their principal approve for providing Developer training fpr the customer.
3. The scope and agenda discussion and composing, and other procedures start.
4. other standard steps...

Guideline 3

Any training with the word *Framework* in the title of a course is a Developer training.

NetCracker Object and Attribute Model topic is a Developer training as well.

7.6.15 SPS3 Library Storage

Правило 1

Политика драфта и финальной ревизии файла

- На SPS3 выкладываются только *чистовые* файлы, вместе с резолвом тикета PSUPTW.
- Старый чистовой файл заменяется новым чистовым файлом с выполненной и проверенной фичей по тикету.
- Промежуточные (draft) версии файла на SPS выкладывать недопустимо. Разработка и апдейт ведется локально.

Правило 2

Комментарии и Tracked Changes

- Comments внутри файлов, а также tracked changes на SPS3 полностью запрещены (попадут на внешний тренинг).

Правило 3

Создание новой папки курса в библитеке

- В момент резолва тикета — готовности чистовой, по его оценке, версии — автор создает папку и загружает файл(ы).
- Он же правит страницу своего курса в каталоге на BASS и проставляет там линк Content Folder.
- На SPS3 папке можно проставить обратный линк с текстом "BASS Page". Для этого нужно выбрать тип фолдера 'Folder URL'.

Правило 4

Папки кастомных курсов

- Для кастомных тренингов заводим папки внутри продуктовых с названием кастомера. Пример: для тикета PSUPTW-648 это будет **/NetCracker Release 9.3 Training Course/Process Orchestrator II/Orange Poland**

7.6.16 Familiarization Training

Familiarization Training will be provided to *Client* at the start of the Analysis phase of the project. This training will provide a high-level overview of the Netcracker product to enable participants to become familiar with the core features and functionality that are available. This training will allow *Client* attendees to participate in ensuing Netcracker workshops with a higher degree of effectiveness. This training will be provided in a demo mode only and does not include any hands-on participation from the *Client* attendees.

Под Familiarization Training мы понимаем:

- Релизный тренинг до старта проекта
- Релизный тренинг на начальной стадии проекта
- Воркшоп до старта проекта
- Воркшоп на начальной стадии проекта
- Презентация на основе наших релизных курсов без практики

Guideline 1

Если заказчик в RFx, Compliance Matrix, сопровождающей RFx или SOW, требует проведения Kick-Off Training, либо если его предлагает Training Department, либо об этом просит проектная команда, необходимо выполнить следующее:

- в ответе на RFx/Compliance Matrix явно указать, что тренинг будет проводится при участии Solution-архитектора именно этого проекта
- если это SOW, то добавить описание данной роли в раздел Training Team и добавить в Assumptions
- заложить бюджет на архитектора (LOE, T&E)

Ответственный – Assignee тикета на оценку/подготовки SOW.

Guideline 2

После того, как дата Familiarization тренинга согласована, необходимо минимум за 2 недели провести Dry-run ОБЯЗАТЕЛЬНО вместе с архитектором. При неявке архитектора на Dry-run или его отказ (по любой причине) от мероприятия, эскалировать на менеджмент проекта и Andrei Denesh, Unknown User (roor[left]).

Ответственный – TDM.

7.6.17 SOW Training Approval Policy Checklist

- [ ] Is Kick-Off training in scope? If yes, Solution Architect role is allocated in the Resource Plan for the entire duration of Kick-Off.
- [ ] Is Developer training in scope? If yes, Developer Engineer role is allocated in the Resource Plan for the entire duration of Dev training.
- [ ] Is System Administrator training in scope? If yes, IT Engineer role is allocated in the Resource Plan for the entire duration of Sysadm training.
- [ ] Resource Plan contains resources allocated to support each training or custom documentation deliverable in scope.
- [ ] No subcontractors, partners, or 3rd parties are allowed in the class.
- [ ] Browser version is not explicitly mentioned in the class & equipment requirements.
- [ ] No "soft copies" for Developer trainings.

7.6.18 Lead Time

Guideline

- For a standard training class: a maximum lead time of 3 weeks (15 working days) if the trainer is already in Europe, of maximum lead time of 6 weeks (45 working days) if the trainer comes specifically from outside Europe for the training.
- For a customized training for which development is needed, an additional 4 weeks (20 working days) on the lead times above will be needed. For customized training, the training content needs to be agreed upfront.

NetCracker should do its best to shorten the lead times described above.

7.6.19 Zero cost training

Zero cost training– это тренинг, за который NetCracker по каким-либо причинам не берет плату с заказчика. Даже если заказчик оплачивает T&E, но самого тренинга нет ни в одном контракте (т е не оплачены разработка и training delivery), то тренинг все равно считается zero cost.

Кейсы:

- На стадии presales заказчику пообещали тренинг "просто так", и теперь говорят, что да, надо провести. Другими словами, часто zero cost training - следствие несогласованных с нашим департаментом commitments со стороны sales.
- Подарок от компании. Например, с заказчиком напряженные отношения, проект предлагает провести тренинг за наш счет (чтобы доказать, что функционал работает/ чтобы команда со стороны заказчика говорила с нами на одном языке и т.д.). Обратный пример - с заказчиком хорошие отношения, подписан контракт на новый проект внедрения на крупную сумму, Поэтому в целях сохранения и развития отношений с заказчиком сэйлз договаривается о том, что часть тренингов, даже если они не отностся к данному проекту, будут бесплатные.

- Разногласия по основному контракту. Заказчик считает, что необходимые ему тренинги прописаны и относятся к основному контракту, хотя по scope (общее количество дней/ темы/ количество сессий) NetCracker свои обязательства выполнил. В таких случаях, если проведение тренинга является необходимым условием продвижения проекта в целом, и с заказчиком не удается оформить CR на тренинги, руководство может принять решение о предоставлении zero cost training.

Действия Training Delivery Manager:

- Необходимо составить SOW на zero cost training, такое же как на обычный тренинг. Единственное различие: в секции 4. Pricing необходимо указать, что это zero cost training
- Заполнить SOW Approval Checklist с полным указанием LOE, T&E (в графе Non-Billable T&E Total Price). Project code - non-billable Customer.TRN.XXX
- Запросить approve на zero cost training у regional VP. К письму необходимо прикрепить SOW, Checklist и продублировать: название тренинга, его длительность, LOE, T&E, non-billable Customer.TRN.XXX и период его действия.
- Только после получения approve и открытия соответствующего кода можно начинать подготовку к тренингу.

Note: если заказчик оплачивает T&E, все расходы по командировкам тренера и SME могут списываться либо на sales код (NC. SLS.XXX), либо на имплементационный код проекта.

7.6.20 Signed training SOW and exceptions

For all trainings we need a signed SOW before the training.

If a ticket for training is created and SOW is not initiated in two months, the ticket should be resolved as "Cancelled by Requestor" and closed.

If the SOW is not signed before the training, we need a VP approval for the training to happen and GP training code (TRN) to be created and opened for hours submission in ERP.

If the trainings are delivered, the training ticket cannot be closed untill the SOW is signed. It is TDM's responsibility to make sure we have the SOW for the training.

7.6.21 Floorwalking

Floorwalking - в буквальном переводе "хождение по этажам". В классическом варианте floorwalker приезжает к клиенту в офис, ходит по рабочим местам и консультирует сотрудников по всем возникшим вопросам. Либо floorwalker обходит рабочие места сам, либо работает в кабинете, а ему пишут и звонят сотрудники фирмы с просьбой подойти. Материалы для floorwalking не нужны. Предварительно оговаривается только скоуп floorwalking, как, например, после тренинга проводить консультирование на определенную тему.

Практика на Оптусе: в кабинете работает флорвокер и сотрудники, которые задают ему вопросы. Другой вариант: floorwalker - это SME на тренинге, который проводит клиент своими силами для своих же сотрудников.

7.6.22 Testing Training Environment Onsite

Guideline 1

7.6.23 Overtime

Все овертаймы на работы по тренингам заводят в erp TDM после согласования с владельцем кода.

7.6.24 Copyright for Training Materials

Netcracker retains ownership of all training materials (e.g., presentations, training guides) that we create and that relate to our products and services, including derivative works of those materials that a customer may create for end user training.

If, as a part of Train-the-Trainer Training, we provide presentation and training guide templates that may be customized for End User Training, then such templates may be modified and used for End User Training. However, all such materials will be owned by Netcracker and are licensed to customer for its use.

7.6.25 Delivering Trainings by Other Teams Members

Some trainings are delivered by external team members. A standard example is the System Administrator course.

In some cases a project team can deliver trainings, for example, when a customer requires trainings in infeasible for CDT terms and the project is ready to deliver the trainings.

The external team members assigned to deliver the trainings by thir own must be properly incstructed and tested before delivering the trainings,

The following items must be checked:

Customer Expectations Compliance

Trainer must be informed of what the customer waits from the training.

Training Materials

Training materials must be checked for compliance with the customer solution NC version and corporate training materials structure, content and styling.

Training Materials Confidentiality

NB! Trainier must be instructed that the training materials are **NEVER**

provided to the customer in editable format. Only PDF copies can be supplied.

Training Materials Confidentiality

NB! Trainier must be instructed that the **Developer** training materials are **NEVER** provided to the customer in softcopies. Only hardcopies can be supplied.

Training Agenda

Training agenda must be fully compliant with the contract or further agreements with the customer (emails, MoMs, etc)

Detailed Training Agenda

Detailed Training Agenda must be accurate and detailed with cofee breaks and lunch.

Logistics

Trainer must be informed of the customer location, PoC contacts, time of training start and completing,

Customer Communications

Trainer must be instructed on how to talk to the trainees and behave himself/herself at the trainings.

Dry Run

Trainer must be tested by a kind of dry run to demonstrate his/her skills in presenting the material and answering questions.

The checks must be provided on such a time base to have a slot for requiring for another trainer from external team if incomplianceis revealed.

7.6.26 Travel Restrictions

The following employees have restrictions for travelling from CIS:

- Children of age below 5
- Employee age above 60
- Restrictions to travel because of disabilities (инвалидность)
- US, Canada: lack of higher education diploma

7.6.27 Server Creation Request Rules

The following guidelines apply for server creation

Guideline 1

The request from TDMs for server creation must be submitted to points of contact at the least 10 workdays before the required server creation date.

Guideline 2

Points of contact: Anton Shimorskiy and Sergey Trusenkov

7.6.28 Resource Inventory vs. D&R

Do not join *Resource Inventory* training with *Discovery&Reconciliation* training in a single training course.

If a Customer solution includes both modules and both trainings are required, compose training program with both training courses included.

7.6.29 Business Trips

Policy Guideline

According to the request of regional managers:

For **.IM.** codes business trips must be started and launched by Off-site

Project Managers. Training Manager should send the request to the Off-Site PM in this case.

If the Training Manager is the owner of the training code, that is for the **.TRN.** codes, then the Training Manager starts and launches the business trip.

7.6.30 Visa Procedure

Guideline

В день, когда становится известно о том, что сотрудник назначен на тренинг, Тренинг Менеджер должен написать запрос в Visa Support Group с просьбой либо сделать визу сотруднику, либо подтвердить, что виза не нужна.

7.6.30.1 Visa Policies

7.6.30.1.1 USA

- L1B visas for the US (except India) as a rule. Multiple travels within a year (limited overall duration though). Can use "Trainer".
- B1/B2 is acceptable for single, very short, up to 1-week visit
- US visas for Latvia citizens is a question for the next 6 months
- Do not plan new hires for travel to the US within first 14 months
- H1B - should travel only to that specific location

7.6.30.1.2 Shengen Zone

- "Workshop Facilitator", we sold the product to our client and now want to participate in/lead a workshop about our product
- Good bank account balance (letter from bank) and proof of intention to return (car, real estate papers, etc.) is required for Russian trainers. Diploma is not required.

7.6.30.1.3 Indian Trainers

- Additional scrutiny for the US visas
- B1/B2 may face issues on US border

7.6.31 Keeping TDM in CC of Correspondence with SME

Instructional designer shall keep the training delivery manager who coordinates the OOB course upgrade or development, in the copy of all the emails with the product SME, who supports activities and reviews the OOB training course.

7.6.32 Keeping OOB Training Materials in Process on SPS3

The OOB training materials in process of update or development must be stored on sps3 in the folders with prfefix "_In_process_" like

https://sps3.netcracker.com/corporates/NetCrackerProductReleaseTrainings/NetCracker%20Product%20Release%20Trainings/Forms/AllItems.aspx?RootFolder=%2Fcorporates%2FNetCrackerProductReleaseTrainings%2FNetCracker%20Product%20Release%20Trainings%2FNetcracker%20Release%2010%2E3%20Training%20Courses%2F%5FIn%5Fprocess%5F%20Subscriber%20Inventory&FolderCTID=0x012000725CA20A3886B04DA0BA0550242CD087&View={59567AD0-DA70-4866-B9E4-E0262C6C3DBF}

7.7 Standard Response

Documentation	Standard Response
Installation guide available	*Ok. IT Deployment*
Maintenance guide available	*Ok.*
System documentation available	*Ok.*
Operating documentation available	*Ok.*
Training documentation available	*У нас есть в скоупе тренинги? Если они будут, то да документация будет.*
User documentation available	*Ок. Продуктовая документация.*
User and training documentation describes how to use each component in non-technical terms (e.g., functional description)	*Ок для тренинговой документации (см. следующий комментарий)*
User documentation clearly defines procedures for all processes	*Не четко. Если в скоупе нет пользовательской документации по решению, то продуктовая не покроет все.*
System documentation includes design and setup information	*Ок.*
Documentation is available in electronic format (e.g., CD-ROM)	*Да, soft copies в PDF можно пересылать.*
Documentation may be maintained by the customer	*Продуктовая документация выдается в PDF, и ее редактирование – сомнительная выгода.*
Documentation can be copied by customer without restriction	*Внутри организации заказчика, да. Передавать 3-им лицам нельзя.*
Documentation is regularly updated and distributed	*С релизами да и по запросу могут выдаваться апдейты.*

7.8 Responsible: Technical Writer

Process Guideline

Any discreapncies with the Design Documentation - Product/Solution guidelines are reported to product component design documentation authors. Product PM and Alexandra Pilyugina or Sergey Kudyurov are CC'd in the e-mail.

Feedback on FDS, DMS, UIS, REQs, IM is mandatory, feedback on other design documents is optional.

7.8.1 Requires: Product Project Kick-Off Procedure

7.9 RBM Documentation CRs

Rationale

- The analysis and documentation of CRs has been a pain point, and we need to undertake measures to streamline this process.
- We can put a process in place for the documentation CRs, and subsequently look at how we can address the issue of Dev CRs.
- We are already familiar with this process and have been following it in the past. Off late, for some reason however, we have not been very consistent in this activity resulting in a bulging list of unresolved PRs. If we can invest time to clear up the backlog and ensure that this process is adhered to in the future, our list of CRs will be reduced to a manageable and within-reach range.

7.9.1 The process

1. An appointed analyzer draws out the list of documentation CRs targeted for a specific release.
2. The analyzer performs a high-level analysis of the reported problem and enters relevant information in the **Impact** field of the Change Synergy page for the specific CR.
3. The analyzer assigns a team member as the resolver of the CR.
4. The resolver, on receiving an email from Change Synergy, becomes the owner of the CR.
5. The resolver analyses the problem, updates the appropriate document, has the content reviewed by the SME, and finalizes the content.
6. As a post-release task, the resolver performs the following activities:

- Changes the status of the CR to Dev Complete in PRD and adds a note to indicate the change.
- Changes the status of the CR to Resolved in Change Synergy and adds a note in the **Enter Note** field.

Note that the status must mandatorily be changed in both the applications, and a note must be added to indicate the change.

7.9.2 Team responsibilities

- Unknown User (kpai4020[left]) will hereby change the status of all documentation CRs fixed for 8.0.2 to Dev Complete and Resolved. Thereafter, he, as the analyzer, will perform a high-level analysis of the documentation CRs for the upcoming MRs: 5.0.20 and 7.0.5. He will also assign a resolver for each CR based on the functional expertise of team members and their availability.

- Unknown User (vraula[left]) will analyze the backlog of CRs for all other streams of RBM, and if a CR is already addressed, change the status to Dev Complete and Resolved.

- Unknown User (ggup7372[left]) will analyze the Dev CRs for 5.0.20 and 7.0.5 (with help from Unknown User (vraula[left]), if required) and assign team members including herself via an excel sheet to document the Errata and update the affected guides.

We will eventually work out a way to track the status of Dev CRs. Until then, Dev PRs will be tracked via a spreadsheet prepared by Unknown User (vraula[left]) and Unknown User (ggup7372[left]), The spreadsheet https://sps3.netcracker.com/sites/proddoc/RB Releases/RBM 8.0/RBM_MR_Dev_PRs_Analysis_for_Doc_Impacts.xlsx is placed in the SharePoint Server. Additional sheets will be appended to this spreadsheet for future MRs.

7.10 Customer Communication

This is a Lesson Learned.

Общение с заказчиком всегда идет только через Point of Contact – ПМ или Sales представитель.

Напрямую на заказчика не выходим, даже если коллега из Trainings уже общался с этим заказчиков напрямую.

Если PoC готов отдать коммуникацию напрямую, то это делается так:

1. Он вначале узнает, готовы ли вы
2. Он в отдельном письме представляет вас заказчику, “Let me introduce…” и т.д.

Только после этого можно вступать в прямую переписку с заказчиком.

7.11 CR and PDCR Estimations

7.11.1 Оценка трудозатрат на CR в части пользовательской документации

Информация в данном разделе применяется как к продуктовым CR (PD CR), так и к проектным CR.

Процесс оценки включает участие бизнес-аналитика BA и технического писателя TW.

Шаг 1. Бизнес аналитик – это первая линия оценки. Бизнес аналитик знает влияние функций CR на пользователя и принимает решение есть ли TW работы в CR.

Шаг 2. *Если* TW работы есть, то создается "Documentation Subtask" и TW приступает к оценке LOE.

7.11.2 Есть ли TW работы в CR?

В CR **нет** работы для TW, если CR имеет:

- **Zero End User Impact** так как у CR нет юзер интерфейса, включая случаи тривиальных интерфейсных улучшений. В документации не описываются вещи типа "Если вы видите красную звездочку рядом с полем, это означает обязательное поле". Сюда также относятся случаи описания общепринятых самоочевидных инструментов в пользовательском интерфейсе.
- **Zero Advanced User Impact** так как нет функций, подлежащих конфигурированию или настройке.
- **Zero Administrator Impact** так как нет инструментов для траблшутинга или отсутствует сам объект траблшутинга.
- **Zero Developer Impact** так как CR не добавляет никаких новых публичных функций в Public API.

Если работ TW нет, но "Documentation Subtask" заведен, то он резолвится со статусом "Not a Bug".

7.12 Как заполнять поля в отчете TER

7.12.1 Схема заполнения TER отчета

Израсходованные часы сообщаются в Time and Expeses Report (TER) по следующей схеме:

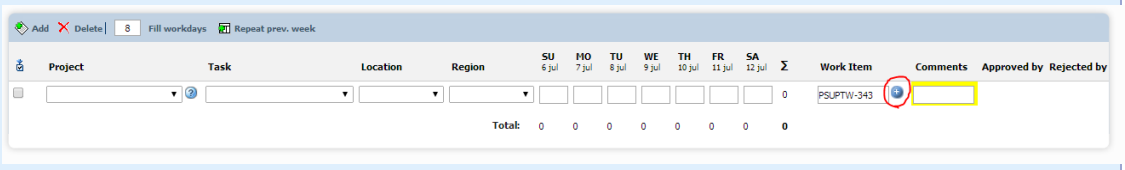
Project	Task	Work Item	Comments
Код проекта. Указан в тикете.	Для проектов в домене **NC.**: • "Training Documentation Development" • "User Documentation Support" • "Design Documentation Support" Для проектов в клиентских доменах: • Получить у PM проекта	• Ключ тикета в системе PSUP • Ключ тикета в системе SMS • Ключ тикета в системе TMS	Содержимое поля "Summary" тикета

Пример

- Для каждого тикета заводится своя отдельная строка Work Item. Для

этого используется кнопка "+", показанная на рисунке ниже.

- В поле Work Item может стоять только ключ тикета (не гиперссылка), без каких-либо дополнительных символов. Пример: `PSUPTW-343`
- Summary тикета указывается в поле Comments.



7.12.2 Классификация Work Items по GP коду

N	Вид активности	Система JIRA	Заказчик.Тип.Скоуп	Task
1	Сборка и публикация документации для заказчика	PSUP	*CUSTOMER*.**IM.***XXX* **NC.PROD.***XXX*	Определяется PM-ом проекта внедрения
2	Сборка и публикация документации для релиза NetCracker	PSUP	**NC.SMS.PDSUP**	"User Documentation Support"
3	TW работы для PDCR	PSUP	**NC.PROD.***XXX*	Определяется PM-ом продуктового проекта
4	TW работы для Product Project, кроме оценок	TMS, PSUP	**NC.PROD.***XXX*	Определяется PM-ом продуктового проекта
5	TW работы для проекта внедрения, включая TW Lead	TMS, PSUP	*CUSTOMER*.**IM.***XXX*	Определяется PM-ом проекта внедрения
6	Любая операция мёрджа контента в продуктовую пользовательскую документацию	PSUP	**NC.SMS.PDSUP**	"User Documentation Support"
7	TW работы по исправлению дефекта пользовательской документации	PSUP	**NC.SMS.PDSUP**	"User Documentation Support"
8	Любые TW работы по продуктовой тренинговой документации, включая: • Добавление новых фич, нового контента (например, тестов) • Разработка новых курсов • Мёрдж контента из кастомизированной	PSUP	**NC.SMS.NCU**	"Training Documentation Development"

N	Вид активности	Система JIRA	Заказчик.Тип.Скоуп	Task
	документации в продуктовую • Баг-фиксинг документации			
9	Работы TM по сборке и баг-фиксингу серверов для практики	PSUP	**NC.SMS.NCU**	"Training Documentation Development"
10	TDM активность, кроме оценок и подготовки Separate Tarining SOW	SMS	*CUSTOMER*.**IM.***XXX*	Определяется PM-ом проекта внедрения
11	Подготовка Separate Training SOW (на тренинг), включая все оценки	SMS	**NC.SMS.NCU**	"General"
12	Любые работы по кастомной тренинговой документации	TMS, PSUP	*CUSTOMER*.**IM.***XXX*	Определяется PM-ом проекта внедрения
13	Проверка дизайн документации, feedback на дизайн документацию	PSUP	**NC.SMS.PDSUP**	"Design Documentation Support"
14	Ответ на RFP для бид-менеджера, включая: • Подготовка скоупа обучения • Оценка трудоемкости подготовки этого скоупа (LOE)	SMS	*CUSTOMER*.**SLS.***XXX* **NC.SLS.***XXX*	Определяется бид-менеджером
15	Оценка TW трудозатрат для продуктового проекта	TMS, PSUP	**NC.SMS.PDSUP**	"User Documentation Support"

7.13 NetCracker Style Guide Change

7.13.1 Style Guide Change Committee

For the Netcracker style/design guides, there is a committee that acts as the governing body for the standards. When someone has a question or request, it gets submitted to the members of the committee for:

- discussion
- approval
- making the change public

7.13.2 Members of the Committee

Adam Bramhall

Anthony F Popp

Ria C Small

Andrei Denesh

Natalia Simonova

7.14Training Forms and Blueprints

7.14.1 Training Delivery Package

Delivery	Evaluation Forms
Detailed Training Agenda Template 2017.docx Read detailed agenda guidelines here Detailed Training Agenda Training Sign In Sheet 2017.docx Read sign-in sheet guidelines here Training Delivery Manager Training Sign In Sheet 2017.fr.docx	Course Evaluation Form DE_2017_print.pdf Course Evaluation Form EN_2017_print.pdf Course Evaluation Form FR_2017_print.pdf Course Evaluation Form RU_2017_print.pdf Course Evaluation Form Esp_2017_print.pdf **Forms to use on webinars:** course_evaluation_forms_2016_de_Webinar Only!.pdf course_evaluation_form_2016_en_Webinar Only!.pdf course_evaluation_forms_2014_fr_Webinar Only!.pdf course_evaluation_form_2017_ru_Webinar Only!.PDF course_evaluation_form_2017_esp_Webinar Only!.pdf Course Evaluation Form Letter.pdf
Training Report	**Training Certificates**
Training Report Template EN	Certificate Text Template (EN)

Delivery	Evaluation Forms
2017.docx Training Report Template RU 2017.docx Training Course Evaluations	Certificate Text Template (RU) Certificate Text Template (SP) Certificate of completion 2013 - source file.ai
Onsite Training Requirements	
Onsite Training Requirements.docx	

7.14.2 Training Sales and RFPs

7.14.2.1 SOW Approval Checklist

SOW Approval CheckList Template



SOW Approval Policies and other templates

7.14.2.2 Training Program Template - RFx Response

RFP Response-Training Program Template 2017 v0.8.docx(document content below ↓↓)



RFP Response-Training Program Template 2017 with TNA v0.3.docx(document content below ↓↓)



7.14.2.3 Training Proposal Template (PPTX)

Training Proposal Template.pptx (file content below ↓↓)



7.14.2.4 Training Strategy Template

Training Straregy Template 2017 v0.1.docx(document contents below ↓↓)



7.14.2.5 Training Plan Template

Training Plan Template 2017 v0.1.docx(document content below ↓↓)



7.14.2.6 Training SOW Template

Training SOW Template 2017 v 1.0.docx (document content below ↓↓)



7.14.2.7 Training Services Portfolio



Follow this link: Cablevision Training Presentation v0.1.pptx

7.15 Glossary

7.15.1 Development and Release Cycle

Term	Definition and Meaning
ACPD	**Accelerated Core Product Development**. RBM term. Like a head release feature, but it starts out as a client-funded feature and is rolled into a head release.
Doc PR	**Documentation Problem Report**. RBM term.
Dev PR	**Development Problem Report**. RBM term.
CMCORE	**Collections Manager Core**. CM term.
RLA	**Release Level Agreement**. Scope of work attached to a release. Agreed documentation work for a release is referenced as DOC RLA (for example, RLA - Installation/Platform, RLA Product and tools, RLA enhancement).
Write-up	
Roll-up	Adding a customer sponsored RBM product feature (ACPD) into a GA release of RBM.
PD CR	**Product Development Change Request**. TOMS term.
SME	**Subject Matter Expert**
SILO	Owner of RBM Module.
MR	**Maintenance Release**. A release where 3rd position number is increemented. Used for clients' releases.
HR	**Head release**. Major release, where 2 fisrt position numbers are changed.
SA	**System Availability**
GA	**General Availability**

Term	Definition and Meaning
Subset	Partial document set released at SA.
Fullset	Fullset documentation released at GA.
Front End Documentation	Design documentation. In RBM, presumably it is High Level Design (HLD) document.
RAT review	**Review Automation Tool based Review**. RBM Technical and Edit reviews are raised through RAT. http://infdev.emea.convergys.com/review/
HOT request	
CIBER Team	Former RBM team split into 3 TOMS teams: Release Management, Operations Tools, IT Deployment.
ICE	**Information management Center of Expertise**. http://infdev.oz.convergys.com:8040/mediawiki/index.php/ICE
BBGUI	**Browser Based GUI**. ICOMS term.
EAV	**Entity-Attribute-Value**. NetCracker Object and Attribute model is a kind of Entity-Attribute-Value model. See EAV in Wikipedia.
DCUT	**Design, Coding, Unit Testing, defect resolution**. RBM term.
ECA	**Enhanced Care API**. RBM term.
SPC	**Stored Package Specification** (for PLSQL stored procedures). RBM term.

7.15.2 RBM Training Courses

Course Acronym	Course Name	Product	Description
POV	Product Overview	Rating and Billing	Rating and Billing Overview/Online Charging Overview
CCM	Customer Configuration and Maintenance	Rating and Billing	Basic Customer/Account config in Rating and Billing
ED	Event Definition	Rating and Billing	Event Configuration for Rating and Billing
RCM	Rating Catalog Maintenance	Rating and Billing	Rate Plan Configuration in Rating and Billing
PP	Products and Pricing	Rating and Billing	Product and Price plan configuration in Rating and Billing
DIS	Discount Configuration	Rating and Billing	Discount configuration in Rating and Billing
ROP	Rating Operations	Rating and Billing	Process Plan and rating related operations
BOP	Billing Operations	Rating and Billing	Process Plan and Billing related operations
DM	Data Model	Rating and Billing	Introduction to core data tables in Rating and Billing

Course Acronym	Course Name	Product	Description
FIN	Finance	Rating and Billing	Finance relation configuration and functionality
NPC	Policy Control and Configuration	Rating and Billing	Online charging Network Policy Controls
DTD	Day to Day Operations	Rating and Billing	Overview of System Operations
AED	Advanced Event and Rate Plan Configuration	Rating and Billing	
RTCO	Real Time Convergent Charging Overview	Rating and Billing	
ITT	Integration Tools	Rating and Billing	
RTCW	Real Time Convergent Charging Workshop	Rating and Billing	
ACC	Advanced Customer Concepts	Rating and Billing	

7.15.3

8 Recommended Software

8.1 SVN

Guideline

Документационный тикет не может быть переведен в статус Resolved, если соответствующий ему контент еще не был закомичен (committed) в SVN/ProductDocuments. Тикет переводится в Resolved только после того, как контент закомичен и с файла в SVN/ProductDocuments снят Lock.

Инструкцию по работе с репозиторием SVN можно скачать здесь.

Guideline

Documentation ticket's status cannot be changed to Resolved if the appropriate content is not committed to SVN/ProductDocuments. A ticket can be resolved only when the content is committed and the Lock is released.

For information about working with SVN, see the SVN Instructions.

8.1.1 Работа с документационным репозиторием

Последовательность шагов при работе с документационным репозиторием:

1. Assignee ставит Lock на файл в SVN/ProductDocuments.
2. В случае успеха Assignee меняет статус тикета на **In Progress**. Если при выполнении операции возникли проблемы- см. Коллизия.
3. Выполняется работа над контентом.
   Для работы с контентом используется локальный HDD (жесткий диск).
   Промежуточные версии в репозиторий не выкладываются. Для передачи файлов в процессе перекрестных проверок (*peer review*) и технического ревью *(SME review*) используется MS Outlook. В репозиторий выкладывается версия документа, прошедшая все необходимые проверки
4. Assignee делает commit финального контента в SVN/ProductDocuments.
5. Assignee снимает Lock с файла в SVN/ProductDocuments.
6. Assignee меняет статус тикета на **Resolved**.

8.1.2 Working with the Documentation Repository

Step-by-step procedure for working with the documentation repository:

1. The Assignee sets Lock on the file in SVN/ProductDocuments,
2. If successful, the Assignee changes the ticket stasus to **In Progress**. Otherwise, see Collision.

3. The file content is being processed. To develop content, the local HDD (hard disk drive) is used. The interim versions are not depolyed to SVN. File transitions between specialists in process of *peer review* and *SME review* are performed via MS Outlook.The final version of a document is deployed to SVN when the reviews are completed
4. Once the work is done, the Assignee commits the final content to SVN/ProductDocuments.
5. The Assignee releases Lock from the file in SVN/ProductDocuments.
6. The Assignee changes the ticket status to Resolved.

8.1.3 Коллизия – файл заблокирован другим

К п.2 выше, если Assignee не может поставить Lock, например из-за того, что файл заблокирован другим, то Assignee договаривается с ним о моменте снятия блока. Если Assignee принимает решение изменить контент файла в созданной локальной копии, зная при этом, что файл заблокирован другим, то это означает, что он создал локальную ветку.

Для мерджа ветки в документационный репозиторий Assignee должен:

1. Договориться/дождаться, когда будет снят Lock.
2. Поставить lock файла на себя
3. Сделать Compare & Merge из своей локальной копии в репозиторную посредством Word.
4. Снять Lock.

8.1.4 Collision – the file is locked out by another specialist

If the Assignee cannot set Lock on the file (see item 2. above), for example, because the file is locked out by another specialist, then the Assignee makes arrangement with the above specialist for the time the Lock is to be released. If the Assignee takes a solution to update the file contents in the created local copy while the file is locked by another, it means that the Assignee creates a local branch.

To merge the branch to the documentation repository, the Assiognee shall:

1. Wait until the Lock is released from the file.
2. Set Lock on the file.
3. Make Compare & Merge from the local copy to the repository file using MS Word.
4. Release Lock from the file.

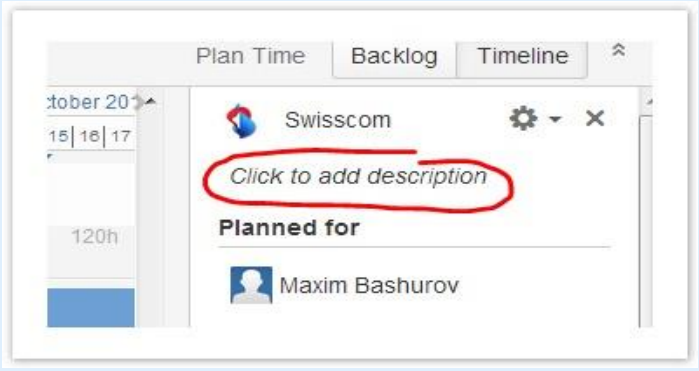
8.2 Поле Description

Guideline

В любом allocation в Tempo должно быть заполнено поле **Description**. Возможные варианты:

- Гиперссылка на тикет тренинга
- Гиперссылка на тикет в проекте PSUPTW или проектах на TMS. В ланном случае может быть более одной гиперссылки.

- Если нет опорного тикета, то краткое описание сути задания для сотрудника.



8.3 JIRA Systems

8.3.1 Usage of JIRA Systems

8.3.1.1 PSUP: Продукт

- Любые изменения продуктовой документации. Типы тикетов **Bug, Improvement.**
- Новая продуктовая документация. Тип тикета **New Feature.**
- Документирование новых фич в продукте. Тип тикета **New Feature.**
- Продуктовая тренинговая документация. Типы тикетов **Bug, Improvement, New Feature.**

8.3.1.2 TMS: Проект

- Солюшен документация. Тип тикета выбирает команда.
- Solution User Guides. Тип тикета выбирает команда.

8.3.1.3 SMS: Тренинги

- Тренинговые мероприятия. Тип тикета **Training.**
- Кастомная тренинговая документация. Тип тикета **Training.**

8.3.2 Information from JIRA Helpdesk

The **Implementation** and **Product Development** projects should be created in a separate JIRA instance **TMS.**

Please find the detailed information about TMS **here.** General overview of the project configuration and the work process is available in the **presentation**

The IT Group is responsible for project creation in that instance. Please fill the **form** and attach it to the request email.

8.3.3 Information on JSD

Information on JSD can be found here
https://sps3.netcracker.com/corporate/JSD_Documents/default.aspx

8.4 MS Word

8.4.1 Configuring Regional Settings

Word documents include Word-specific fields like table of contents ("TOC"), index entries ("XE") and cross-references ("REF"). When editing such fields in the field code mode, you may notice that in some fields (for instance, in "TOC" fields) you can specify a list of entries.

Important! Individual entries in the list must be separated with semi-colons (";").

Note that when updating such a field with list entries, Microsoft Word checks the list separator setting in the Windows regional settings. Microsoft Word actually updates the field only if this setting is ";". Otherwise, Microsoft Word displays an "Error! …" string in the field.

Changing regional settings in Windows XP

To change the list separator regional setting in Windows XP:

1. Click the **[Start]** button.
2. From the <Settings> menu, select <Control Panel>.
3. In the Control Panel window, double-click "Regional and Language Options".
   The <Regional and Language Options> dialog is displayed.
4. On the <Regional Options> tab of the dialog, click [Customize].
   The <Customize Regional Options> dialog is displayed.
5. On the <Numbers> tab of the dialog, from the dropdown listbox displayed to the right of the <List separator> field, select ";".
6. In the <Customize Regional Options> dialog, click **[OK]**.
7. In the <Regional and Language Options> dialog, click **[OK]**.

Now you can update fields in Word documents.

Changing regional settings in Windows 7

To change the list separator regional setting in Windows 7:

1. Click the **[Start]** button.
2. From the <Start Menu>, select <Control Panel>.
3. In the Control Panel window, from the <View by> dropdown listbox, select "Large icons" or "Small icons" value.
   The Control Panel window is displayed in the selected mode.
4. In the Control Panel window, click "Region and Language".
   The <Region and Language> dialog is displayed.
5. Click the <Formats> tab.
6. On the <Formats> tab, click "Additional Settings".
   The <Customize Format> dialog is displayed.
7. Click the <Numbers> tab.
8. In the <List Separator> field, type ";".
9. In the <Customize Format> dialog, click **[OK]**.
10. In the <Region and Language> dialog, click **[OK]**.

8.4.2 Templates

For all new NetCracker product documentation, use the following template:

\\robohelp\Templates\NetCracker\NCPD.dot

8.4.2.1 Specifying template location for Microsoft Word 2003

To configure your system for Microsoft Word 2003 to properly find and attach the template, do the following:

1. Map the drive "T:" to the \\robohelp\Templates folder.
2. In Microsoft Word, choose <Options> from the <Tools> menu.
3. Click the <File Locations> tab.
4. Select "Workgroup Templates" and click **[Modify]**.
5. Specify the drive "T:" and click **[OK]**.
6. Close the dialog.

8.4.2.2 Specifying template location for Microsoft Word 2010

To configure your system for Microsoft Word 2010 to properly find and attach the template:

1. Map the drive "T:" to the \\robohelp\Templates folder.
2. In Microsoft Word 2010, click <File> in the ribbon.
   The <File> tab is displayed.
3. On the <File> tab, click "Options".
   The <Word Options> dialog is displayed.
4. In the <Word Options> dialog, click "Advanced" menu and scroll the options list till you reach the "General" group.
5. Click the **[File Locations]** button.
6. In the <File Locations> table, select "Workgroup Templates" and click **[Modify]**.
7. Specify the drive "T:" and click **[OK]**.

8.4.3 Creating New Documents

This topic describes how to create new documents based on the NCPD.dot template in Microsoft Word.

Creating new documents in Microsoft Word 2003

To create a new document based on the NCPD.dot template in Microsoft Word 2003:

1. On the <File> menu, click <New>.
2. On the right pane, click <General Templates> (Word XP) or <On my computer> (Word 2003) under <Templates>.
3. Click the <NetCracker> tab.
4. Double-click "NCPD.dot".

A new document based on the NCPD.dot template is created and its first page is displayed.

Creating new documents in Microsoft Word 2010

To create a new document based on the NCPD.dot template in Microsoft Word 2010:

1. In the ribbon, click <File>.
   The <File> tab is displayed.
2. In the <File> menu, click <New>.
   The <Available templates> dialog is displayed.
3. In the <Available templates> dialog, click [My Templates].
   The <New> dialog is displayed.

4. In the <New> dialog, click the <NetCracker> tab.
   The <Netcracker> tab and the corresponding templates are displayed.
5. Double-click "NCDP.dot".
   A new document is created and its first page is displayed on the <Home> tab.

Setting Document Properties

After a new Microsoft Word document based on the NCPD.dot template is created, you need to set the name and other properties of the document.

1. Do one of the following:
   - From the <File> menu, select <Properties>.
     The <Properties> dialog is displayed.
   - In Microsoft Word 2010, click <File> in the ribbon.
     The <File> tab is displayed. The document properties are displayed in the right column of the <File> tab.
2. In the <Title> editbox, type the name of the module or component.
3. In the <Subject> editbox, type the name of the book.
   If the book consists of one document, leave this editbox empty.
4. Make sure that the <Author> and <Company> editboxes contain "NetCracker Technology Corp." and nothing else.
5. Make sure that the <Comments> field contains "v." followed by the document version number.
   Note For more information on document versioning, refer to "Document Versions."
6. Do one of the following:
   - In Microsoft Word 2003, click the <Custom> tab of the <Properties> dialog.
   - In Microsoft Word 2010, click the [Properties] button. From the dropdown listbox, select <Advanced Properties>. The <Document Name – edited Properties> dialog is displayed. Click the <Custom> tab of the <Document Name – edited Properties> dialog.
7. Make sure that the <ComponentVersion> property exists and contains the component version number.
   Otherwise, create such property on the <Custom> tab and set its value.
8. Click **[OK].**

Updating Document Fields

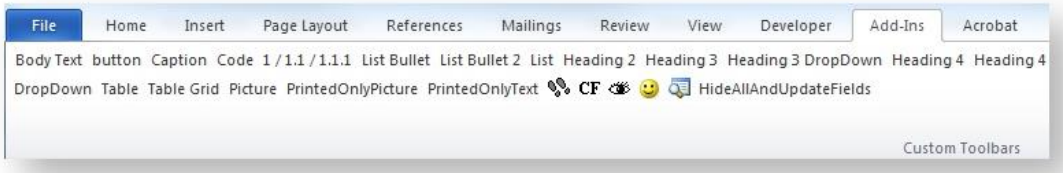
To update the document fields:

1. On the first page of the document, update the field containing document heading.
   The field shows the document title you have specified in the document properties.
   Note If the document is a part of a book consisting of several documents, make the title composite, matching the other documents of this book
2. Update all fields in the headers and footers. It is enough to update the first header and footer—all the other headers and footers in the document will be updated automatically.
   Note If the document is a part of a guide consisting of several documents, put the guide title in the footer, matching the other documents of this book.
   All fields in the headers and footers display the appropriate data on the book.
   You can use a macro in order to update all the footers by clicking **[HideAllAndUpdateFields]** in the <NC Toolbox>. For more information on using <NC Toolbox>, refer to "NC Toolbox."

8.4.4 NC Toolbox

NC Toolbox is a special toolbar in NCPD.dot that contains buttons for all the necessary styles and functions. Use this toolbox to format your documents, along with the MS Word Styles panel.

Note Not all of the NCPD.dot styles are available on the MS Word Styles panel. Use NC Toolbox rather than the MS Word Styles panel.



The five buttons with icons in the lower row provide the following functions:

– Keep With Next

CF – Clear Formatting

– Toggle Hidden Text

– Update Styles

– Document Map

Once you open a new document based on the NCPD.dot template, the NC toolbox becomes available on the Add-Ins tab of the MS Word Ribbon.

If you work with a document based on the NCPD.dot template and by some reason you do not see the Add-Ins tab, do the following:

1. On the Ribbon of MS Word window, click the **File** tab.
2. On the vertical menu, click **Options**.
3. In the Word Options window, click **Add-Ins**.
4. From the **Manage** drop-down menu, select **Templates**.
5. Click Go.
6. On the right of the Document Template selector box, click **Attach**.
7. Select the NCPD.dot template.
8. Click **Ok**.

The Add-Ins tab is displayed on the MS Word Ribbon.

In NCPD.dot, keyboard shortcuts for most popular styles are implemented. For a list of these shortcuts, see NCPD Template Styles. The following actions also have keyboard shortcuts specified:

- Clear Formatting: CTRL+ALT+X
- Insert Caption: CTRL+ALT+C

8.4.5 Autocorrect Options

It is important that you specify correct Microsoft Word autocorrect options, as their actions, if unnoticed, may cause formatting errors. The following options should be disabled:

- Replace "straight quotes" with "smart quotes"
- Replace Internet and network paths with hyperlinks.

The "Preserve styles" options should be enabled.

To check and correct the autocorrect options:

1. Do one of the following:
    - To check autocorrect options in Microsoft Word 2003, from the <Tools> menu, select <AutoCorrect Options>.
    - To check autocorrect options in Microsoft Word 2010, click <File> in the ribbon, select "Options" and click "Proofing". In the <Word Options> dialog, click "AutoCorrect Options".

    The <AutoCorrect> dialog box is displayed.

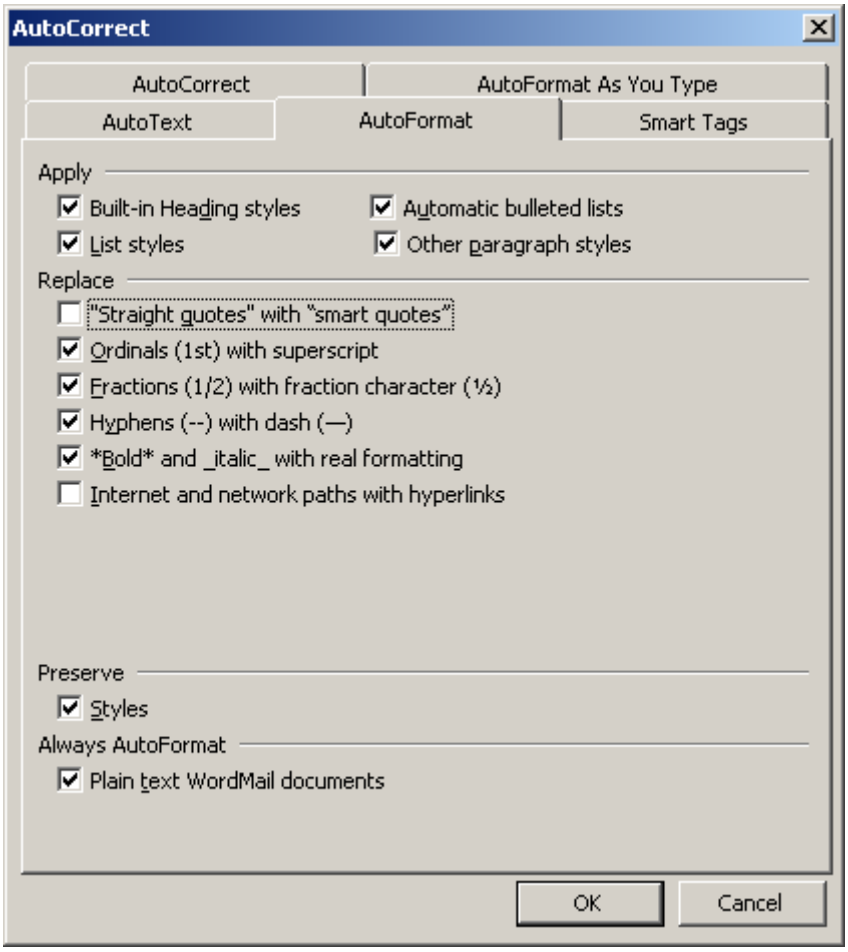


Figure 2. AutoCorrect dialog box—AutoFormat tab

2. On the <AutoFormat> tab, make sure that:
    - In the <Replace> group, the <"Straight quotes" with "smart quotes"> checkbox is cleared.
    - In the <Replace> group, the <Internet and network paths with hyperlinks> checkbox is cleared.
    - In the <Preserve> group, the <Styles> checkbox is selected.
3. On the <AutoFormat As You Type>, in the <Replace> group, the <"Straight quotes" with "smart quotes"> and <Internet and network paths with hyperlinks> checkboxes are cleared.

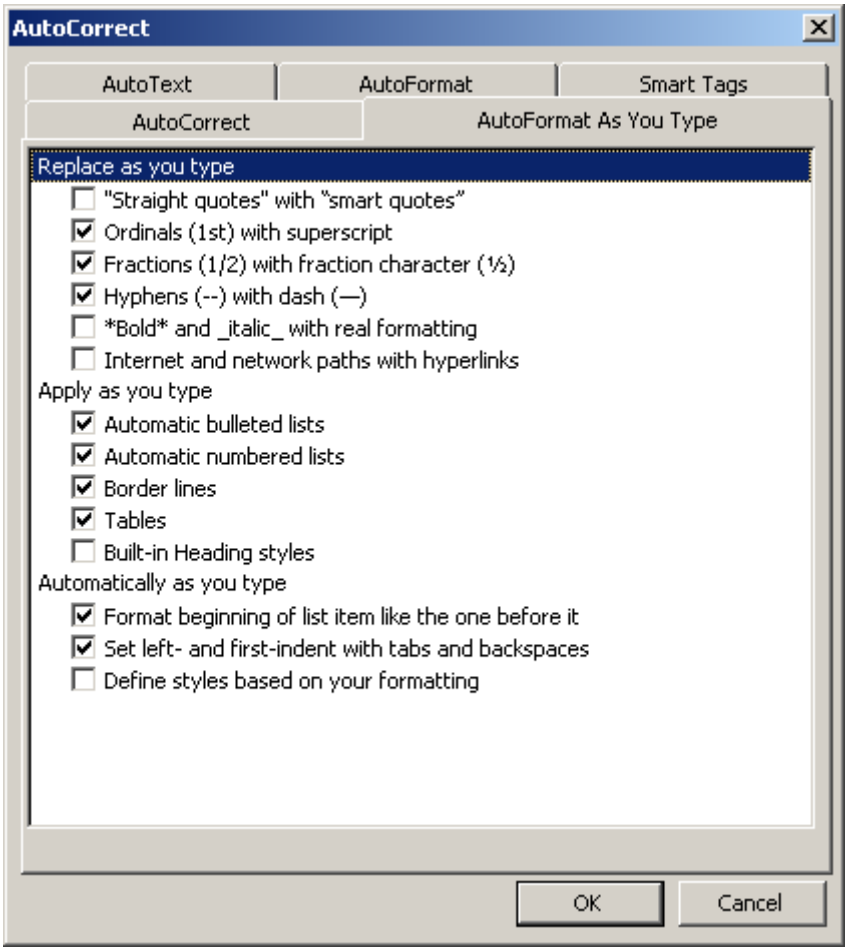


Figure 3. AutoCorrect dialog box—AutoFormat As You Type tab

4. Click [OK].
   The required autocorrect options are set.

8.4.6 Track Changes Identification

When you make changes to a document in Track Changes mode, it is necessary that you provide an appropriate identification for your comments, so that it is clear who has made the changes. Microsoft Word enables setting your name to be used in comments so that it does not affect the document <Author> property, which has to contain only "NetCracker Technology Corp."

8.4.6.1 Specifying track changes identification in Microsoft Word 2003

To set up track changes identification in Microsoft Word 2003:

1. In Microsoft Word 2003, from the <Tools> menu, select <Options>.
2. In the displayed <Options> dialog, click the <User Information> tab.

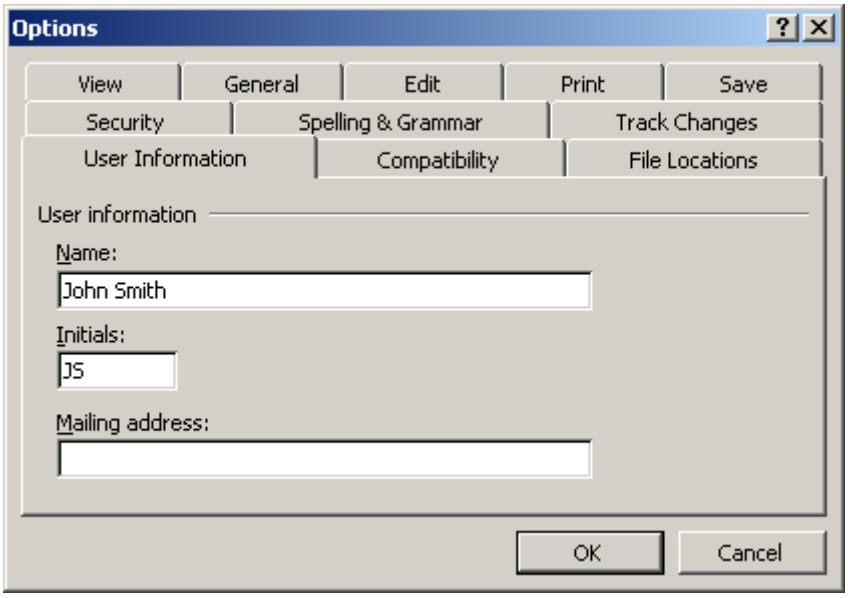


Figure 4. Options dialog—User Information tab

3. In the <Name> editbox, type your name.
4. In the <Initials> editbox, type your initials.
5. Click **[OK]**.
   Your identification is saved. From now on, your comments will be marked with your name.

8.4.6.2 Specifying track changes identification in Microsoft Word 2010

To set up track changes identification Microsoft Word 2010:

1. In Microsoft Word 2010, from the <Tools> menu, click <File> in the ribbon.
2. On the <File> tab, click "Options".
   The <Word Options> dialog is displayed.
3. In the <Word Options> dialog, click "General".
4. In the <User Name> editbox, type your name.
5. In the <Initials> editbox, type your initials.
6. Click **[OK]**.
   Your identification is saved. From now on, your comments will be marked with your name.

8.4.7 Setting Book Title

This topic describes how to set a book title for a project, when you make on-line help. The book title is the string that appears in TOC and corresponds to a particular project.

To set a book title:

1. Open your Word document.
2. At the very first text paragraph in the document insert a WebWorks "BookTitle" field.
   Type the book title as the value of the field. If the "BookTitle" field is not present in the list of available WebWorks field, add a new field type using the **WebWorks > Configure WebWorks Field Type** command.

8.4.8 Document Versions

Currently in NetCracker each component has its own version number. Customers can have individual sets of different versions of the same components. That is why each NetCracker document on a particular component in NetCracker must contain the full document version number of the following format:

<NC Component Version>.<Internal document version number>

In a document, the NetCracker component version number (W.X.Y.Z) is the number of the NetCracker component software version for which this document is intended.

Typically, the first two numbers in the component version (W.X) mean the earliest NetCracker product version the component was designed for. For instance, "6.0", "7.0", "7.1", "7.2", "7.3", "8.0", "8.2", "9.0", and so on. In most cases, the third and fourth numbers in the component version (Y and Z) stand for the major and minor versions of the component respectively. For some components the minor component version can consist of two digits.

Note If the version of a NetCracker component does not follow the rule (W.X.Y.Z) mentioned above, the component version to be specified in the corresponding document may be different from that specified in the component itself. Each such a case should be treated separately.

The NetCracker component version number should be specified in the document's contents and in the document file name—for example, "Asset Management v.7.0.2.0.doc". The version number of the given component suggests that it can be installed on all versions of NetCracker beginning from 7.0, that is, NetCracker 7.X, NetCracker 8.X, and so on.

The internal component version number is a two-digit version of the document for the given component version. The full document version number (including the internal document version number) must be specified in the document's contents.

Each time a document is updated to reflect some functional changes—that does not include fixing spelling and other minor errors, it is necessary to find out to which component version the document must correspond. If it differs from the last described version, then, in Clear Case (CC), create a new document with the name reflecting the current component version. The old document does not disappear, but stays in the same folder, with the old version number.

If the component version is the same, or the modifications are based on a bug report and the document is to be re-delivered, only the internal document version number is changed. For a new document, this number is ‘01’. Add 1 to this number each time a document for the same component version is updated. Increase the version number only if the current document version was delivered to the customer. If the document is modified in course of the internal process, this number should not be increased. In this case, no new documents should be created in CC, all changes are made in the current document.

Example

7.0.2.0.01—a new document for NetCracker's Asset Management 7.0.2.0 component version.

This full document version number is specified in the <Comments> property of the document and appears in the document footers. The 7.0.2.0 component version number is specified in the document's file name and in the document's <ComponentVersion> property and appears on the document's title page.

Specifying full document version number

To edit the full document version number:

1. Open your Word document.
2. From the <File> menu, select <Properties>.
3. In the <Comments> field, type "v." followed by the appropriate version number. Example: "v.7.0.2.0.01".
4. Click **[OK]**.

5. Update the version field in the document footers.

   Notes

   - It is enough to update the first footer—all the other footers in the document will be updated automatically.
   - All fields in the footers display the appropriate document version number.

Using macro for footers updating

You can use a macro to update all the footers by clicking **[HideAllAndUpdateFields]** in the <NC Toolbox>. For more information on using <NC Toolbox>, refer to "NC Toolbox."

Specifying NetCracker component version number

To edit the NetCracker component version number for a document:

1. Open the Word document.
2. From the <File> menu, select <Properties>.
3. Click the <Custom> tab of the <Properties> dialog.
4. Make sure that the <ComponentVersion> property exists and contains the needed component version number.

   Note If this is not the case, create such a property of the text type on the <Custom> tab, set its value, and click **[Modify]**.

   Example: "7.0.2.0".
5. Click **[OK]**.
6. Update all fields in the document.
   For instance, this can be done by pressing CTRL+A and then pressing F9.

8.5 Primo PDF

Guideline 1

Use Primo PDF instead of MS Word Save as PDF function.

Download link http://www.primopdf.com/

Guideline 2

After manual generation of documents in PDF format, it is necessary to check these documents for formatting errors. To check, make sure that:

1. The filename and location of the document correspond to its filename and location in the ClearCase stream.
2. The document contains no field update errors.
   To find such errors, look for "Error!" text.
3. The properties of the document have correct values, as defined in "Creating new documents."
4. Paper size is "Letter (8,5x11)".

5. The title and the second page of the document conform to NCPD.dot format and have no headers or footers.
6. All pages, starting from the third page, have correct headers and footers, conforming to NCPD.dot, containing actual data.
7. The Table of Contents reflects the real page numbers for document topics.
8. Long bookmark names are not cut off in the middle.
9. The bookmark hierarchy reflects the topic headings hierarchy.
10. The NetCracker logo on the first page looks OK (is not blurred, cut and so on).
11. All figures and tables are not wider than the page width with corresponding margins.

8.5.1 Checking PDFs

After manual generation of documents in PDF format, it is necessary to check these documents for formatting errors. To check, make sure that:

- The filename and location of the document correspond to its filename and location in the ClearCase stream.
- The document contains no field update errors.
  To find such errors, look for "Error!" text.
- The properties of the document have correct values, as defined in "Creating new documents."
- Paper size is "Letter (8,5x11)".
- The title and the second page of the document conform to NCPD.dot format and have no headers or footers.
- All pages, starting from the third page, have correct headers and footers, conforming to NCPD.dot, containing actual data.
- The Table of Contents reflects the real page numbers for document topics.
- Long bookmark names are not cut off in the middle.
- The bookmark hierarchy reflects the topic headings hierarchy.
- The NetCracker logo on the first page looks OK (is not blurred, cut and so on).
- All figures and tables are not wider than the page width with corresponding margins.

8.6 WebWorks Publisher

8.6.1 Installing WebWorks Publisher

Word documents which are marked up for the online help include special WebWorks fields like "BookTitle", "SeeAlsoKeyword", "SeeAlsoLink", and "Context". To work with these fields in Microsoft Word (create and delete fields, and edit their values), WebWorks Publisher must be installed on you computer. This will add the <WebWorks> menu to Microsoft Word.

The WebWorks Publisher installation package is available at:

\\robohelp\Distrib\WebWorks\

8.7 Interesting Products

8.7.1 WhatFix

http://whatfix.com

8.7.2 Electronic Performance Support System (EPSS)

Overview Demo:
http://www.kryonsystems.com/

Doc on capture process (no technical skills needed):
http://www.kryonsystems.com/wp-content/uploads/2013/11/Leo_Training_Solution.pdf

Doc on search (can be activated on demand):
http://www.kryonsystems.com/wp-content/uploads/2013/11/Leo_Performance_Support_Solution.pdf

White Paper:
http://www.kryonsystems.com/wp-content/uploads/2013/11/Successful_Implementation_Recommended_solution_for_successful_user_adoption.pdf

Top-Level - EPSS

- EPSS – Electronic Performance Support Systems (e-Glue/Composia/Nice)
- Works on Desktop OS, capture screen elements (incl. back screen/back systems)
- Configured flows of processes (development) to allow GUIDE-ME on live production (pop-ups/help or block)
- Reduces errors to low %, decreases AHT, automation of common flows
- Same flows can be used during EUT on test environments
- Fully changeable post go-live & after BAU for advanced purposes (upsell/cross sell)
- Expensive 3rd party (Licenses avg. $400-500)

8.7.3 EduBrite LMS

http://www.edubrite.com/oltpublish/theme-eb-www/cms.do

Plus Confluence plugin
https://marketplace.atlassian.com/plugins/com.edubrite.confluence.plugins.gilly

8.8 Screen Capturing

Screen Hunter, free verions

8.9 Confluence

The page moved to
http://bassdev2.netcracker.com/display/ALLDOC/User+Documentation+Tutorial

See also
Confluence Markup Guidelines

8.9.1 Creating PDFs

In Confluence, launch Content Tools > Publish Space > Word.

For bulk conversion to PDFs use the VBscript:

1. Navigate to robohelp2011, then to C:\DocLoader
2. Run transform_docs.vds script using the command

cscript transform_docs.vbs <path to DOCX files> <path to save the PDF files>

AutoOpen macro will be run by transform_docs.vds too.

8.10 Word Counting

This software can be used to count words in a series of files in a folder tree.

Word count across multiple documents in various formats:

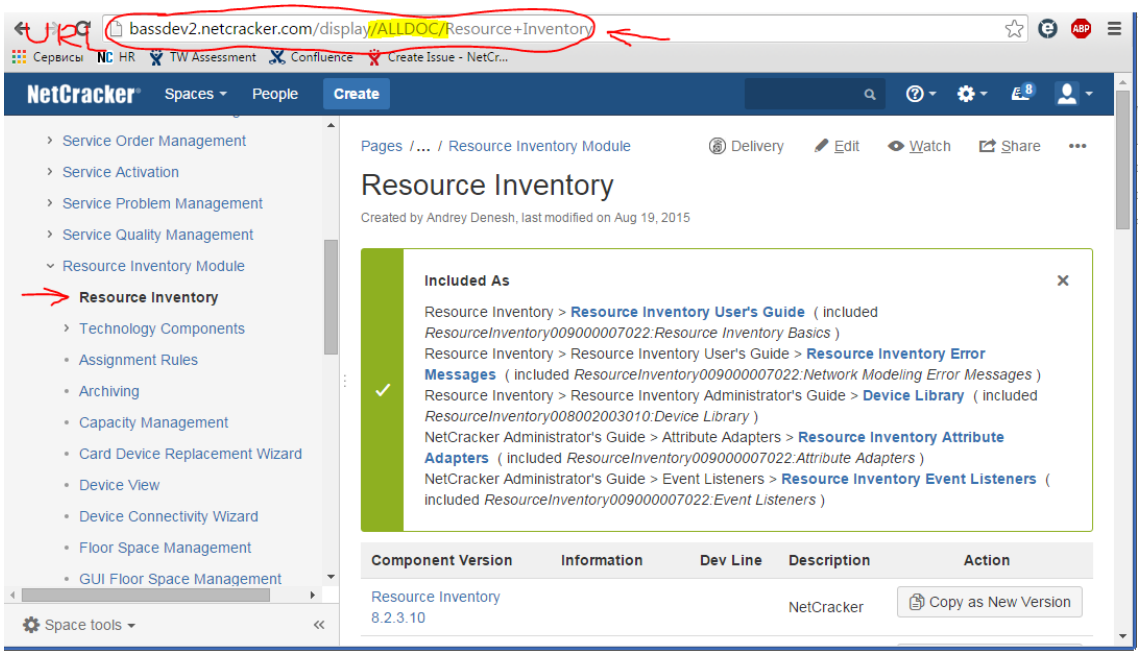
- http://www.globalrendering.com/download.html
- Yet another one: http://www.surefiresoftware.com/totalassistant/

8.11 SPS3

Процедура многократного выкладывания PDF-файлов на SPS3 заменяется на однократное создание линка на страницу продуктового компонента на BASSDEV2.

Пример создания линка для продуктового компонента Resource Inventory:

1. Зайти на **SPS3** > **Product Documentation** > *business practice* > *product component* > **User Guide**
2. Сверху в риббоне **Documents** (под Library Tools) распахнуть кнопку **New Document** и выбрать **Custom Link to Document**.
3. В поле **Document Name** ввести `Resource Inventory User Documentation`
4. В поле **Document URL** скопипастить URL продуктового компонента. URL берется с BASSDEV2 всегда из спейса **ALLDOC**
5. Нажать **OK**, затем нажать **Check In**.
6. Аналогичную процедуру повторить для папки … > *product component* > **Administrator Guide**. Имя линка точно такое же – “Resource Inventory User Documentation”, URL точно такой же. То есть можно также просто скопировать линк.


URL
bassdev2.netcracker.com/display/ALLDOC/Resource+Inventory
NetCracker
Spaces
People
Create
Service Order Management
Service Activation
Service Problem Management
Service Quality Management
Resource Inventory Module
Resource Inventory
Technology Components
Assignment Rules
Archiving
Capacity Management
Card Device Replacement Wizard
Device View
Device Connectivity Wizard
Floor Space Management
GUI Floor Space Management
Space tools
Pages / ... / Resource Inventory Module
Delivery
Edit
Watch
Share
Resource Inventory
Created by Andrey Denesh, last modified on Aug 19, 2015
Included As
Resource Inventory > Resource Inventory User's Guide (included ResourceInventory009000007022:Resource Inventory Basics)
Resource Inventory > Resource Inventory User's Guide > Resource Inventory Error Messages (included ResourceInventory009000007022:Network Modeling Error Messages)
Resource Inventory > Resource Inventory Administrator's Guide > Device Library (included ResourceInventory008002003010:Device Library)
NetCracker Administrator's Guide > Attribute Adapters > Resource Inventory Attribute Adapters (included ResourceInventory009000007022:Attribute Adapters)
NetCracker Administrator's Guide > Event Listeners > Resource Inventory Event Listeners (included ResourceInventory009000007022:Event Listeners)
Component Version
Information
Dev Line
Description
Action
Resource Inventory 8.2.3.10
NetCracker
Copy as New Version

9 Links and Folders

9.1 ICOMS

9.1.1 ICOMS Videos

- **To begin with**
  1. \\ftp.netcracker.com\ftp\Depts\CareerDevelopmentCenter\Training_center\Library\Video_trainings\ICOMS trainings
  2. \\ftpor\ftp\depts\Cable Solution Delivery\Dept\tec_writ\Training Materials\Webex Recordings\

- **Advanced**
  http://sps3.netcracker.com/departments/QA/Center%20of%20Excellence/Forms/AllItems.aspx?RootFolder=%2Fdepartments%2FQA%2FCenter%20of%20Excellence%2F10%2E%20ICOMS%2FVideo_Presentations&FolderCTID=0x0120007F585052EE131A43A97E37F073D5ABB2&View=%7b5E90C875-8584-4EE0-8AAA-572DB6D7FDC5%7d

ICOMS Training Documentation

ICOMS training materials on SPS3http://sps3/corporate/NetCrackerProductReleaseTrainings/default.aspx

9.1.2 ICOMS Presentations

http://sps3.netcracker.com/departments/QA/Center%20of%20Excellence/Forms/AllItems.aspx?RootFolder=%2Fdepartments%2FQA%2FCenter%20of%20Excellence%2F10%2E%20ICOMS%2FPresentations&FolderCTID=0x0120007F585052EE131A43A97E37F073D5ABB2&View=%7b5E90C875-8584-4EE0-8AAA-572DB6D7FDC5%7d

9.1.3 ICOMS Product Documentation

Assembled PDFs:

- User Documentation: https://sps3.netcracker.com/sites/cablesol/cabledoc/default.aspx
- Requirements and Design Documentation: IMPR – Home: Cable

Source Adobe FrameMaker:

- User Documentation: \\ftpor\ftp\depts\Cable Solution Delivery\Dept\tec_writ\

Published to:

1. https://sps3.netcracker.com/sites/cablesol/cabledoc/default.aspx
2. http://sps3.netcracker.com/departments/QA/Center%20of%20Excellence/Forms/AllItems.aspx?RootFolder=%2Fdepartments%2FQA%2FCenter%20of%20Excellence%2F10%2E%20ICOMS%2FUser%20and%20Release%20Documentation%209%2E1&FolderCTID=0x0120007F585052EE131A43A97E37F073D5ABB2&View=%7b5E90C875-8584-4EE0-8AAA-572DB6D7FDC5%7d
3. http://sps3.netcracker.com/departments/QA/Center%20of%20Excellence/Forms/AllItems.aspx?RootFolder=%2Fdepartments%2FQA%2FCenter%20of%20Excellence%2F10%2E%20ICOMS%2FUser%20Guides%208%2E2&FolderCTID=0x0120007F585052EE131A43A97E37F073D5ABB2&View=%7b5E90C875-8584-4EE0-8AAA-572DB6D7FDC5%7d

For *internal* access to the doc (replaces the CVG intranet), follow these steps:1) Log into NC VPN (or be in NC network)2) Click: https://csapp001.netcracker.com:7305/help/en/user/CS/ICOMS/3) You will get a page that says there is a problem with the security certificate. Click the line to Continue.4) Enter your user name as your full name (the name in your NC profile. In my case: Ria C Small) This may not be not your network login ID on your pc.5) Enter your NetCracker password and click Login.6) You will be directed to the ICOMS documentation.

9.1.4 ICOMS Project Management

https://sps3.netcracker.com/sites/cablesol/Lists/Project%20Management/View%20by%20Project.aspx

9.2 Documentation: RBM, CM, AM, DDS (Dynamic Decisioning Solution)

TMS

PR/Bug Tracking system for RB, TAP3, VI, ECA and AMI core development: https://tms.netcracker.com/browse/RBM

PR/Bug Tracking system for CM development: http://tms.netcracker.com/browse/CMDEV

9.2.1 RBM Product Documentation

FrameMaker: https://svnca/RBMDOC/branches/RB/

Doc Site: https://sps3.netcracker.com/sites/proddoc/default.aspx

Intranet and Tools Sites: http://intranetca.netcracker.com

PDFs: https://support.netcracker.com

9.2.2 RBM API Documentation

9.2.2.1 RBM samples of API documentation:

http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/interfaces_schemas/Rating_and_Billing_Manager_Enhanced_Care_API_Interactive_8.0/etca.htm

http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/interfaces_schemas/Rating_and_Billing_Manager_Stored_Procedures_Interactive_8.0/stored_procedures.htm

http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/interfaces_schemas/Rating_and_Billing_Manager_Web_Services_Interactive_8.0/index.htm

9.2.2.2 Convergys Atlys API documentation:

http://upsdev.netcracker.com:8090/clientdoc/crBin/php/client_doc_selection.php (click on Atlys 12 > Technical guides, and click on API guide from there to see what was provided for Convergys Atlys product. It is a very large Microsoft Word guide, 1900+ pages)

9.2.2.3 Collections Manager API that is inherited from the Atlys API (still used by RBM clients):

http://upsdev.netcracker.com:8089/PDFDoc/CM_4_3_5/Collections_Manager_API_Interactive_4.3.5/index.htm

9.2.3 RBM Training Documentation

http://sps3/corporate/NetCrackerProductReleaseTrainings/default.aspx

RBM and Products Course Development Repository:
https://sps3.netcracker.com/sites/lsim/PMO/Course%20development/default.aspx

RDB Training Documentation Best Practices:
https://sps3.netcracker.com/sites/lsim/PMO/Editing%20tempates%20and%20tools/Forms/AllItems.aspx

9.2.4 Active Mediation (AM) Training Documentation

FrameMaker: https://svnca/RBMDOC/branches/AM/

PDFs: CDT folder on SPS3

9.2.5 Collections Manager (CM) Training Documentation

FrameMaker: https://svnca/RBMDOC/branches/AM/

https://svnca/RBMDOC/branches/AM/**PDFs:** CDT folder on SPS3

9.3 RBM Release Schedules

You can find the updated RB Maintenance Release schedule for year 2013 - 2014:-

IM Product Information Site: link

RBM Workplace on SharePoint (with detailed milestones): link

(This link can be accessed by RBM Product Development teams only.)

9.4 List of Virtual Machines with FrameMaker License

https://sps3.netcracker.com/sites/proddoc/Team/Forms/AllItems.aspx?InitialTabId=Ribbon%2EDocument&VisibilityContext=WSSTabPersistence

9.5 Training Templates

Click to open SPS3 folder containing training documentation templates.

9.6 Published documentation

http://upsdev.netcracker.com:8090/clientdoc/crBin/php/client_doc_selection.php

Info

– Atlys' predecessor was P2K back in 2000 and before that. It was Precedent 2000, which we acquired when Convergys purchased Auxco in Florida. That was replaced/morphed into Infinys and marketed as a license/channel ready suite of software. Once the Cambridge office was purchased, the Geneva Rating and Billing was used as the Rating and Billing software afterward in Infinys. Atlys had some similar components as Infinys. ... it has been at least 7-10 years if not more.

10 RBM and TOMS Process Documents

10.1 Active Mediation Conversion

- 1. Purpose
  - 1.1. What and Why
  - 1.2. What do I Need Before I Start
- 2. Process
  - 2.1. Standardize Active Mediation Guides
    - 2.1.1 Analysis
    - 2.1.2 Replace the Cover (title) and Legal Pages
    - 2.1.3 Standardize the Headers
    - 2.1.4 Update the Document Properties
    - 2.1.5 Update the Files Names and BOM
    - 2.1.6 Update the Overview Guide
    - 2.1.7 Update the Release Notes
  - 2.2. Revision History

10.1.1 1. Purpose

This section provides an overview of the requirement for the process.

10.1.1.1 1.1. What and Why

This process describes the process of standardizing the Active Mediation pdf files sent from Digital Route to NetCracker.
The reason for this process is that these documents should look like our other NetCracker documents.

10.1.1.2 1.2. What do I Need Before I Start

You need the following:

- The latest Active Mediation files fromDigital Route.
  - One of the AM contacts should provide this: Jon F France, Debdatta Bhattacharjee, Rao Venkata Subba Rambhatla, or Srinivas Munigala (contacts as of May 2015).
- The link to the AM directory on SVN: https://svnca.netcracker.com/RBMDOC/branches/AM
- Adobe Acrobat 9.0 or better.
- Word 10.0 or better.

10.1.2 2. Process

10.1.2.1 2.1. Standardize Active Mediation Guides

This is an outline of the process used to standardize the Active Mediation guides:

- Analysis
- Replace the Title page and Legal page
- Standardize the Headers

- Update the Document Properties
- Update the File Names and BOM
- Update the Overview Guide
- Update the Release Notes

10.1.2.1.1 2.1.1 Analysis

Compare the new files with the files from the previous release. Determine the new files.

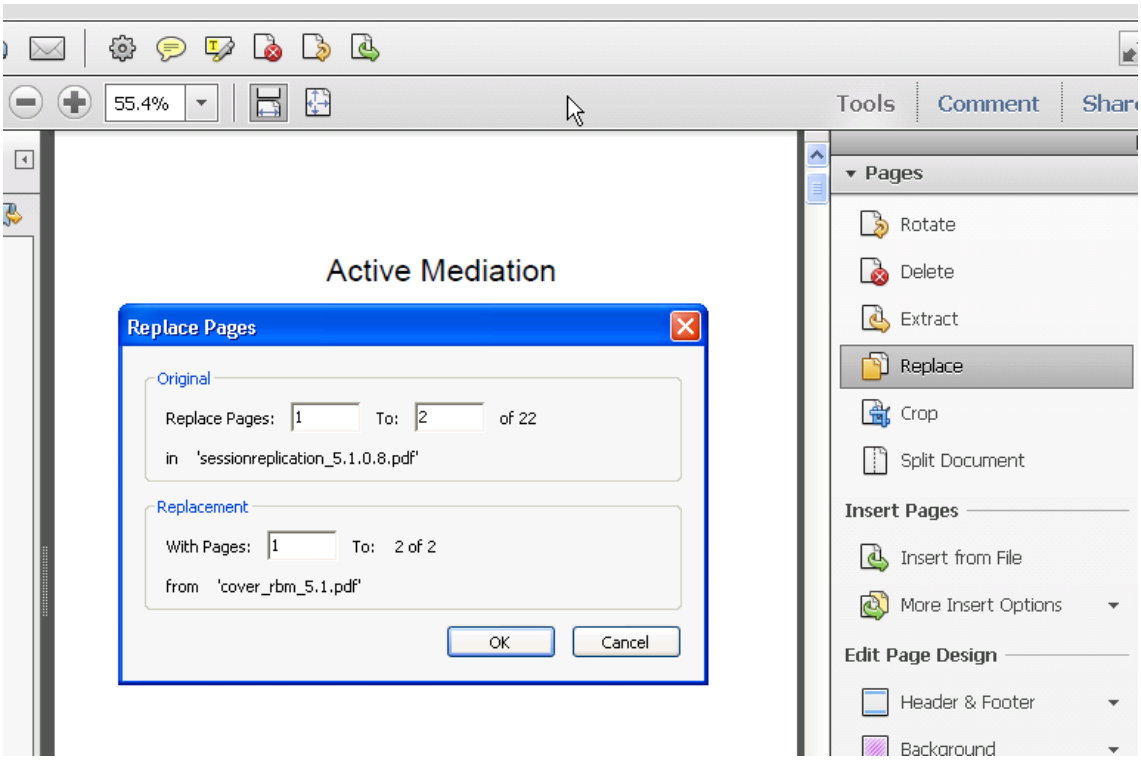
> Do not convert the following files:
>
> - RTBS Agent, rtbs_X.X.X.X.pdf (This file is not relevant to Active Mediation.)
> - Development Toolkit, devkit_X.X.X.X.pdf (This file is an internal tool that should not be shared with clients. Although this guide is not posted for clients to read, the Development Toolkit is mentioned in the Active Mediation Overview.)

10.1.2.1.2 2.1.2 Replace the Cover (title) and Legal Pages

Access the current title and legal page. You will reuse this page for each guide:

1. The A4 cover page (for AM 7.0) is stored here: https://svnca.netcracker.com/RBMDOC/branches/AM/7.0/cover page
2. Update release number and copyright (if needed) and save.
3. Replace the cover page and copyright page. In Adobe Acrobat X from the **Tools** menu on the right, select **Page > Replace**. Follow the prompts and then confirm the replacement. Repeat for all guides.

> In 7.0, the AM pdf pages are “A4”, and the standard cover page is “Letter”.



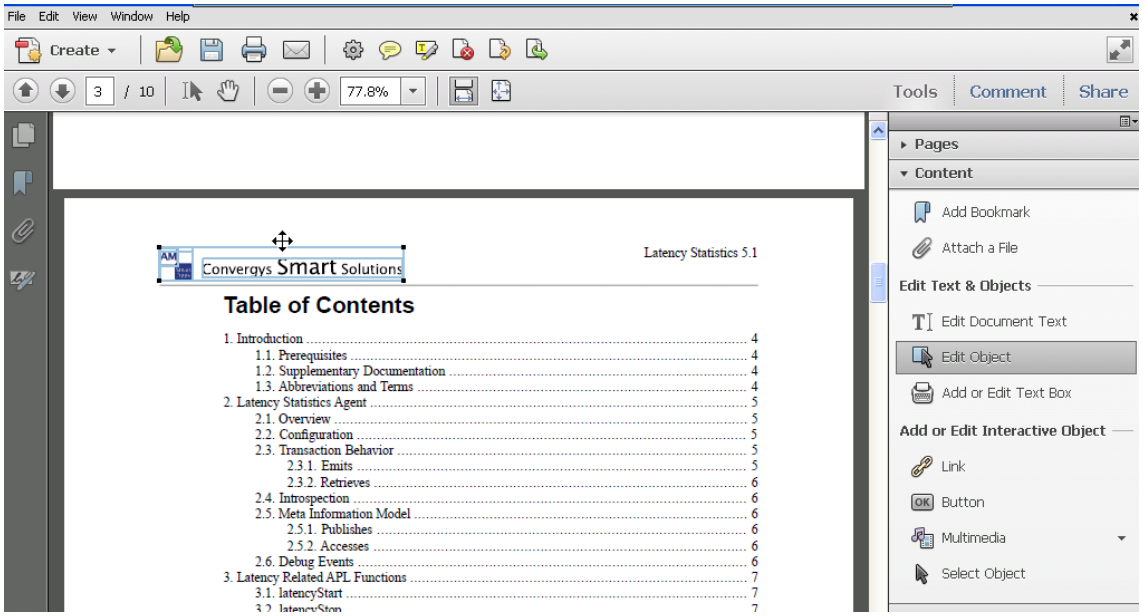
10.1.2.1.3 2.1.3 Standardize the Headers

Remove the NetCracker Smart Solutions icon in the header on the left side and move down the guide name text on the right side. The guide name text should remain in the upper right but down closer to the horizontal line. The footers will remain the same with a centered page number below a horizontal line.

Remove the image and text on the upper left:

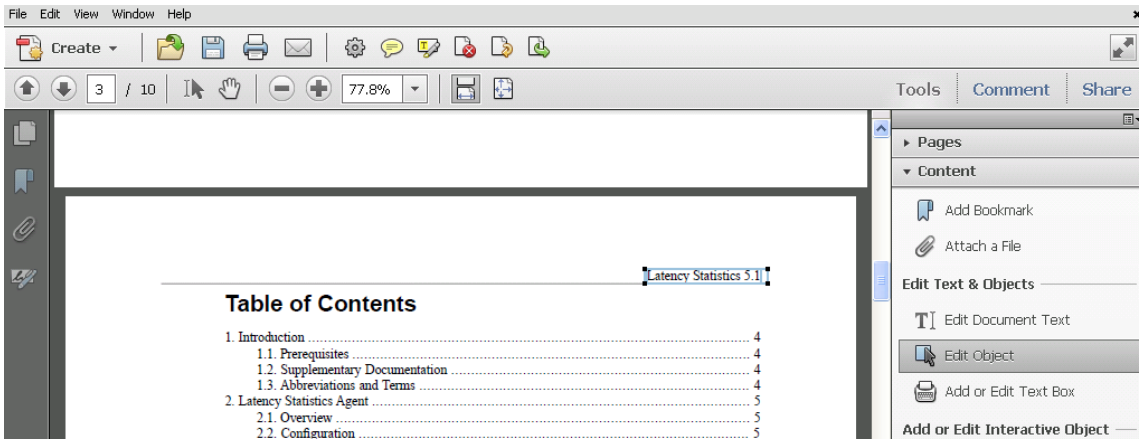
1. Open Adobe Acrobat 9.0 and select **Tools > Advanced Editing > TouchUp Object Tool**.
2. Remove the NetCracker Smart Solution icon by clicking the icon/text but not the line. (You should only have to do this on the cover page. This change occurs automatically on the other pages.)

> Removing the image and text from the TOC page removes it from all pages (after a delay).



Move guide name on the left down closer to the horizontal line:

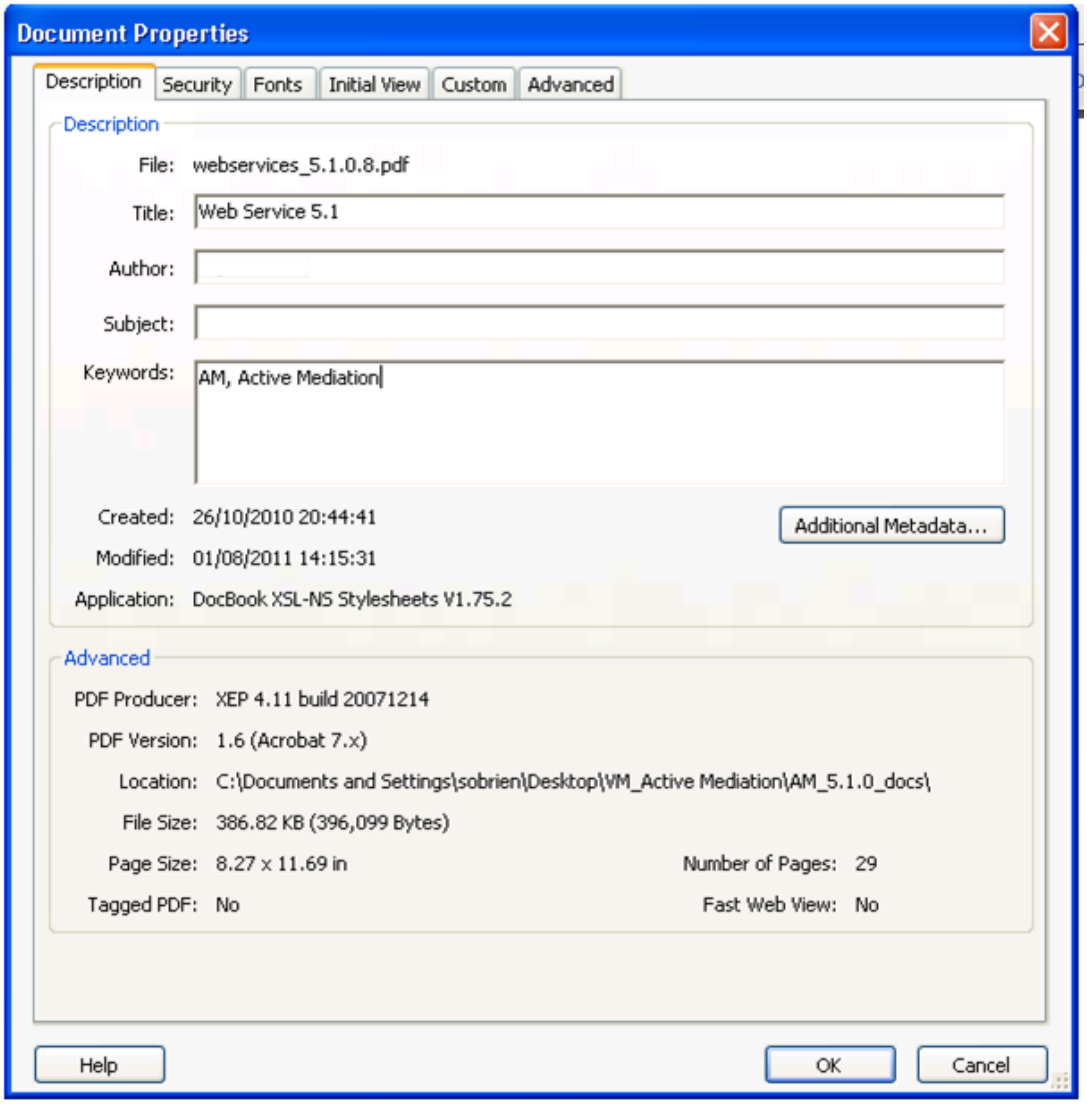
1. Select the text.
2. Use your down key to move the text down closer to the horizontal line.



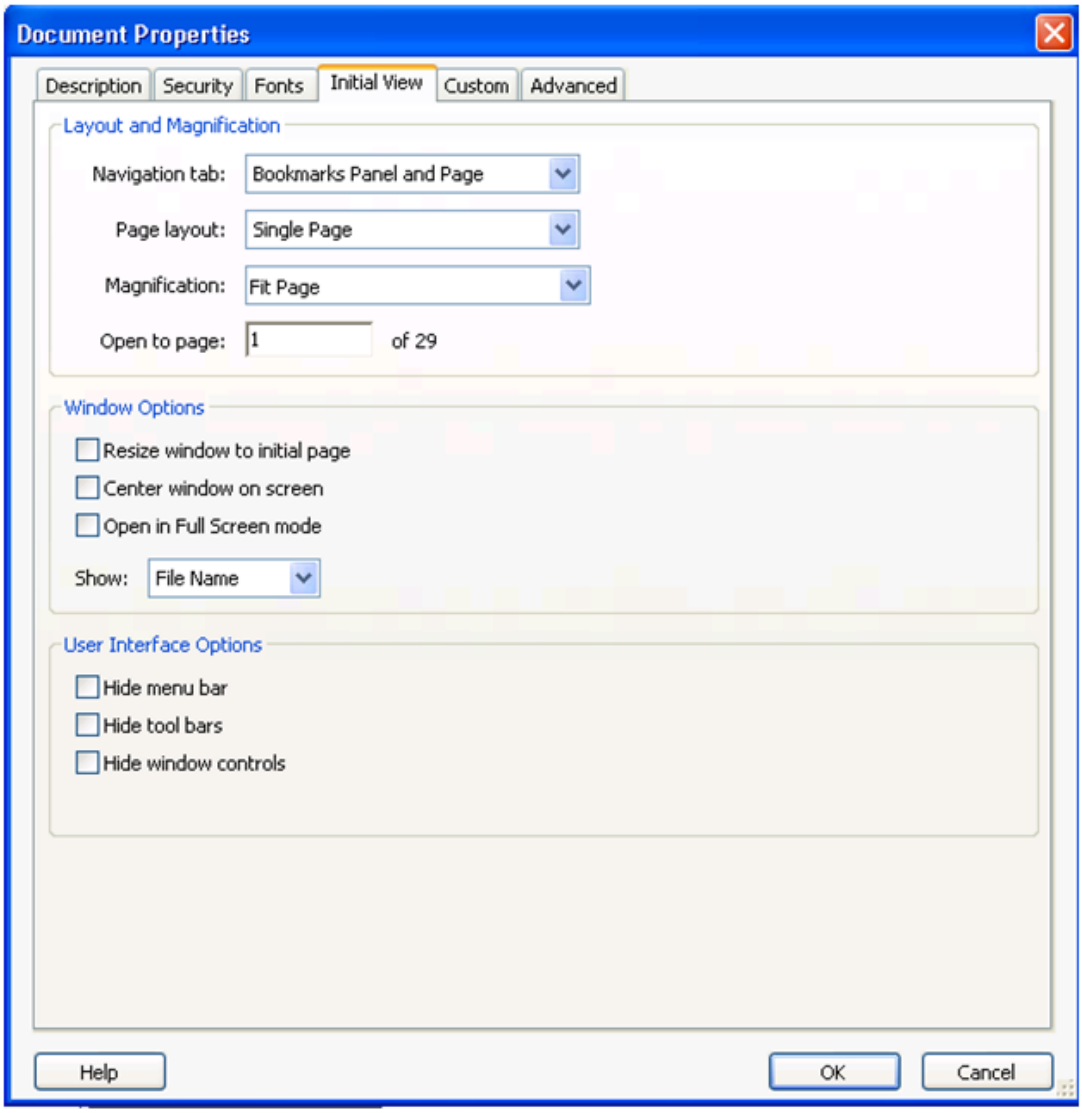
10.1.2.1.4 2.1.4 Update the Document Properties

To set the document properties:

1. In Adobe Acrobat X, select **File > Properties**.
2. On the **Description** tab, remove the Author text and add keywords (AM; Active Mediation).



3. Click the **Initial View** tab. Set the fields as follows:



10.1.2.1.5 2.1.5 Update the Files Names and BOM

It is necessary to rename the pdf files sent from Digital Route and put them in the **rebranded files** folder. Update the BOM folder to reflect the file names.

10.1.2.1.6 2.1.6 Update the Overview Guide

Update the Overview Guide in Word (in the Overview folder) according to new/removed functionality.
This guide provides an overview of Active Mediation and includes standard chapters/sections where applicable.
If AM guides are added or removed, update the Documentation Set chapter to reflect the change(s).

Note: At AM 6.3, the level of detail in the Overview guide was reduced to make it easier to update. A SME still needs to review/verify the guide before it is published.

10.1.2.1.7 2.1.7 Update the Release Notes

Search/replace the following in the Release Notes (RNs) (RNs may come as a Word file and/or PowerPoint):

- Digital Route > NetCracker

- MediationZone > Active Mediation (Note: Digital Route calls this product "MediationZone" but we call it "Active Mediation".)

Also, replace the cover (if a Word file). (Note: PowerPoint files are in landscape, so it would look odd to replace the cover.)

Note: Digital Route produces RNs about every 3 months. Ask your AM contacts for the latest RNs.

10.1.2.2 2.2. Revision History

Version	Date	Author	Comments
1.0	September 13, 2011	Sandy O'Brien and Julie Busken	Initial version.
2.0	May 28, 2015	Julie Busken	Updated instructions based on changes.

10.2 Bill Data Generation Processes

- 1. Purpose
  - 1.1. What and Why
  - 1.2. The Bill Data Interactive
  - 1.3. What Do I Need Before I Start
  - 1.4. Process Overview
- 2. Gathering Bill Data Tag Information
  - 2.1. Documentation Bill Data Tag File
    - 2.1.1. Important Points
  - 2.2. Information Sources
    - 2.2.1. Checking Information Sources
    - 2.2.2. Checking Field Positions in Multi-Field Tags
- 3. Generating the Bill and Statement Data Interactive
  - 3.1. Setting up the Bill and Statement Data Generation Environment
  - 3.2. Generating the Bill and Statement Data Interactive
    - 3.2.1. Create text.htm
    - 3.2.2. Create datatypes.htm and mainnodes.htm files
  - 3.3. Creating the Interactive
  - 3.4. Test the Deliverable
  - 3.5. Checking the Deliverable
  - 3.6. Final Tasks
- 4. Dunning Data
  - 4.1. Checking for Changes
  - 4.2. Gathering Dunning Data Tag Information
  - 4.3. Generating the Dunning Data Interactive

10.2.1 1. Purpose

This section provides an overview of the requirement for the process.

10.2.1.1 1.1. What and Why

Bill data is produced by the Billing Engine and written as very large records into the RB database. The Bill Data Writer produces managed files from the bill data and the Bill Formatting Engine is used to generate bills using bill templates (or a third‑party system can be used). The bill data interactive shows the structure of the bill data and explain the details of each element within the structure.

There are two types of bill data:

- Bill and statement data: This is the standard, first bill sent to customers (i.e. not a delinquency notice). This bill can also include a summary and/or billing center reports (BCR).
- Dunning data: Used for producing dunning notices (delinquency notices). This interactive rarely changes and most often you will not have to regenerate this interactive. This document will concentrate on producing bill and statement data with differences for the dunning data described in "Dunning Data".

10.2.1.2 1.2. The Bill Data Interactive

It's easiest to understand the bill and summary data output by first viewing it. For example:
http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/interfaces_schemas/Rating_and_Billing_Manager_Bill_and_Statement_Data_Interactive_8.0/bnf.htm (CSWS) or
https://support.netcracker.com/help/documentation/HTML_Documents/9140966238513281384/Rating_and_Billing_Manager_Bill_and_Statement_Data_Interactive_8.0/bnf.htm (CSS)
Click on the **Go to BNF Navigator** link to display the view of interest to the customer. Be aware that this takes a while to load.
Bill data consists of two parts as shown by the two panes of the interactive:

- In the top pane is the BNF (Backus-Naur Form) – this is the structure of the bill data. There are two types of links in this structure:
    - Lower case links are elements of structure. Clicking this type of link displays the details of the structure immediately below this part of the structure.
    - Upper case links are tags. These are elements of the structure that contain data that can be output to the bill. Clicking this type of link moves the lower pane to the required tag description.

  You can search for a tag or BNF structure element using the search field at the top of this pane. This displays the location in the top pane or, if there are multiple entries, a pop-up displays links to all of the available locations.
  The Data Types link in the top right of this pane shows a pop-up of the data types. These describe the content of tags e.g. string or number.

- In the lower pane are the bill data tags. These describe what information is carried in this part of the bill data. Most tags are a single item, though some include multiple rows of data, much like a spreadsheet.
  Links in this pane display the location in the top pane. If there are multiple entries then a pop-up displays links to all of the locations.

10.2.1.3 1.3. What Do I Need Before I Start

You need to do the following:

- Access to the SVN development database (in addition to the SVN documentation database) for source materials. You will need the following projects:
    - A working copy of the current Documentation release in SVN: **\branches\RB\x.x.x**, where x.x.x is the current release (for example, 8.0.4 or 9.0.x).

  - A working copy of the **RB\BILL** Development project in SVN. Typically, this will be located in **RB\branches\MR\x.x.x\RB\BILL**, where x.x.x contains 2 digits from the major release and "x" for the third digit. For example, for 8.0.4, the release appears as 8.0.x and the full path is: https://svnca.netcracker.com/RB/branches/MR/8.0.x/RB/BILL. You need to check out this project in order to get a copy the **bill_data_grammar.y** file and other source files. **You will not make any updates in the BILL project and you must be careful not to change/check out any files in this project (treat the project as read-only).** See Generating the Bill and Statement Data Interactive for more information.
  - If you are generating the Dunning Data interactive, a working copy of the **RB\FINANCE** Development project in SVN. Again, you will not make any changes to files. See Dunning Data for more information.

- Perl installed on your (virtual) PC. A version is available at \\hoccorp\prdpc\Public\Perl\Active Perl 5.005_03\APi522e.exe (*CH note: this is the version originally suggested by this document – although it is very old, I'm not deleting since since it shows the compatible version from when the Perl scripts for bill data generation were first built)*.
  However, you should download the latest Perl version from the Internet, e.g. from Perl.org (http://www.perl.org/get.html). Use Active Perl or Strawberry Perl (if in doubt, check with David Wang).

> Do not install Perl into the generation directory.

10.2.1.4 1.4. Process Overview

The owner of the bill data needs to go through the following processes:

1. Gather the relevant tag data and update the relevant files. This process is detailed in the "Gathering Bill Data Tag Information" chapter.
2. Once the tag data is complete, generate the bill data interactive. This process is detailed in the "Generating the Bill and Statement Data" chapter.

10.2.2 2. Gathering Bill Data Tag Information

Before the bill data interactive author can create the interactive, they must gather all the bill data changes for the release or releases between the current release and the last release at which the interactive was published. The interactive is only generated at each head release when the full documentation set is published. It may also be generated at client-specific releases, which are effectively the same as head releases. For example, for the 7.0 interactive, the last full release was at 6.0 and the interactive was not published at 6.1, therefore all bill data changes for 6.1 need to be incorporated for the 7.0 release.

10.2.2.1 2.1. Documentation Bill Data Tag File

The bill data interactive author needs to ensure that the bill data tag information is fully up to date for a release before generating the interactive. The following file needs to be updated for modified tags:

...\branches\RB\x.x.x\interactive_data\interactive_bill_data**bill_data_tags.doc**

This word document will have marked up changes (for RAT review) in tracked changes. By the end of the release work, all tracked changes should be accepted. Subsequent changes to the text in the next release must again be tracked.
The three columns in table are **Tag Name**, **Description**, and **Derived From**. Make sure that any changes you make are not duplicated with tags that already exist in bill_data_tags.doc. Also be aware that some bill data tags only need to be updated and are not added.

10.2.2.1.1 2.1.1. Important Points

When inserting new tags into bill_data_tags.doc you should be aware of the following rules:

- New tags will need to be added alphabetically within the table in the bill_data_tags.doc document. The format of this document does not matter (e.g. font is irrelevant) as it will be converted into text to produce the interactive. However, the table content and number of cells cannot be modified.
  Be aware of the way in which tags with "_" are ordered. The "_" has precedence over characters, for example: "EVCOMPTOTAL_ id" should precede "EVCOMPTOTALITEM_ id".
- Tags may end in "_", such as "BSTARTEVLIST_". In this case, the tag must have an identifier after, for example:
  "BSTARTEVLIST_ id" (there is a space between "_" and "id").
- Tags may have an "_" in the name, such as: "ICURR_NEWBAL". You should check that there are **no** spaces next to the "_".
- Tags must **not** have a carriage return after them (in the first column of the table). This will cause a broken link in the generated interactive between the main structure and the tag description pane in the BNF Navigator.[1] Check the whole table: search on ^p (paragraph marker) and remove any found in column 1. In addition, you should remove any spurious carriage returns from columns 2 and 3 in the table, i.e. at the end of the given text/paragraph. The extra returns cause formatting inconsistencies in the finished interactive. Carriage returns are only acceptable in multi-paragraph descriptions or occasionally in the derived from column (e.g. to ensure line breaks).[2]

[1] The broken link occurs because the tag name will erroneously include “xbreak” in its name (e.g. PRODSEQxbreak) once you’ve converted bill_data_tags.doc to text.htm (see Create text.htm).

[2] Documenting this issue at 5.0 after finding two broken links due to carriage returns after tags in 1st column.

- Many tags have “Derived from” at the end of the description. This tells the customer where the information in the bill comes from – usually this is a database table and column but is could be something that is not saved in the database (e.g. "calculated by the Billing Engine" or "calculated by Vertex"). In the past, we did not require this information and this is why some existing tags do not have this information. Current policy is to provide the information for all new tags.
  The following types of tags are deemed to be structure (i.e. table/block start/end) and have derived values of “Not applicable.”:
  BSTART*
  BEND*
  TSTART*
  TEND*

Most tags are singular, for example:

ACCBALCREFINFORMTOT	The canceled balance refunds total that does not contribute towards the financial totals (meant for information only).	ACCOUNTPAYMENT.ACCOUNT_PAYMENT_MNY

However, tables (with multiple data items) are input in a different fashion. These tags are referred to as "multi-field tags" in this document. For example:

ACCBALCPAYDET	The canceled balance payments details table. The fields output by this tag are:	
	1. The date of the account payment.	ACCOUNTPAYMENT.ACCOUNT_PAYMENT_DAT
	2. The date/time the account payment was failed (if applicable)	ACCOUNTPAYMENT.FAILED_DTM
	3. The date/time the account payment was canceled (if applicable)	ACCOUNTPAYMENT.CANCELLED_DTM
	4. The amount of money that was canceled.	ACCOUNTPAYMENT.ACCOUNT_PAYMENT_MNY
	5. The account number from which this account payment has been transferred; this is meaningful only if the payment origin indicates that this account payment is a balance transfer.	ACCOUNTPAYMENT.TRANSFER_ACC_NO

For tag tables (multi-field tags), the first row should be a general description of the tag. Subsequent rows should have a blank **Tag Name** cell, a **Description** of the table column preceded by a written number in the format above (i.e. do NOT do this using windows auto-numbering), and the usual **Derived From**. To help determine the order of new fields added to multi-field tags, use the **bg_image_tags_data.pm** file from the prd database (see Checking Field Positions in Multi-Field Tags).

10.2.2.2 2.2. Information Sources

There are two sources of information for the bill data tags:

- **Development**. The following file in the BILL project in the SVN database is updated by developers as they modify the bill data for a release:
  BILL\BG\DOC**bill_data_changes.doc**
  This document provides a chapter for each enhancement/PR with bill data changes. The BNF changes are not of interest to the person creating the interactives. **The tag changes are of interest – these are provided in tables within the New Tags, Modified Tags, and Deleted Tags sections of each chapter.**
  This document usually requires tag descriptions to be rewritten for our documentation standards when they are added to our bill_data_tags.doc document. Sometimes, the "derived from" information is missing and developers need to be contacted to provide this content.

> For the **bill_data_changes.doc** file, run an Update operation in SVN in your copy of the BILL project to ensure that you have the latest version of the file in the BILL\BG\DOC folder. Use the Show Log operation to see file versions. It's also advisable to check with the development SME to ensure that the file is not still being worked on. (Unlike Synergy, you can't easily see if a file is being modified unless it

is locked and you attempt to lock it yourself.)

Additionally, the following file in the BILL project in the SVN database should be consulted for multi-field tags to determine the position of any new fields added to existing tags, or the complete fields for new tags:

BILL\BG\SRC**bg_image_tags_data.pm** (it's located at the bottom of the files in the SRC folder after all the **.c** and **.h** files)

See Checking Field Positions in Multi-Field Tags for more information and an example.

- **Documentation**. The CDT team includes bill data changes in the Release Changes chapter in the release notes for each enhancement. The author may use the development document (bill_data_changes.doc) to provide this information, or it may be provided from the feature SMEs. The Release Changes entries for bill data may be less detailed than what is required in the Bill Data interactive (starting from 7.0, we are producing less detailed RNs). If you use this information, you may have to do further work to gain the details needed for bill_data_tags.doc (for example, Derived From information). The Release Notes documents are checked into SVN within the current RB documentation project (branches\RB\x.x.x), or you can view changes per feature in the ACPD_features folder.

  Also, a documentation architect should be analyzing development defect PRs that may affect bill data. You should be made aware of any of these changes (check the project spreadsheet) that affect the bill data tags so you can update the bill_data_tags.doc file. Also check whether any ACPDs/CRs affect the bill data tags.

  The bill data interactive author needs to decide which of these sources should be their main source of information. This decision should be based on how late in the release cycle the bill_data_tags.doc file needs to be updated. The most efficient method would be to use the Release Changes but these may not be available earlier in the cycle.

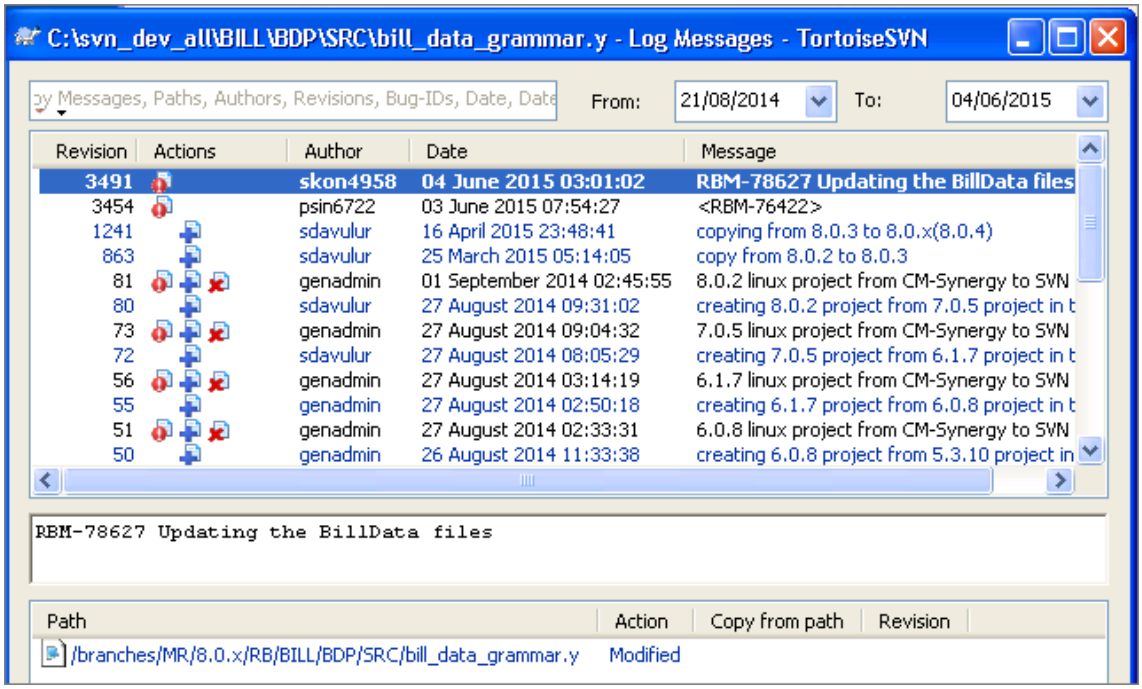
Both development and documentation sources should be compared to ensure that no enhancement information has been missed.
You should only start the bill data generation process when you are sure all new/modified data tags for a release have been entered in the bill_data_tags.doc document. Any significant changes can involve regenerating the interactive. (It is possible to make small manual fixes post-generation, for example, to an existing tag description. It is also possible to add missing tag descriptions, but doing so may break the interactive if not done correctly. See xxxCH O/S 1: XREF to new section to be added during 9.0 work.)

10.2.2.2.1 2.2.1. Checking Information Sources

The following file describes the BNF structure of the bill data:

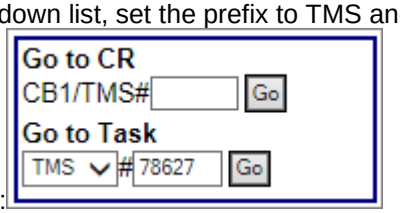
BILL\BDP\SRC**bill_data_grammar.y**

As this file is used for testing, Development should always keep this file up to date. **This file is therefore more reliable than the bill_data_changes.doc file**. You should use Show Log on the **bill_data_grammar.y** file in SVN and use the latest version for the current release (remember that you ensure you are in the correct release by checking out your project from the correct development branch in SVN). For example:



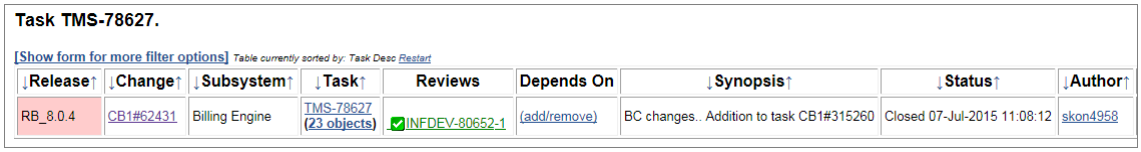
You should examine the TMS task (listed in the SVN Message details) that was used to commit every relevant version of the grammar file. Do this using the "prd" Intranet home page: http://intranetca.netcracker.com/prd/, using the Task search options, as shown below. In the second dropdown list, set the prefix to TMS and enter the number from the SVN log message.

For example:



This will provide the task details. The task should tell you which CR/PR is associated with the task (listed under **Change** in the screenshot below). Check the CR/PR to see if you have already included it in your work. If not, you should check whether the CR/PR impacts any bill data tags.

Continuing the previous example, here is the task for ticket TMS-78627. The CR is for one of the major enhancements in RBM 8.0.4 (so in this example, the bill data tags work had already been captured):



10.2.2.2.2 2.2.2. Checking Field Positions in Multi-Field Tags

The **bg_image_tags_data.pm** file in the SVN development database (look in the BILL\BG\SRC folder, near the top of the folder) is a useful source of information on the position of fields within a multi-field tag. This file can also help you determine the "content" of each field since meaningful names are used (conversely, the **grammar.y** file contains the field's type, e.g. "optnumber" means an optional number field; "sep" means separator).

When new fields are added to existing tags, or when new tags with multiple fields are introduced, you should consult the **bg_image_tags_data.pm** file to ensure you are placing the fields in the correct order.

For example, at RBM 7.0, several existing multi-field tags had changed for the Community Groups feature and the SME sent the information below about one of the tags,

CHILDRATINGDISCOUNTUSAGE. As you can see, the new tags (highlighted) were NOT added at the end of the fields, but before all existing info currency (ICURR) fields.

NOTE: For all tags with "info currency" fields, new fields will *always* be added *before* the "info currency" ones.

Example (from SME):
"In the bill data tags, the attributes related to information currency are always written at the end and the values related to account currency are place prior to them. In case of CHILDRATINGDISCOUNTUSAGE it is as follows:

bg_image_tags_data.pm:

['TR', [36, 0, 5, 'B+BCR', 'NoMul', 'BG', 'CHILDRATINGDISCOUNTUSAGE'], 'FxdFields', ['CUSTREF', 'PRODUCTSEQ', 'PRODNAME', 'EVDISCNAME', 'EVDISCDESC','CHILDRATINGDISCDISCID','EVSOURCE', 'STARTDATE', 'STARTTIME', 'ENDDATE', 'ENDTIME', 'TOTUSAGE', 'REMAININGUSAGE', 'DISCUSAGE', 'DISCMNY', 'EVENTCOUNT', 'BILLTOTUSAGE', 'BILLDISCUSAGE', 'BILLDISCMNY', 'BILLEVENTCOUNT', 'EVENTTYPE', 'AMOUNTPERUNITBOO', 'DISCSUMATTRNUM', 'DISCSUMMULT', 'DISCSUMNAME', 'PERIODMAXMNY', 'THRESHTYPE', 'THRESHVAL1', 'FIXEDDISC1', 'PCTDISC1', 'THRESHVAL2', 'FIXEDDISC2', 'PCTDISC2', 'EVENTGENPRODSEQ', **'ICUGID', 'CUGNAME'**, 'ICURRDISCMNY', 'ICURRBILLDISCMNY', 'ICURRPERIODMAXMNY', 'ICURRFIXEDDISC1', 'ICURRFIXEDDISC2']],

bill_data_grammar.y:

childratingdiscountusage : CHILDRATINGDISCOUNTUSAGE tagsep string sep number sep string sep string sep optstring sep number sep optstring sep datestring sep timestring sep datestring sep timestring sep threshold sep threshold sep threshold sep money sep optnumber sep threshold sep threshold sep money sep optnumber sep optnumber sep string sep optnumber sep optnumber sep optstring sep optmoney sep string sep optthreshold sep optmoney sep optpercent sep optthreshold sep optmoney sep optpercent **sep optnumber sep optnumber sep optstring** sep optmoney sep optmoney sep optmoney sep optmoney sep optmoney eol;

The attributes whose names start with "ICURR" are the values in information Currency and the coresponding bill-data_grammar.y changes are also at the end. and the new changes are added as highlighted in the above example."

10.2.3 3. Generating the Bill and Statement Data Interactive

To generate the bill data interactive, you need the latest versions of the following files:

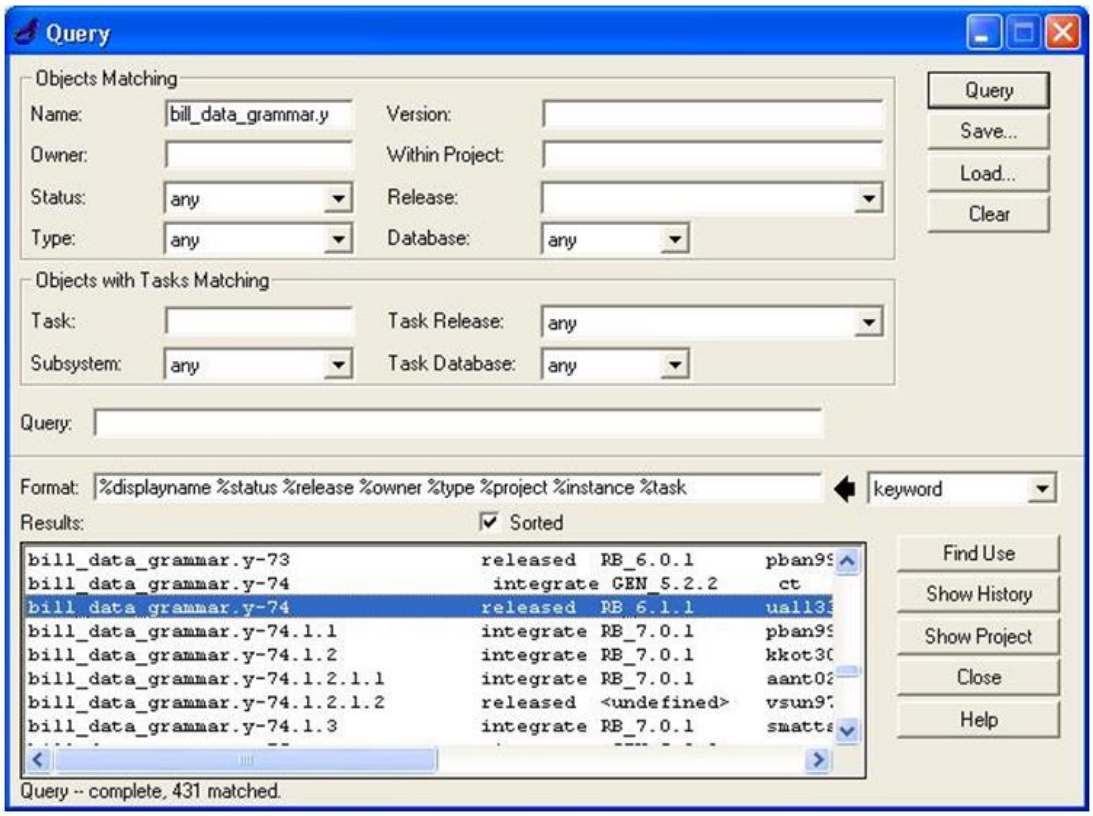
- \branches\RB\<current release stream e.g. 8.0.x>\interactive_data\interactive_bill_data**bill_data_tags.doc** (SVN documentation project)
- BILL\BDP\SRC**bill_data_grammar.y** (SVN development project)

For the **bill_data_grammar.y** file, to ensure that you have the latest/finished version for the current release, so the following:

1. Run an Update operation in SVN in your copy of the BILL project.
2. Use the Show Log operation to see file versions. (However, note that you can't easily see if a file is being modified unless it is locked and you attempt to lock it yourself. You should never modify the grammar file.)
3. Contact the development SME for bill data updates at this release to ensure the file is not still being modified.

If you do not have a copy of the BILL project open, you can use Actions > Query to locate the grammar file. Add **%release** into the Format (e.g. add it here: %displayname %status **%release** %owner %type %project %instance %task). Click Query. Find the version you need for the given release and highlight it. Click on Show History to view the file. From there, double-click to open the file version you need and save it locally.

For example:



If the source files from development were not updated since the last release, then it is only necessary to update the RBM release number (use HomeSite/TextPad to search files for “Rating and Billing Manager”), version/document version (bnf.htm) and copyright dates of the following files:

- bnf.htm
- datatypes.htm
- bill_data.htm
- key.htm
- ls.htm
- mainnodes.htm
- search.htm
- text.htm

Note: the wrapper pages (everything above except datatypes.htm, mainnodes.htm and text.htm) were rebranded during 7.0 to use the new branding/layout. The Perl scripts were also updated to produce the correct branding/layout in datatypes.htm, mainnodes.htm and text.htm. Thus, the manual updates in the HTML are similar to other interactives that get rolled forward.

10.2.3.1 3.1. Setting up the Bill and Statement Data Generation Environment

You must ensure that you have Perl installed on your PC to generate the interactive.

Set up the generation directory (for example BD_Generator).

> The directory name cannot contain any spaces as they interfere with the execution of the Perl scripts. (Also avoid putting the generation directory in a path that includes spaces, for example, the "Documents and Settings" directory for your user.)

Copy the Perl files listed below into your generation directory. The Perl files are located in the SVN project area for Documentation, in \branches\RB\interactive_data\interactive_bill_data\bill_data_html_src_NEW.

- bnf2html.perl
- bnfelement.pm
- bnfexp.pm
- bnfnode.pm
- convertformat.perl
- javascriptfile.pm
- tagtext2html.perl
- automated_testing directory and content (test files).

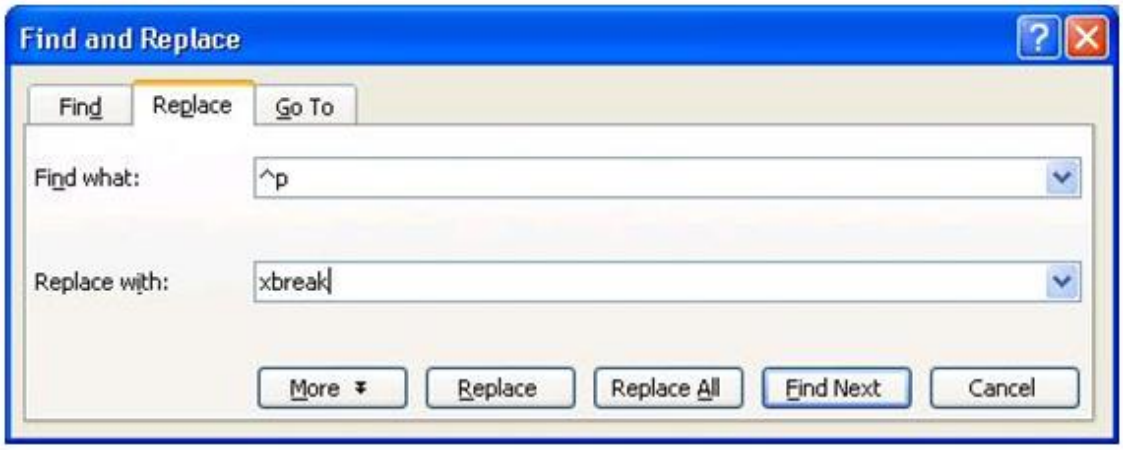
These files were updated in 2013 to produce the correct branding for interactives post-NetCracker acquisition and removal of Smart Suite branding, etc. Thus, you must use the bill_data_html_src_NEW folder containing the Perl scripts. (The original versions are stored in the folder labeled _OLD.)

10.2.3.2 3.2. Generating the Bill and Statement Data Interactive

Ensure that there are no more changes to be made to **bill_data_tags.doc** (see Gathering Bill Data Tag Information for details). *Before proceeding, ensure that you have removed all spurious carriage returns from the document (see Important Points, bullet 4).*

> If any Perl scripts fail to run when working on a virtual machine, enter **Ctrl, Alt, End** to reboot the virtual machine and set the appropriate paths.

> In the following sections (3.2.1 and 3.2.2), all text to search and replace is shown in round brackets. For example, if asked to search on (^p) and replace it with (xbreak), then in Word, do this:



10.2.3.2.1 3.2.1. Create text.htm

The procedure in this section must NOT be performed on the master bill_data_tags.doc stored in SVN. You must run this procedure using a local copy.

The reason for this is that the Word document is destroyed by the scripts. Even performing the early steps (such as removing the “xxx” strings) cannot be done on the master **bill_data_tags.doc**. The master document must remain intact to be updated for subsequent releases.

1. Open bill_data_tags.doc in MS Word. Ensure that you are not tracking changes as you follow the steps below.
2. Ensure there are no carriage returns after tag names in column 1. Search on ^p and remove any that you find. (Carriage returns in columns 2 and 3 are OK.)
3. Select **Tools >> AutoCorrect Options >> Auto Format** and untick the box "Straight quotes" with "smart quotes". *(Note: You must do this in two tabs: **AutoFormat As You Type** and **Auto Format**, otherwise step 4 will not work.)*
   (In Word 2010, change these settings using File > Options > Proofing > Auto-Correct Options > AutoFormat tab and AutoFormat As You Type tab.)
4. Delete all occurrences of (xxx) i.e. replace this with a null value (nothing) in the "Replace" field – this leads to over 2850 replacements.
5. Search for all occurrences of double quotes (") and replace them with single quotes (').
6. Replace line breaks (^p) with (xbreak) (no brackets and all lower case). *(Note: it appears you can't replace the very first line break (paragraph marker) before the whole table. This is fine.)*
7. Replace soft breaks (^l) with (xbreak) (no brackets and all lower case). *(Note: none found in whole document at 5.0, this instruction might be from using soft returns in the past?)*
8. Select the entire table and use the **Table >> Convert >> Table to Text…**option. The **Separate text at** option button should be set to **Other** and (") entered into the field (double quote, with no spaces around it).
   (In Word 2010, do this by right-clicking in the table, then Select option > Table. Then go to the Layout tab and use Convert to Text in the Data set of options, top right.)
9. Remove all spurious text including table header (i.e. Bill data tag"Description"Derived from), and spurious lines at the end of the file. This includes removing (xbreak) at the end of the file. *(CH notes: original instruction unclear if paragraph marker should be removed (i.e. closed up to final tag) at end of file, or removed from top of file. I did remove these before proceeding and it doesn’t appear to have caused a problem.) [During 6.0 and 7.0 work, I removed xbreak from end and closed up to previous line, and removed carriage return from*

top of file. But the paragraph marker at the end of the file gets restored by a later step, and it works fine like that.]

10. Replace (^p") with (^pvvv"). Results in over 2000 replacements.
11. Replace line break (^p) with ("^p). Results in over 5000 replacements. Check the last line of tags.[3] There should be two quotes at the end of the line for the final tag. These lines should appear like this (including a carriage return after this line – it's been added by this step):

```
ZIPCODE"An optional string for the ZIP code. Null if no information
added.""
```

1. Ensure that there are no spaces at the end of the tag name in the left hand column (i.e. first position in each line) by searching for a space followed by a double quote ("). If there are spaces, then remove them, i.e. replace them with just a double quote ("). *(Note: you may find [space double quote] (") elsewhere, e.g. in descriptions. It seems to be OK to remove these as well – I did a "replace all" and it did about 50 replacements.)*
2. Save the word file as a text file, with the file name **tags.txt.** (Ensure you use this exact file name: the Perl script command in Step 15 does not work with a different file name.) Save it as Windows (Default). (In Word 2010, accept the defaults too, i.e. Text encoding should be Windows (Default), and do not select options for inserting line breaks or allowing character substitution.)
   This could produce questions marks (?) where double quotes (") should be. Open tags.txt in TextPad and replace (?) with ("). *(Note: if you get two options (to save as text only or text with line breaks) save as text only. Also revisit this step if generation fails. However, I did not get any question marks in the file from doing this. This was also true during 6.0 work where I used Word 2010 to save the .doc as .txt.)*
3. Move the text file to the generation directory in which the Perl files are stored.
4. Open a DOS prompt and navigate to the generation area where the Perl files are located.
5. Convert the text file to an HTML file, using the following command: **perl tagtext2html.perl tags.txt text.htm**

You will get a number of warning messages e.g. "Use of uninitialized value at … " and "…called too early to check prototype at…". This should not be a problem but modifications to the Perl code that suppress this message have not yet been made.
Additionally*:*
a) DOS may give a warning that "'dos2unix' is not recognized as an internal or external command, operable program or batch file" but this doesn't seem to have caused a problem
b) there are lines starting vvv with no tag description and you may get a warning in about this in the DOS terminal output) – this is fine (derives from lines where a tag has multiple rows in the original table and the 1st column has been tagged with vvv earlier in this procedure).
If the text.htm file successfully generates, you will get a message telling you so, after any warning messages.

6. Open text.htm with an editor (e.g. HomeSite or TextPad). *(Note that if you're searching/replacing in TextPad, you need to start at top of file each time, it doesn't find upwards by default.)*
7. Replace all instances of two full stops (..) with a single full stop (.).
8. Replace all instances of **2013** with the current year (2013 is the last time the Perl scripts were updated, so this will be the end date you find in copyright ranges).
9. Replace all instances of three x's (xxx) with a single space ( ). **Note:** This may no longer be necessary. *(This note is correct; there are no longer any xxx strings (they get removed in Step 3). However, check for xxx as a precaution. Also, in the following section, after you generate mainnodes.htm, it is the case that XXX appears in some places and is correct, e.g.*
DOCTYPE

[3] Note that in Micky's original instructions, it said: "Check the last line of tags. It is possible that two quotes are placed there, in which case one needs to be removed." This is NOT the case. Removing one quote from end of ZIPCODE tag causes the tagtext2html.perl script to fail with a fatal error about "an unintended line break or lack of closing quote" at the following line: ZIPCODE"An optional string for the ZIP code. Null if no information added." If this happens, add the missing double quote at the end of this line.

10.2.3.2.2 3.2.2. Create datatypes.htm and mainnodes.htm files

1. Open **bill_data_grammar.y** with MS Word. (In Word 2010 (and Word 2003 for that matter), when you save the file, you will get a message saying the file may contain features that are not compatible with Plain Text format, and asking if you want to save the document in this format. Click Yes.) *[CH note for future: could this be a source of the IE8 rendering problem? (not investigated in 2013)]*
2. Replace all occurrences of a colon (:) with a space, colon, space (:). There are over 2400 replacements. [4] *(Note: There are many instances of colons with spaces already around them. Follow the original instruction anyway because step 4 takes care of any extra spaces. It's a waste of time to try to deal with these cases individually!)*
3. Replace all occurrences of a vertical bar (|) with a space, vertical bar, space (|). There are over 1700 replacements.
4. Replace all occurrences of a double space ( ) with a single space ( ). Repeat this until no double spaces are left.
5. Replace all occurrences of a tab followed by a space (^t) with a single tab (^t).
6. Remove all superfluous text. This includes:
    a. The toplevel statement [5] and above to the top of the file:
    toplevel : summarystatementlist |
    billbcrlist;

    *Note: you MUST remove up to and including the semi-colon in the top-level statement or the **bnf2html.perl** script will fail. (Also, if you're searching on "toplevel:" you need a space before the colon due to Step 2.)*
    Once the toplevel statement and above have been removed, the updated file should start as follows:
    billbcrlist :
    billdata |
    bcrdata |
    billdata billbcrlist |
    bcrdata billbcrlist;

b. Any **#include** or **extern** definitions at the top of the file. *(Note: these should be gone by doing previous step, i.e. removing all above the top level statement.)*

c. Any comments. These take the form: ***/* <comment> */***
Instances of ***/* empty */*** are legitimate and should not be removed. It is therefore recommended to use the following process (don't forget step iii) ):

i. Replace all occurrences of (/* empty */) with (qqq) (no spaces around these strings). Also search on (/*empty */), i.e. with no space between /* and the word "empty", and replace with (qqq) as before. *(Note: at 5.0, there were 1375 replacements, so definitely do this! At 7.0, there were over 1400 relacements.)*

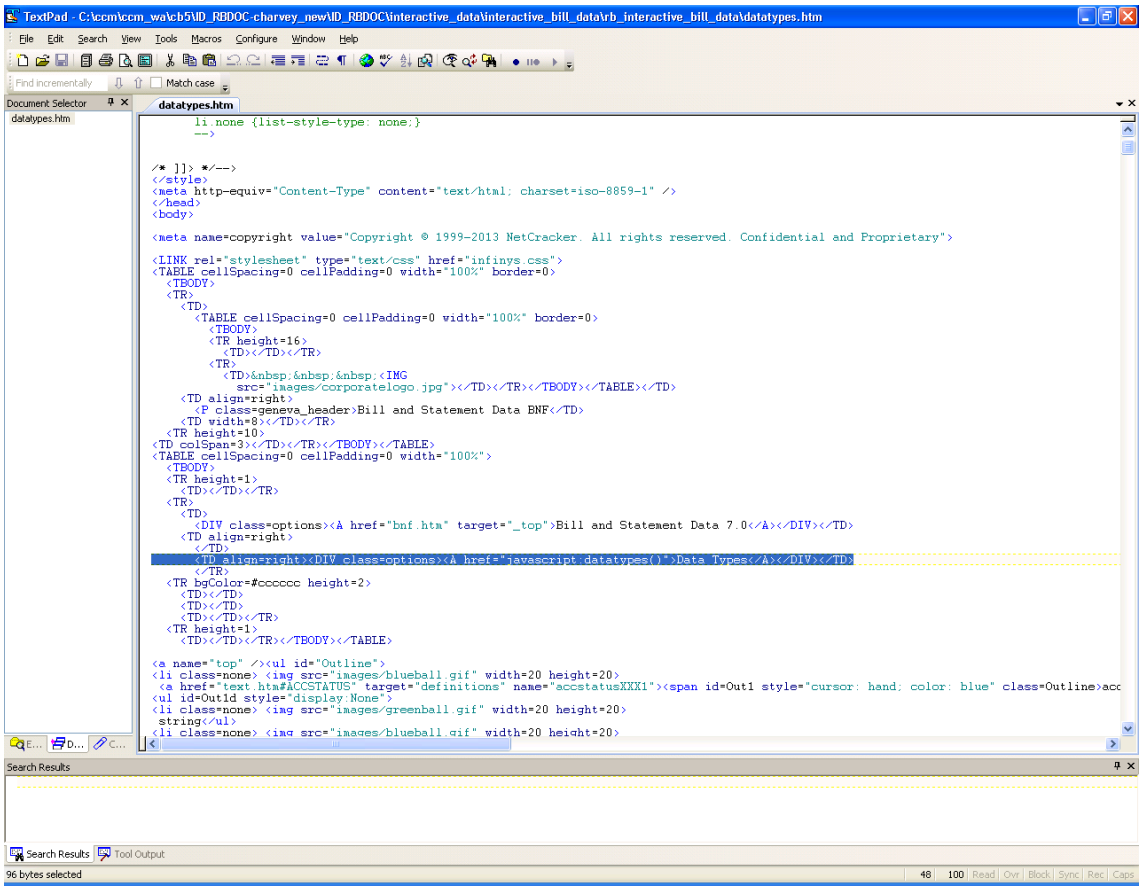
ii. Remove all comments of the form: /* <comment> */ by searching on (***/****) and ***manually*** removing each comment. Ensure you remove only /* <comment> */ but no formatting around the comments such as spaces or tabs *[CH note: This original instruction came from Micky Runham. I have found that you can safely remove multiple tabs e.g. that were present after the comment being removed, but be careful not to remove any carriage returns if the comment is only part of a line. In general, if in doubt, don't remove anything but the comment.]* **Do these comments individually – it is not possible to do a global replace.** There are about 40 comments to remove.

Note: the comments sometimes include what looks like grammar, e.g. / doctypeSUMMARYSTATEMENT is DOCTYPE tagsep string eol */ These are still comments and should be removed based on the instructions here.*

iii. Replace all occurrences of (qqq) with (/* empty */), i.e. you are restoring these valid comments. There are over 1400 replacements.

7. Change (doctypeSUMMARYSTATEMENT eol) to (DOCTYPE tagsep string eol) at the top of the file.
8. Change (doctypeBILL eol) to (DOCTYPE tagsep string eol) at the top of the file.
(Note: original instruction said to change "doctypeBILL" but if you don't capture "oel" in this replacement, you will end up with "DOCTYPE tagsep string eol eol". On the basis of the previous step, it's clear you should search on "doctypeBILL eol".)
9. Change (doctypeBCR eol) to (DOCTYPE tagsep string eol) at the top of the file.
(Note: original instruction said to change "doctypeBCR". I made the same correction to include "oel" as in Step 8.)
10. Save the grammar file as **bnf.txt** – Windows (Default) in the generation directory where the Perl files are located.
11. Open a DOS prompt and navigate to the generation area where the Perl files are located.
12. Convert the text file to an HTML file, using the following command:
perl bnf2html.perl IE bnf.txt mainnodes.htm datatypes.htm
A lot of data will stream across your screen – this is usual.
(Note: if you don't see a lot of data streaming on the DOS screen, then the script has not worked. You will get some information back on the DOS command line that may help you diagnose the problem. When the script works, you also get the two files, mainnodes.htm and datatypes.htm, in your generation directory.)
13. Open mainnodes.htm in TextPad and replace all occurrences of (zzz) with a single space ( ). Then save mainnodes.htm. ***(Note: You must ensure that all zzz strings, both lowercase and uppercase (ZZZ), are replaced with a space, or the finished interactive will have broken links between the main structure and the tag descriptions*** *(e.g.* DOCSTART_ id eol *will appear as* DOCSTART_zzzid eol and this link will be broken in the interactive). ***TextPad may default to searching/replacing with "Match case" turned on. Make sure this is turned OFF (unselected) before you do this step.)***

14. Search for (<UNDEFINED>) in mainnodes.htm and replace it with the relevant version number. There is one instance of this.
15. Replace all instances of **2013** with the current year for the end of the copyright date range (2013 is the last time the Perl scripts were updated, so this will be the end date you find in copyright ranges).
    Note: Do not change the 2013 date in strings like <span id= Out2013 … since it's not a copyright date. To avoid accidentally changing this string, search on -2013 (i.e. part of 1999-2013.)
    Also search on the year of the previous release (e.g. 2013 if it's now 2014) in case there are such strings. (Found in e.g. legal statement at 5.0. I did not find this problem during 6.0 work.)
16. Open **datatypes.htm** in TextPad and replace all occurrences of (zzz) with a single space ( ). *(Note: I did not find any occurrences of zzz in 5.0 work, either lowercase or uppercase. This was also true during 6.0 work and 7.0 work. However, I've left in this instruction as a safeguard.)*
17. Repeat steps 14 and 15 for the **datatypes.htm** file.
18. In **datatypes.htm**, also remove this line (it's creating a link to the Data types page within that very page!)
    <TD align=right><DIV class="options"><A href="javascript:datatypes()">Data Types</A></DIV></TD>
    Screenshot below of the line to remove:



[4] Note that in Micky's original instructions, it said: "Replace all occurrences of a double colon (:) with a space, double colon, space (:). This wording is confusing. I believe Micky meant a "colon". There are no instances of double colons (::) in the file.

[5] In previous version of this document, the text was "toplevel: summarystatementlist | billlist | bcrlist | billlist bcrlist;" but that appears to be out of date with the grammar file as of RBM 5.0.

10.2.3.3 3.3. Creating the Interactive

You can now create the interactive.

1. In SVN, locate the latest interactive zip file (that is, the interactive for the previous release, which should be in the SVN work area for the current release): \branches\RB\x.x.x\interactive_data\interactive_bill_data\Rating_and_Billing_Manager_Bill_and_Statement_Data_Interactive_X.X.zip (where X.X is the prior release) [6]
2. Unpack (unzip) this file into a local directory (you can also use the SVN work area, but it can be cleaner in SVN to just copy and add the final zip file into SVN once finalized.)
3. Copy the new **text.htm**, **mainnodes.htm**, and **datatypes.htm** files over the existing files (i.e. replace these).
4. Check that the product version and document version in **bnf.htm** are correct and that copyright dates are correct in all the .htm files.
5. In the search.htm file, update the BNF version number in this line, e.g.
   `<title>Rating and Billing Manager Bill and Statement Data BNF 6.1 Search Facility</title>`
6. Ensure that the images (e.g. logos) are being picked up on the BNF Navigator page (open the interactive in a browser window from **bnf.htm** then following the BNF Navigator link). This is controlled by the **mainnodes.htm** file (not **bill_data.htm**).

[6] The zip file was renamed during RBM 7.0. Previously, it was called rb_interactive_bill_data.zip.

10.2.3.4 3.4. Test the Deliverable

1. Copy the **javascript.pm file** from the **automated_testing** directory and overwrite the same file in your generation directory. *(Note: not really clear why you need to do this, they have the same saved date, but follow this instruction just in case there's a diff.) xxxCH O/S old: Nov 2013: I need to check this b/c javascript.pm is one of the files I modified at 7.0 for branding. However, I will not have time before leave. For now, the procedure below should be done using the older version of javascript.pm that is in automated_testing.*
2. Run the standard Perl command to create a new **mainnodes.htm** file:
   perl bnf2html.perl IE bnf.txt mainnodes.htm datatypes.htm
3. Rename the new **mainnodes.htm** file to **mainnodes-test.htm**. *Note: renaming this file makes the Test Links button available in the web page when viewed in Explorer. You can't do the next step using the real mainnodes.htm file, which does not have this button. Do not just copy your mainnodes.htm file from the previous procedure and rename it as mainnodes-test.htm, because it will cause problems in your real file.The test file will not have correct style sheet, release numbers, images etc – ignore that.*
4. Open **mainnodes-test.htm** in Windows Explorer and ensure that the Show Branches and Validate Links checkboxes are selected. Then click the "Test Links" button.
   "Test Links" generates two tables. The first table shows links and number of all images that are used in mainnodes-test.htm. The second table shows all the hyperlinks in the BNF tree and indicates if they are nodes or branches. An internal cross validation to the hyperlinks is carried out by using part of the fast search lookup feature.

This automated test is resource hungry and will use a lot of CPU time. You should get at lease one JavaScript dialog box, informing you that the application is running slowly. You should allow the application to run till completion. *(Note: click "No" on the warning message, or the script will stop running! You may have to reply to this warning repeatedly.)*
Also note it doesn't seem to be possible to save the web page

generated by the test links button, so you need to do all checking (below) before you close it.

5. Once the internal test is complete and the results page is displayed you need to assess the output:
    - The presence or absence of images/links in the first table indicates whether or not the correct images are available. *(Note: I had no images, just image names, when I ran this and the generated file looked just fine in terms of the blue and green bullets in the main page. Therefore, it seems that getting the name of the image file in this table (2nd column) is acceptable.)*
    - The presence of red button images in the first table indicates that there is an error with some links generated in the table. *(Note: I'm not sure what Micky meant by "red button images". At 5.0, I got the usual red cross when a webpage can't find an image, but that's normal since the mainnodes test file is not in the right location to pick up the style sheet. The "red button image" must be something the script creates in this test file if there really is a missing image file.)*
    - In the second table, the generated output contains two columns that indicate the physical count (labeled "Actual Occurance") and the assumed number of hyperlinks. This uses the fast search functionality. These numbers should normally match up. Some exceptions do occur and are due to the fact that some nodes and branches have the same hyperlink. Other mismatches indicate a possible inconsistency that needs to be investigated. The presence of "0" in one of the two columns definitely indicates that there is a problem. All mismatches, valid or invalid, are highlighted in red. *(Note: Hard to tell from original instruction what is a valid mismatch. From 5.0 work, it appears that mismatches where the "Actual occurance" column is exactly twice the "Assumed Occurance" column (for example, 8 and 4, or 2 and 1) are valid. It's also not clear exactly how one is to investigate these mismatches. At 5.0, I did this by doing a fast search (in the normal navigator page) on the tag name that showed a mismatch in the test results table. So long as the links work, e.g. to see the tag location in the structure and the tag description in the bottom pane, then assume there isn't a problem. The results table does not appear to pinpoint broken links between the bill data structure and the tags description (this should be picked up by Xenu in the final checks).*

    Suggestion: View the source of this file and search for 0. Any occurrence of this indicates missing tags in the BNF or in the tags document. *(Note: At 5.0, there were no mismatches with "0" in the test results.)*

10.2.3.5 3.5. Checking the Deliverable

You should perform the following checks on the interactive after it is complete:

1. Check that the release and document versions on the front page are correct. [Old instruction: Also check here to make sure that the BETA is showing (for non-GA release) or not showing (GA release).]
2. Check that the dates of the copyright are correct in the HTML files.
3. Check that the legal page is the most recent – you will have been told during a release if the legal statement has changed.
4. Ensure that **mainnodes.htm** (the page with the bill data structure) does NOT have the test facility, i.e. "Validate Links" button and checkboxes. If it does, it appears like this in the HTML:
    <input type="button" value="Test Links" onClick="testLinks();">
    <input name=checkBox2 type="checkbox" checked="true">Show Branches
    <input name=checkBox3 type="checkbox" checked="true">Validate Links

Manually remove these lines, like this:
<input name=checkBox type="checkbox" checked="true">Fix search to start of tags
<input type="button" value="Test Links" onClick="testLinks();">
<input name=checkBox2 type="checkbox" checked="true">Show Branches
<input name=checkBox3 type="checkbox" checked="true">Validate Links

5. Go for a quick tour of the pages in the interactive, drilling down as far as you can. Check that the look and feel of the document is as expected (e.g. the style sheet has been applied appropriately and there are no red bullets). Do some random checks of links from the BNF to the tags and vice versa. *(Note: there are legitimate red bullets in the datatypes page (linked from top right-hand side of the BNF navigator) if you drill down far enough in some datatypes. This has been cross-checked against the interactive at release 4.0. There should not be red bullets in any of the tags or structure elements on the main navigation page.)*

6. Check all the links in the interactive using Xenu (http://home.snafu.de/tilman/xenulink.html#Download).

CH old note from 5.0 work to verify in future: two broken links I couldn't resolve, this is in mainnodes.htm in javascript stuff that may be running the test facility, but check it with David (CH note, Nov 2013: I haven't followed up on this and am not sure it's an important issue.):
file:///C:/workspace/charvey/BD_new_interactive(3)/rb_interactive_bill_data/'+(logArray[0][i]).src
+'
file:///C:/workspace/charvey/BD_new_interactive(3)/rb_interactive_bill_data/'+logArray[2][i]+'

10.2.3.6 3.6. Final Tasks

To create the interactive:

1. Delete the **mainnodes-test.htm** file. *(But note this file should be in your generation area anyway, not the master file structure in SVN. Just ensure it's not in the master structure you zip up.)*
2. Zip up the files (including the images directory) into Rating_and_Billing_Manager_Bill_and_Statement_Data_Interactive_X.X.zip (where X.X is the current release number).
3. Add the new zip in SVN in \branches\RB\x.x.x\interactive_data\interactive_bill_data. Then commit the zip file.
4. Commit the parent folder, interactive_bill_data, since you added a new object.
5. Once the new zip has passed its deliverable check, copy the file to the delivery area in SVN and run Add/Commit operations.

10.2.4 4. Dunning Data

CH note, Nov 2013: This part of the process document has not been checked or updated recently. The Dunning Data has not changed in many releases, but it should be verified in 2015 (check for any changes to **dunning_data_grammar.y** in the SVN development database. As of Nov 2013, it appears it was last updated at Infinys 3.0).

The dunning data interactive is much smaller than the bill and summary interactive. Also, it rarely changes.

10.2.4.1 4.1. Checking for Changes

Examine the following documents in the SVN development projects:

- DOC\design\processes\dunning_letters\dunning_data_changes.doc (for example, for the 8.0.4 release, see https://svnca.netcracker.com/RB/branches/MR/8.0.x/DOC/design/processes/dunning_letters/)
- FINANCE\DLG\RTEST\dunning_data_grammar.y

If these files have been updated since the release at which the interactive was last issued, you should have to do a full regeneration.

If the source files from development were not updated since the last release, then it is only necessary to update the version/document version (bnf.htm) and copyright dates of the following files:

- bnf.htm
- datatypes.htm
- dunning_data.htm
- key.htm
- ls.htm
- mainnodes.htm
- search.htm
- text.htm

If the source files have been updated for descriptions only (including "derived from") or a PR requires changes to descriptions, you can manually modify the interactive AND our tag source document (\branches\RB\x.x.x\interactive_data\interactive_dunning_data\dunning_data_tags.doc).

10.2.4.2 4.2. Gathering Dunning Data Tag Information

If the dunning data interactive needs to be regenerated, you should gather data in the same way as for billing data (see Gathering Bill Data Tag Information), except that your development source data file is:
DOC\design\processes\dunning_letters\dunning_data_changes.doc

The documentation sources will be the same. You must gather all the dunning data changes for the release or releases between the current release and the last release at which the interactive was published. For example, for the 4.3 interactive, the last release was at 4.0.4 (aka Cobrabel), therefore all dunning data changes for 4.1, 4.2, and 4.3 need to be incorporated.

10.2.4.3 4.3. Generating the Dunning Data Interactive

To generate the dunning data interactive, you need the latest versions of the following files:

- \branches\RB\x.x.x\interactive_data\interactive_dunning_data\dunning_data_tags.doc (SVN documentation project)
- FINANCE\DLG\RTEST\dunning_data_grammar.y (SVN development project)

The method of generation is the same as for bill and statement generation (see Generating the Bill and Statement Data Interactive). The interactive file is:
\branches\RB\x.x.x\interactive_data\interactive_dunning_data\dunning_data_tags.doc

The file should be tested in the same fashion (though this process is a lot faster for dunning data!).

10.3 Collections Manager Documentation Process

Note: Derron Newland is the main CM SME. Other CM SMEs are Mary Swan, Marina Kraversky, and Jim Connelly.

The following are the main steps involved in updating the Collections Manager User Guide:

1. Create a new ticket for the Collections Manager work using the appropriate client ERP codes. Note the following:
    a. This ticket will be used in the Confluence site as well since a ticket is required to save updates.
    b. The project manager for the Collections Manager custom release should provide you with an ERP code. For example: https://tms.netcracker.com/browse/CMDEV-

4439

c. All work should be charged to the client since the core updates and custom updates both. (You should not mention the words "core" or "custom" to the client CM release managers. We determined this was the best approach – make the core updates first and then the custom updates, but the client is paying for the updates because the core updates also apply to their custom solution. It is just easier for us to think of core vs. custom so that we can build on the core guide for the next custom release.)

2. Ask Andrei Denesh or Tony Popp to create a new component version space for the new Collections Manager core version using the previous core version. (For example, Collections Manager 4.11.0.0 will most likely be the next core release so you will ask them to copy the Collections Manager 4.10.0.0 space and name it Collections Manager 4.11.0.0). Note the following:
   a. Here is a link to all of the Collections Manager core documents: https://doc.netcracker.com/pages/viewpage.action?spaceKey=ALLDOC&title=Collections+Manager
   b. Starting with Collections Manager 4.6.0.0, we are only maintaining the Collections Manager User's Guide. All other guides have been retired due to lack of SME availability. This was confirmed by Derron Newland, Chris Meader, and some CM project managers.
   c. You will see other Collections Manager guides are in the Collections Manager 4.5.1.0 Confluence space; however, some of those guides were never completely updated for 4.5.1 (the ones that have 4.3.5 in the guide name -> Configuration, System Processes, and Customization & Integration – were not updated). The last time the entire CM doc set was updates was for Release 4.3.5.
3. Export the Collections Manager User's Guide to Word and turn on track changes. Ask Derron to make all of the core updates in the Word file and then copy/paste/edit his updates into the new Collections Manager core Confluence space (for example, Collections Manager 4.11.0.0).
4. Also ask Derron to provide you with the custom updates using the template from previous releases (**CM_temp_for_custom_updates.doc**). Note that you will not make the custom updates in the core guide. This is explained in a later step. The **CM_temp_for_custom_updates.doc** file is stored here: https://sps3.netcracker.com/sites/proddoc/Collections/Forms/AllItems.aspx
5. Using the information that Derron provides you, come up with an estimate. (It usually takes a week or two to make the updates in the user guide, but I suggest you add an extra week to the estimate if you are new to Collections Manager.) If you are new to Collections Manager, I suggest you spend some time getting used to the UI (comparing the UI against the user guides) and/or asking me or Derron to give you a quick demo.
6. Ask Derron to provide you with a UI link for the corresponding Collections Manager release so that you can see the updates and document them accurately.
7. Locate the client who is receiving the custom guide (using this site: https://doc.netcracker.com/display/ALLDOC/Releases) and determine the Netcracker release that is compatible with the Collections Manager version. You will need to ask the release manager for this information.

1. If the compatible Netcracker release is not listed in this space, ask Andrei Denesh or Sergey Trusenkov to create a new space for the custom guide.
2. After you have made all of the core updates from Derron in the corresponding core Confluence space (https://doc.netcracker.com/pages/viewpage.action?spaceKey=ALLDOC&title=Collections+

Manager), copy the CM core user guide to the client Confluence space so that you can make the custom updates there.

3. The CM SME and editor can use the Page History and Compare functions in Confluence to view the updates that you made. Or, you can export the Word file and then do a Compare Word function based on the previous core version. (This is ideal, but currently only Tony and Andrei have permission to export Word files.) That way Derron can quickly review the updates that you made instead of having to click each page in Confluence.
4. Also ask someone to edit your updates directly in the Confluence space (using the Word compare file to see the changes that were made).

6. Create a ticket to have the client guide exported/posted by using the **Export** button in Confluence.

7. Make sure that the guide is posted to the correct location and that everyone knows where to obtain the final user guide. Send an announcement email to the required people with a link to the client support website location.

10.4Doc PR Analysis and Doc Metric Calculation

- 1. Purpose
  - 1.1. What and Why
- 2. What Do I Need Before I Start
- 3. Calculating Doc Metrics

10.4.1 1. Purpose

This section provides an overview of how to analyze the doc PRs and how to resolve them by taking them thru the PR lifecycle.

10.4.1.1 1.1. What and Why

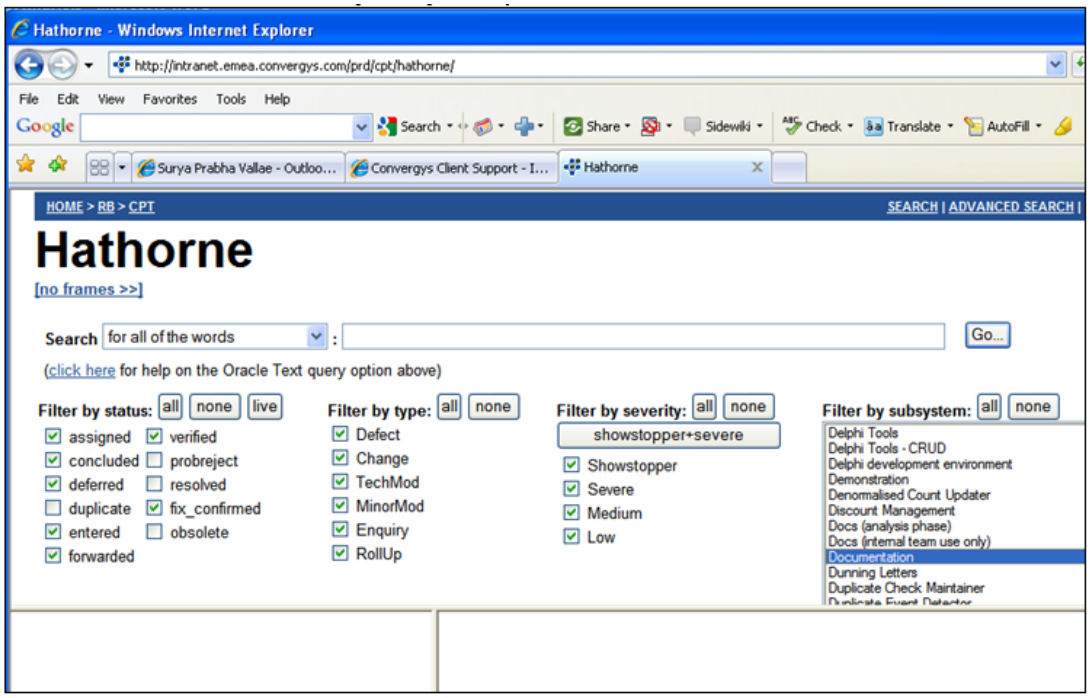
Doc PRs are the bugs filed against the documentation set or individual books belonging to one or more releases.

10.4.2 2. What Do I Need Before I Start

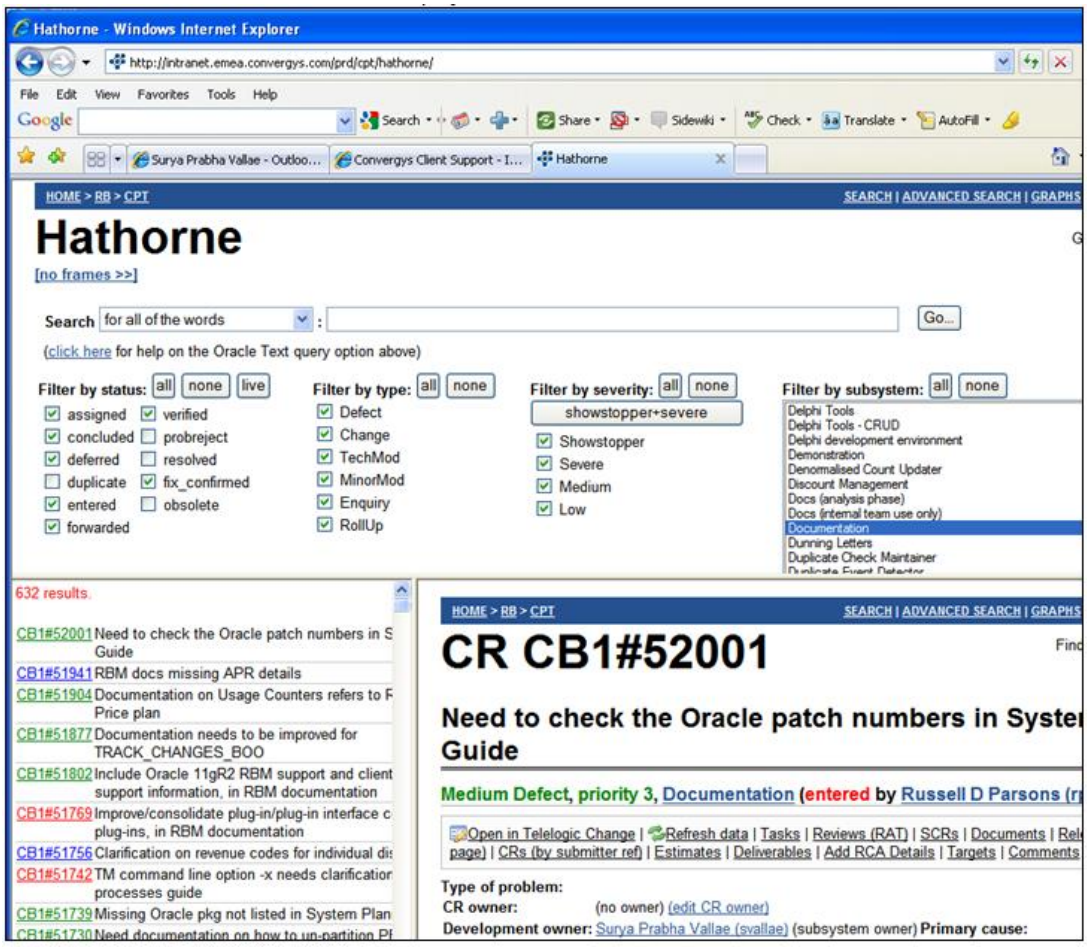
To analyze the PRs, the DOC PR owner needs to make a list of the PRs. The list can be made from the link below. By default, this link is accessible to all.

http://intranet.emea.convergys.com/prd/cpt/hathorne/

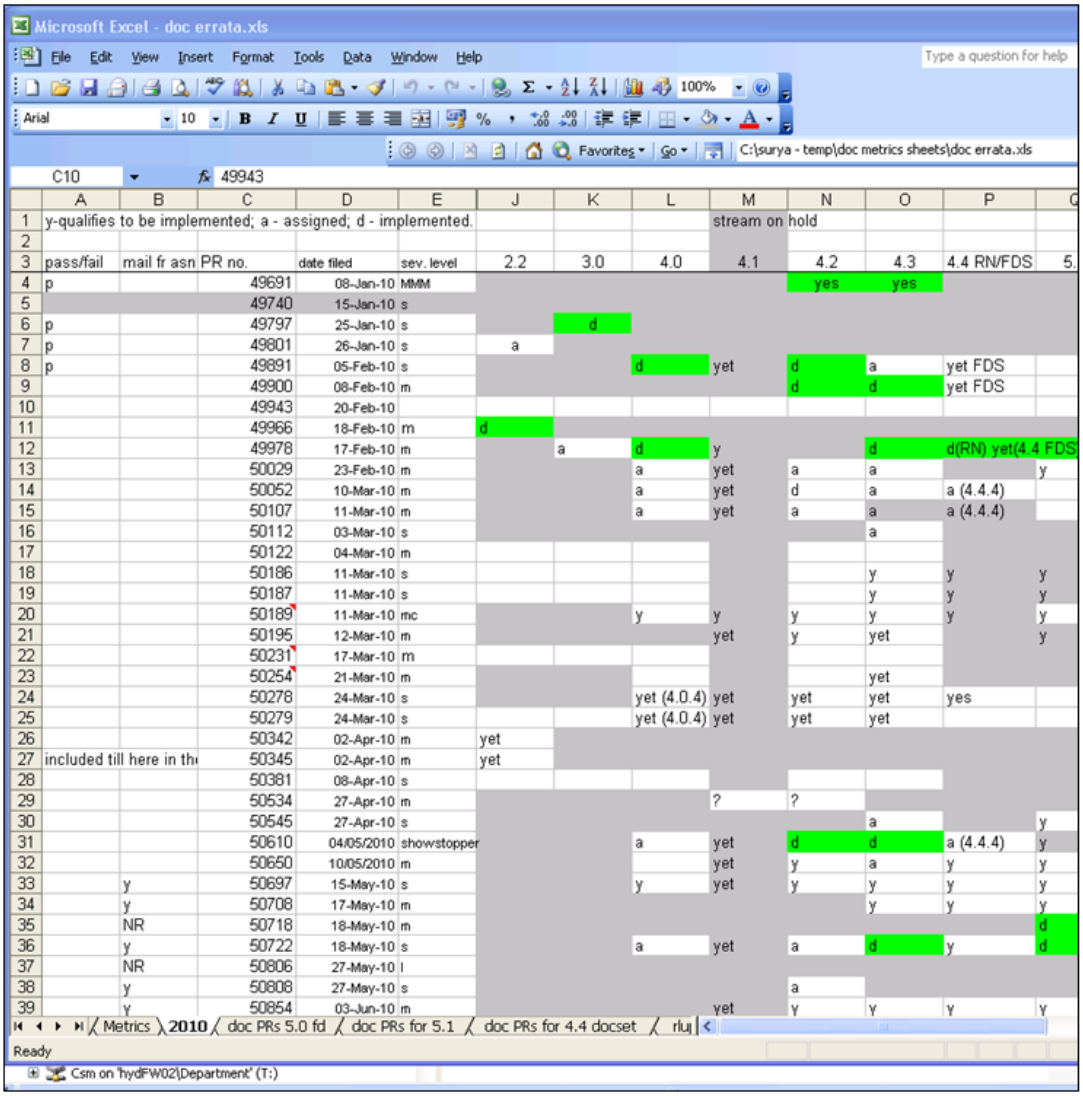
1. Select the following check boxes from **Filter by Status**.
   a. Assigned, concluded, deferred, entered, forwarded, verified, fix_confirmed
2. Select all check boxes from **Filter by Type**.
3. Select all check boxes from **Filter by Severity**.
4. Select *Documentation* from **Filter by Subsystem**.



5. Click **Go**. A list of documentation PRs displays:



6. Enter the PR number, the date it was filed on, and the severity into the doc errata.xls on the sheet named after the current year. You can maintain this spreadsheet in your desktop and later post it to the Product Documentation > RBM Releases > RBM x.x > x.x_RB_Docs_Project.xls project.



7. Read the PR page. Typically a PR is filed against a particular release. This is evident from the release version selected by the person who filed the PR (PR originator).
   Note that if you find that the document was not released at the release mentioned by the PR originator, look up the previous head release doc set. Or, if the PR is filed against a guide which is released only with full doc set, look up the last full doc set version of the guide.
8. If you find that the guide is not in error, change the status of the PR, using Change Synergy to “verify” and then “probe reject”.
9. If you find that the error occurs in the guide, check the later releases of the guide as well to determine if the error occurs there too.
10. Make a list of all the releases where the guide is in error.
11. Analyze how to fix the PR. Get clarifications, if required, from the SMEs.
12. Open the PR in Change Synergy and update the notes field on the PR page with your analysis.
    Your analysis on the PR page should include:

a. The guides that should be fixed.

b. The corrections, approximate or detailed, for each guide at various releases

c. The release streams that the PR should be fixed in.

13. Update the Root Cause Analysis (RCA) details only for *Client raisedSev 1, ShowStopper PRs*.
    To update the RCA details:

    a. Select the **Add RCA details** link on the PR page.

    b. Click **Update**.

    c. Enter the description, root cause, impact, remedial action, and cost to RB (if applicable).

    d. Click **Save changes**.

14. Write to the maintenance release manager to assign a particular PR to upcoming releases based on your analysis above.

15. Once the release manager assigns it to various releases, mark the status of the PR as “a” (means assigned) against each release stream in the doc errata.xls.

16. As you analyze doc PRs, mark all doc PRs that should be implemented in the full doc set. Copy all such doc PRs to the “Doc PRs” tab of the Product Documentation > RBM Releases > RBM x.x > x.x_RB_Docs_Project.xls project and post them roughly 2 months ahead of the GA release date. That gives the authors enough time to complete the work and take the sev 4 doc PR content thru tech reviews.

17. Now the job is taken over by the doc PR author to write the content for the PR.
    Note: At a MR or GA Release Notes where full doc set is not published, the DOC PRs come up as part of the PR list generated by the maintenance/GA release notes author. In these cases, either the release notes author or someone on his/her request develop the content for the doc PRs. However, the doc PRs that are addressed in the full doc set are tracked thru the xls mentioned in step 16.

18. After the doc PR content is developed, it should be approved either by the PR originator or the SME who provided the knowledge to develop the content. And the content should be edited.

19. The edited doc PR content should be part of the maintenance release for which the doc PR is identified.

20. When a doc PR is identified for more than one release, the content can be rolled into the other maintenance releases as well. But you must verify the guide versions (release numbers) etc., so that the content is appropriate for the release where it is being included. Also, sometimes, though you can leverage the same content across various releases, the sections that attract the content may be different. Therefore, ensure that the corrections you are suggesting by rolling up content exactly fit into sections and books you are mentioning in the content.

21. The authors who implement the doc PRs in the full doc set should do two things to further the doc metric calculation and doc PR resolution:

    a. Mark the PR page with appropriate comments about which head release the doc PR is implemented in.

    b. Mark the rows in the x.x_RB_Docs_Project.xls spreadsheet as “complete.”

22. The doc PR owner will mark a doc PR resolved when it is implemented in all the identified releases. Then he/she can mark it resolved in Change Synergy.

10.4.3 3. Calculating Doc Metrics

Doc metrics are calculated for a single year for the PRs during a year, starting from January through December.

Maintenance Release:

The expectation is that a PR be fixed in at least one release within three months from the date it is filed.

1. The previous chapter step 6 explained how to make note of the PRs.
2. As each release carries the content of a PR, keep marking the respective cells in the xls sheet into ‘y’ and color it green. That marks the implementation of the PR in a particular release.
3. Once a PR is implemented in all the identified releases and rolled into the full doc set, you can resolve it.
4. Open the PR in the Change synergy and change the status to “resolved”. Note that you can always reopen a PR for rework.
5. Mark all PRs that are fixed within three months of their filing as P (passed). The exceptions are:
    a. When the first maintenance release is not available within the 3 months timeframe, still mark it a pass if the PR made it to the next available MR. For example, if a PR is filed on Jan 1, 2010, and the MR that it can be fixed first is on April 15th 2010, then mark the PR as passed.
    b. Sometimes, PRs cannot be implemented because content is not approved. Therefore, if you implement it immediately after receiving the approved content, then mark the PR as passed.
    c. When a PR falls into the category "internally-raised Sev 3/4 or customer-raised sev 4", it need not be included in the MR release notes.
6. Since the calculation is till the month of December, you can calculate the doc PR metrics in the month of Feb.
7. To calculate the metric, follow this rule:

The total number of PRs that were implemented

---------- *100

The total number of PRs that were implementable

The result is the doc metric in percentage.

Head Release:

The expectation is that a PR filed in a specific year and before the first day of the month that a head release’s documentation tasks start to be fixed within that release.

1. Once a PR is implemented in the head release, mark the PR as P (passed) in the xls sheet. Exception:
    a. Sometimes, PRs cannot be implemented because the SME is yet to provide the required information or the content is not approved. Therefore, if you implement it immediately after receiving the approved content, then mark the PR as passed.
2. Since the calculation is till the month of December, you can calculate the doc PR metrics in the month of Feb.
3. To calculate the metric, follow this rule:

The total number of PRs that were implemented

---------- *100

The total number of PRs that were implementable

The result is the doc metric in percentage.

10.5 Documentation Build Processes

- 1. Purpose
  - 1.1. What and Why
  - 1.2. What Do I Need Before I Start
- 2. Process

10.5.1 1. Purpose

This section provides an overview of the requirement for the process.

10.5.1.1 1.1. What and Why

A build request enables the Build team to add documentation objects into the development build. Currently there are two sets of documentation objects that need to make it into the build for a GA release:

- Online helps. The following files need to go into the build so they can be included in the setup.exe file created to deploy the Rating and Billing user interfaces:
- The subset of documentation that is released with every SA release (See the Bill of Materials in SVN for complete list of the deliverables. The location is provided below.)

The full documentation set release does not require a build request as this is published on the Customer Support Site (CSS), and not via the Build team.

Note that separate PSUP ticket(s) must be submitted to the build team for RBM documents to be included in the build.

10.5.1.2 1.2. What Do I Need Before I Start

You need to do the following:

- You must have contact with the people responsible for the objects to be entered in to the build request, i.e. the author of the guides or online helps. You will need agreement with this person as to the latest time you can put in a PSUP request (the build team includes the doc deliverables with the software package using this request. Raising the PSUP request marks the delivery of documents to the build team.)
- You must know the deadlines for the release.
- You should use the link (https://psup.netcracker.com/browse/RBMRECORE) to raise the PSUP request(s).

10.5.2 2. Process

The following is the process for issuing a build request for a Head RBM Release:

1. Ensure that all objects to go into the build are completely finished and ready by contacting the authors.

2. Create a new PSUP request for the build request. Use this link to access PSUP: https://psup.netcracker.com/browse/RBMRECORE. Include the following in the PSUP request:

- A list of the SA deliverables, which includes Release Notes, Help files, and key API/reference guides – i.e. corresponding to the Subset version of the Bill of Materials (BOM). In SVN, the BOM is located in the Release level > Bill of Materials folder.
- The SVN folder for deliverables is located here: https://svnca.netcracker.com/RBMDOC/branches/all_doc_deliveries. Append the appropriate Release sub-folder.

10.6 Documentation Delivery on NC CSS

- **Important!** Please note that the actual user interface of NetCracker may differ from that represented in screenshots in this document.

- Introduction to Documentation Delivery on NC CSS
- Getting Permissions for your User
- Uploading Maintenance Release Notes
- Uploading a Documentation Set
    - SVN Delivery Project (Staging Site)
        - Folder Structures
    - Creating the Release Structure in the Sandbox
    - Uploading PDFs - Bulk Upload
    - Uploading PDFs - Single File Upload
    - Uploading and Unzipping HTML Guides
    - Copying RBM Guides to RBM Extension Doc Sets
    - Uploading Other Document Types
    - Setting up "Redirection Links" for Incomplete Doc Sets
    - Use of Descriptive Text
    - Final Checks and Testing in the Sandbox
    - Moving the Complete Doc Set to Live Folder
    - Post-Migration Testing on the Production CSS
    - Reposting a Guide After a Fix
- Linking Documentation Sets to Client Folders
- Migrating Documentation from UAT Server to Live CSS
- Appendix: Document History

10.6.1 Introduction to Documentation Delivery on NC CSS

This document pertains to all releases published after June 1, 2015 and is intended for non-TOMS documentation, including RBM and its extensions, Active Mediation, and Collections Manager. (In some cases, TOMS documentation is also uploaded but is generally specific client releases, and is not controlled by the RBM Documentation Team.) For RBM, this document pertains to *head releases* (e.g. RBM 9.0), *client releases* (e.g. RBM 8.0.5), and all *maintenance releases* (e.g. RBM 5.3.12).

Delivery on the Netcracker Customer Support System (https://support.netcracker.com/) uses two area on the live server:

- The **SandBox** folder on the production CSS (live server): https://support.netcracker.com/ncobject.jsp?id=9143126754613997264
- The "live" folders within the production CSS:
    - **Products**: https://support.netcracker.com/ncobject.jsp?id=9144656672013822913
    - **Clients**: https://support.netcracker.com/ncobject.jsp?id=9144665739313851031

The **SandBox** area is visible to internal users but is never visible to external users. The **Products** and **Clients** areas are visible to external users, depending on their current access permissions. Note that use of the test server (UAT CSS https://qaapp150cn.netcracker.com:7300/) was removed in 2016.

Login requires your "Outlook" username/domain password (for example, Caroline's is "Caroline F Harvey", with normal domain password).

To navigate to the documentation area, go to **Navigation > Documentation**. You will be in a folder called **Top**.

In order to perform this task, you need full grants to work in the CSS. This means you will be able to add/move/copy/unzip/delete folders and files. If you are assigned to the CSS upload work for a release, raise a ticket a few days in advance to get the relevant grants. See "Getting Permissions for your User."

You can work in Chrome or Internet Explorer. This document shows screenshots from Chrome, unless noted.

10.6.2 Getting Permissions for your User

To get full grants for your user, you need to raise a ticket in the PSUP system, as follows:

1. Follow this link and then go to **Tickets > Create Ticket**: https://psup.netcracker.com/browse/NCCSS
2. Ensure the **Project** value is "NC Customer Support System".
3. Set the **Ticket Type** to "Task".
4. For the **Summary**, use text such as "Add full permissions to <Your Name> User for CSS".
5. Set a due date a couple of days out from today's date.
6. In the **Description**, explain that you need to be able to upload documentation (specify the doc set and any deadlines) to the test server (UAT) and production CSS. Provide the links in the introduction above so it's clear which test server is meant.
7. Set Nickolay Sergeenkov, Oleksandr Iakushev and Yuliia Lukianenko as watchers. Their NC names are sergeenkovn, olia0514, and yulu1214, respectively.
8. Fill out any other mandatory fields as appropriate. Click **Create**.

10.6.3 Uploading Maintenance Release Notes

For a maintenance release, the only deliverable is typically the Release Notes (PDF document). In this case, the process is simpler:

1. Request permission to upload documents to the CSS if you do not already have it. See "Getting Permissions for your User."
2. Create the PDF in SVN within the release area (you do not need to use a staging area).
3. Upload the PDF to the CSS using the process described in "Uploading PDFs - Single File Upload". The Release Notes belong in the main release stream, for example, RBM 5.3.12 belongs in the 5.3 > Release Notes area: https://support.netcracker.com/ncobject.jsp?id=9140700574013189872
   NOTE: if you cannot upload the PDF from your SVN work area on the VM, copy the PDF to your local machine and upload from there.
4. Notify stakeholders of the document by sending out the URL to the page containing the new releases notes.
5. If there are any late changes and you need to reload the document, follow the process in "Reposting a Guide After a Fix".

10.6.4 Uploading a Documentation Set

The documentation delivery takes place in the following stages:

1. Create the delivery project in SVN. Tech Writers then copy the completed deliverables to the delivery project. See "SVN Delivery Project (Staging Site)."
2. Upload and test the deliverables in the **SandBox** folder on the live CSS server. This is the major stage of work. See the following sections:
    - "Creating the Release Structure in the SandBox"
    - "Uploading PDFs - Bulk Upload"
    - "Uploading PDFs - Single File Upload"
    - "Uploading and Unzipping HTML Guides"
    - "Copying RBM Guides to RBM Extension Doc Sets"
    - "Uploading Other Document Types"
    - "Setting up "Redirection Links" for Incomplete Doc Sets"
    - "Use of Descriptive Text"
    - "Final Checks and Testing in the SandBox"
3. Move the completed release to the appropriate live folder within CSS server. See "Moving the Complete Doc Set to Live Folder."
   Note that the Move instructions given here can be used for any Move operation within the CSS.
4. Run final tests on the live CSS. See "Post-Migration Testing on the Production CSS."
5. If a guide is fixed late on (either before or after delivery), reload it on the production CSS. See "Reposting a Guide After a Fix."
6. If the release is a client release, work with the client's account manager and Nickolay Sergeenkov's team to ensure the client's users gain the correct kind of access.

This document also covers copying files on the CSS (see "Copying RBM Guides to RBM Extension Doc Sets"). Copying files is not normally needed for a new release except for RBM guides copied to extension doc sets. Also note that if clients are already set up to access folders and you then copy them to a new location, the client permissions are lost and must be set up again. Instead of copying, you should run a Move operation, which retains existing permissions.

10.6.4.1 SVN Delivery Project (Staging Site)

In SVN, the delivery project acts as a staging site to allow all Tech Writers (TWs) to copy completed files into the relevant categories for a given product release. This is the site from which you then upload the guides to the CSS, using your local copy of this SVN project. (The staging site is similar to the shared drive we used in the past for David to upload the CSWS.)

You need to set up the structure in advance so TWs can copy finished guides to it. The structure is similar to the typical guide categories, but for some doc sets, splits out PDFs from HTML guides for some categories. This allows bulk upload of PDFs.

To create the delivery project:

1. Ensure you have the **all_doc_deliveries** project checked out. This is at the same level as the main product folders (AM, AMI, CM, RBM, etc.).
2. Within **all_doc_deliveries**, add the product folder if it does not exist yet using the convention <product acronym>_delivery (e.g. **CM_delivery**). If it does exist (e.g. **RBM_delivery**), add the new release folder, using the full release number (e.g. **9.0.2**).
3. Within the release folder, add all the relevant category folders, using the structures shown in "Folder Structures" for the given product.

4. At the parent level (that is, the top-level folder you have added), commit the structure in SVN. The child folders will be automatically committed. (It's more efficient to commit the whole structure than to do each folder separately.)
5. Copy the finished BOM from the normal product development area to the delivery area. This file can be loose inside the release folder (e.g. **9.0.2**). You will need to refer to the BOM when uploading guides to the UAT server.
6. Notify team members to update their **all_doc_deliveries** project.

10.6.4.1.1 Folder Structures

For RBM head release (or client release), use this structure within the **X.X.X** release folder:

concepts [note: we don't need to append PDF to this folder name since all concepts are PDFs - you will do a bulk upload of this folder]

interfaces_schema_HTML

interfaces_schema_PDF

overviews

release_notes

sys_admin_HTML

sys_admin_PDF

user_interfaces

NOTE: For RBM maintenance releases, just add the Release Notes PDF loose within the **X.X.X** folder, unless other guides are being published as well.

For RBM extensions, use this structure within the **X.X.X** release folder. However, only use those categories that are needed for each doc set:

concepts

interfaces_schema

overviews

release_notes

sys_admin

user_interfaces

For AM, use this structure within the **X.X.X** release folder (this is based on AM 7.0):

concepts

overviews

release_notes

sys_admin

user_interfaces

For CM, use this structure within the **X.X.X** release folder (this is based on CM 4.3.5):

concepts

interfaces_schema

overviews

release_notes

sys_admin

user_interfaces

Once the delivery area is set up and files for publication have been copied there, check out a copy of this part of the SVN structure on your local machine (not on your VM). This is the location from which you will upload guides to the UAT server.

10.6.4.2 Creating the Release Structure in the Sandbox

The **SandBox** folder (https://support.netcracker.com/ncobject.jsp?id=9143126754613997264) allows you to build the entire new folder structure and then move it in a single operation to the live folder that will be visible to external clients, as well as internal users. Remember that you are working on a live system and changes are visible in real-time. However, since the SandBox is not the final folder accessed by users, you can assume that people will not be checking there for documentation before you are done building the new release.

To create the release structure:

1. To create the parent folder, navigate from the **Top** folder in the CSS Documentation area to inside the **Sandbox > BUILDS** folder. At this level, create the new folder for the given release by clicking **New Document Folder**:

   Figure 1 Creating a New Document Folder

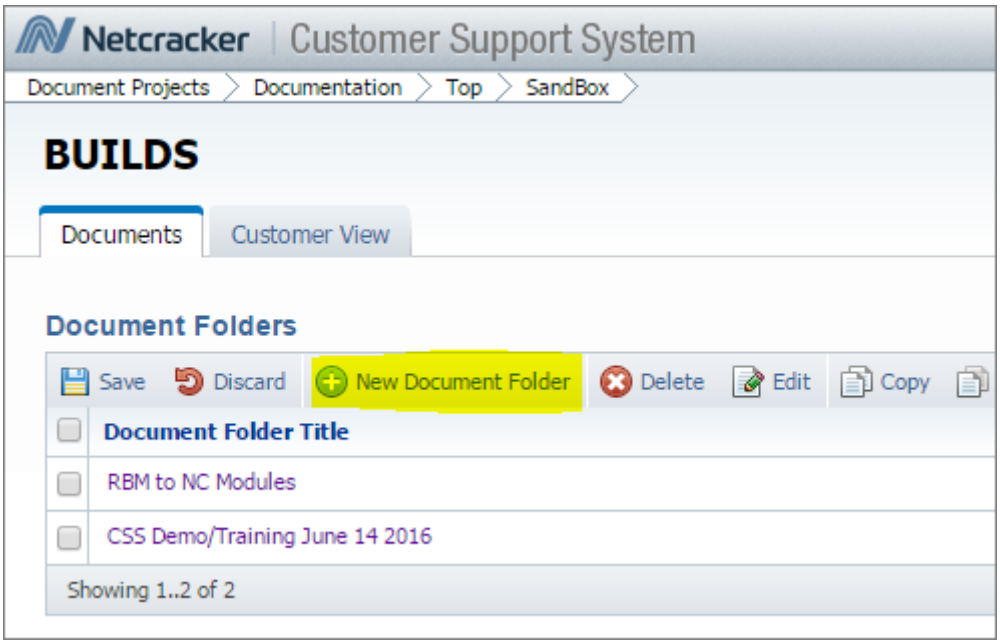


   Figure. Navigating a New Document Folder

2. In the dialog that opens, specify the folder name. The product release folder must be in the format **<product acronym> (space) <full release number>**. For the **Description**, for RBM only, add details of the extensions in this release in a comma-separated list (that is, Extensions: TAP3, VI, AMI but only include those in the given release). For other products, leave the description blank:

Figure 2 Example of Parent-Level folder (Product and Release)

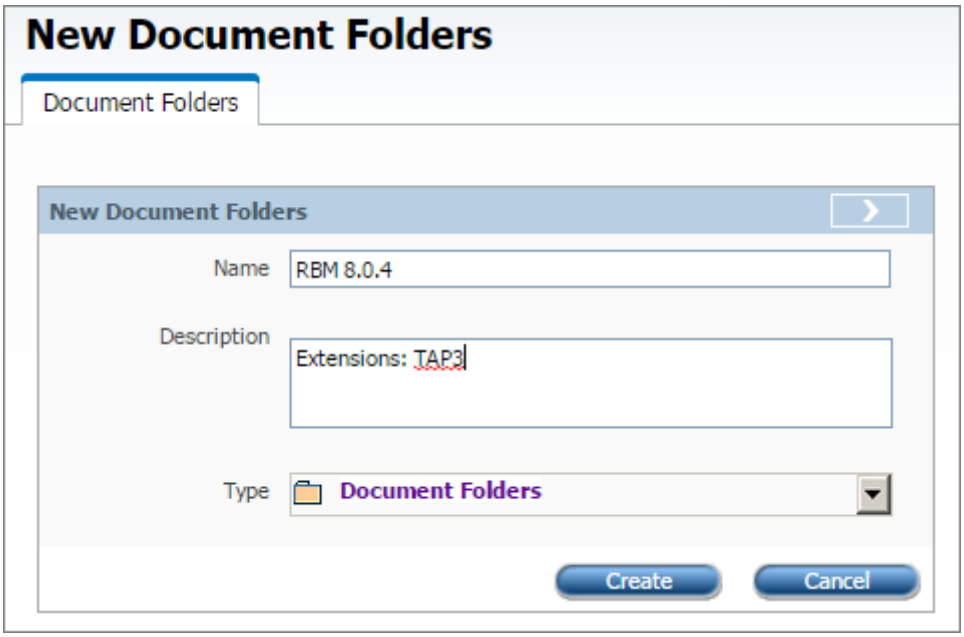


Figure. Example of Parent-Level folder (Product and Release)

3. Navigate back up one level to the main folder for this new release (e.g. RBM 8.0.4). Continue setting up the folder structure for the guide categories. When creating the category folders and extension folders (if any), present them in this order:

   Overviews
   Concepts
   System Administration
   User Interfaces
   Interfaces/Schemas
   Release Notes
   <Extension folders>

   For RBM, the extension folders should appear like this, and in this order:

   RBM TAP3 Extension
   RBM Vertex Extension
   RBM to AM Integration

   Only add an extension folder if it is being delivered at this release. Then create the guide categories for that extension inside the "parent" folder for that extension. This structure mimics the "Related Doc Sets" box on the CSWS.

   Note that each time you create a folder, the CSS leaves you ***inside*** that folder (not at the level where you were when you created it) so you must navigate back up one level before setting up the next folder - otherwise, the folders will all be nested inside one another.

   For example, after creating the **Overviews** folder, you are inside that folder. Click the relevant folder on the navigation path (highlighted element in the screenshot below) to navigate back up one level before creating the **Concepts** folder, otherwise you will create **Concepts** inside **Overviews**.

Figure 3 Example of Navigating Up One Level to Avoid Nested Folders

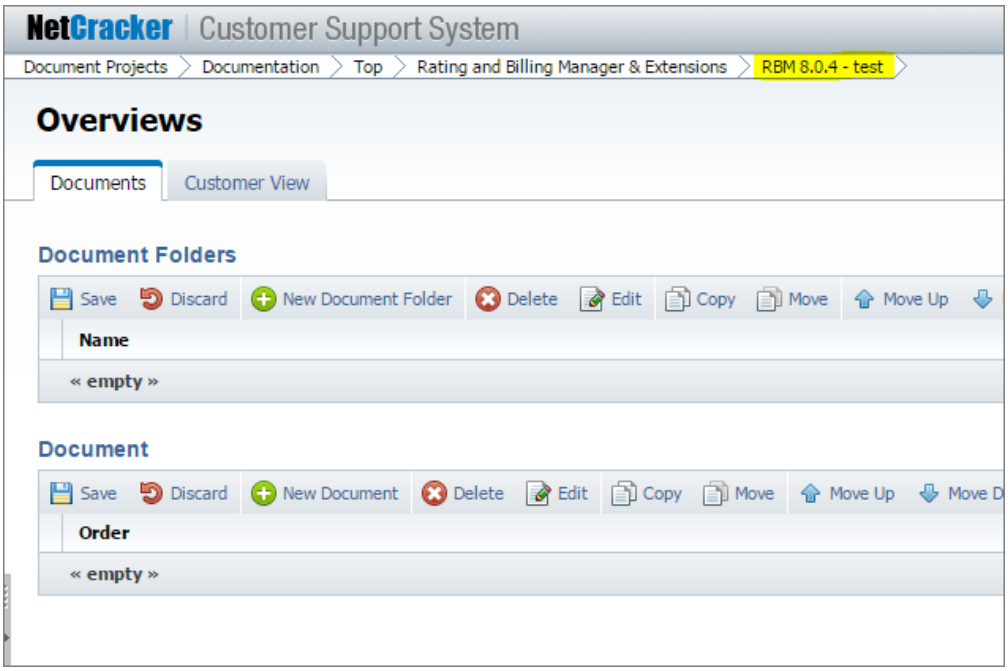


Figure. Example of Navigating Up One Level to Avoid Nested Folders

Once the folder structure is set up, you can add guides. See the relevant sections below for PDFs versus HTML guides (individual zip files), or for other types (e.g. the **.template** file in TAP3 releases).

10.6.4.3 Uploading PDFs - Bulk Upload

The CSS supports adding a zip file of PDFs, then unzipping them into individual files. This makes it efficient to upload doc sets, like RBM and AM, where there are large numbers of PDFs in a given category.

To upload bulk PDFs:

1. In the SVN delivery area, zip up the folder you want to upload, for example, for RBM, it might be **concepts**, **sys_admin_PDF**, etc.
2. On the CSS in the **SandBox** area, navigate inside the folder where you want to add files.
3. In the **Documents** table (i.e. the second table on the page you're viewing), click **New Document**:

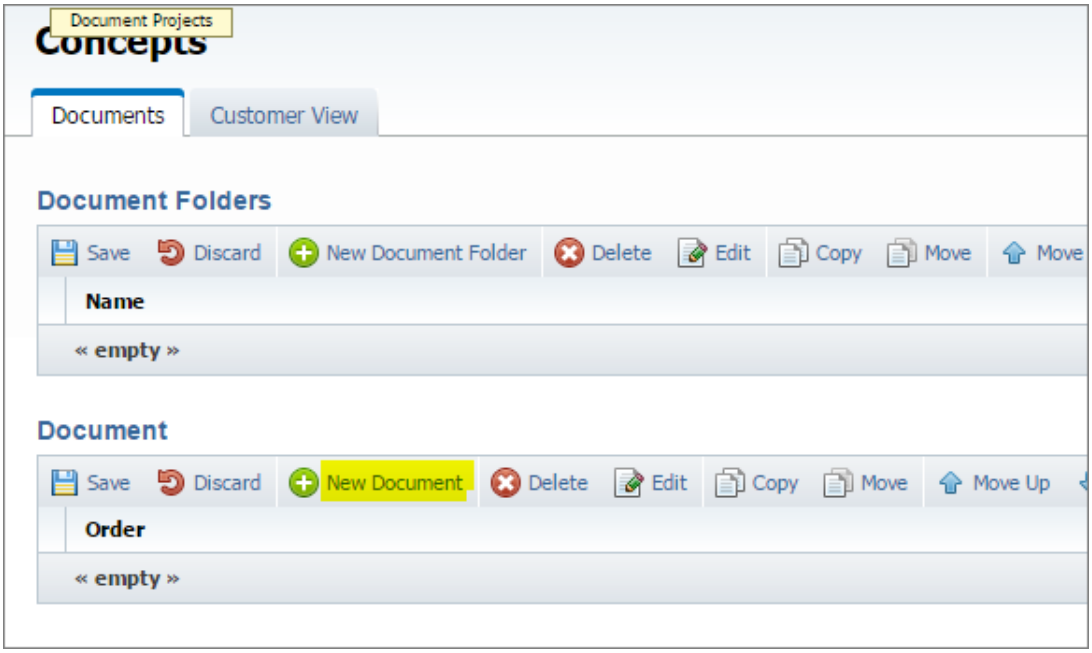


Figure. Creating a New Document (Bulk PDF Upload)

4. In the New Document dialog, click the button in the **Document File** pane:

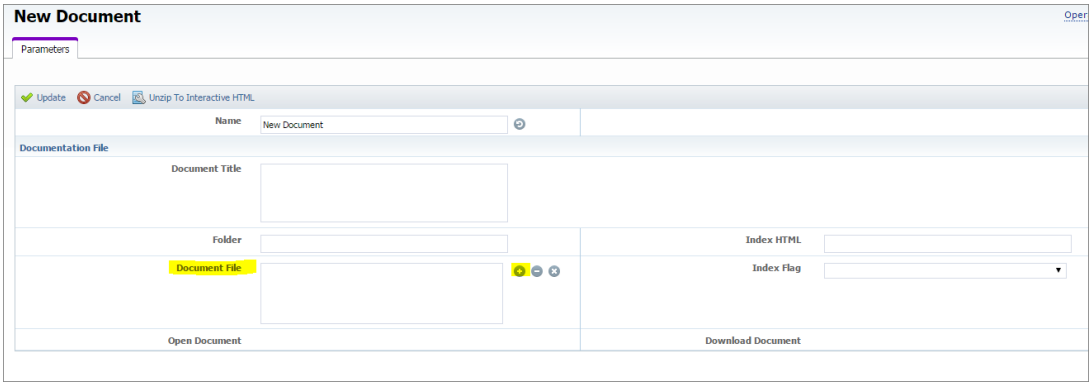
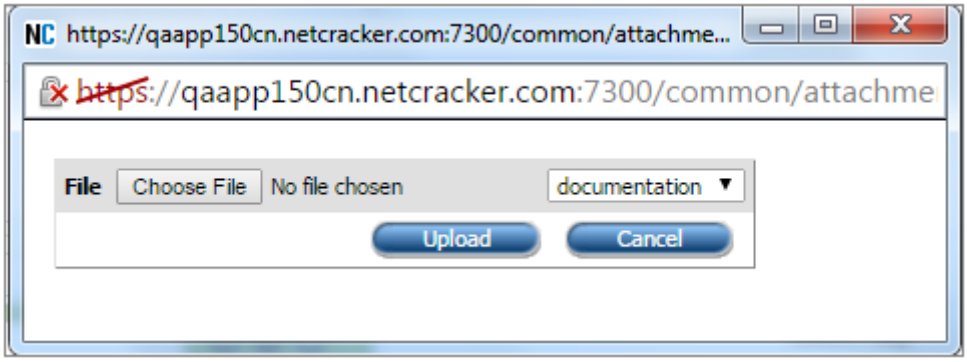


Figure. Selecting the Zip File for Bulk Upload, Stage 1

5. In the Upload dialog, click **Choose File** (Chrome) / **Browse** (IE). Navigate to your SVN delivery area and locate the **.zip** file containing the bulk PDFs:



FYI: Equivalent window in Internet Explorer:

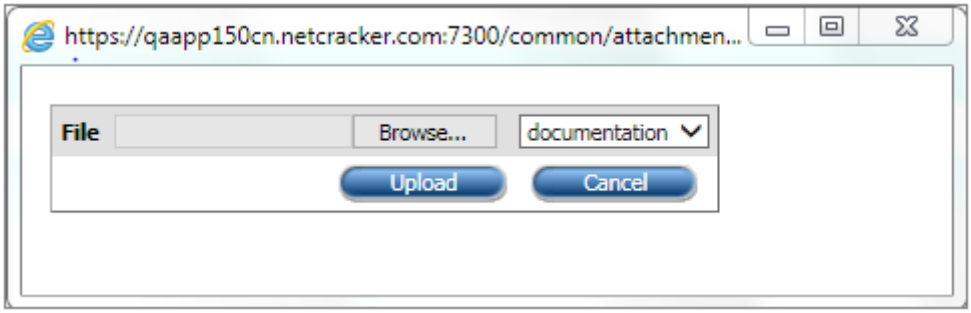


Figure. Selecting the Zip File for Bulk Upload, Stage 2

6. Click **Open** in the Windows Explorer navigation pane. Wait till you can see that the file is ready to upload (in the CSS upload dialog), then click **Upload**. You will see the files being uploaded and then the main page will show the file that is uploaded, with the **Document File** pane in green. Note that you can leave the **Name** field set to the default value of "New Document" (not shown in the screenshot):

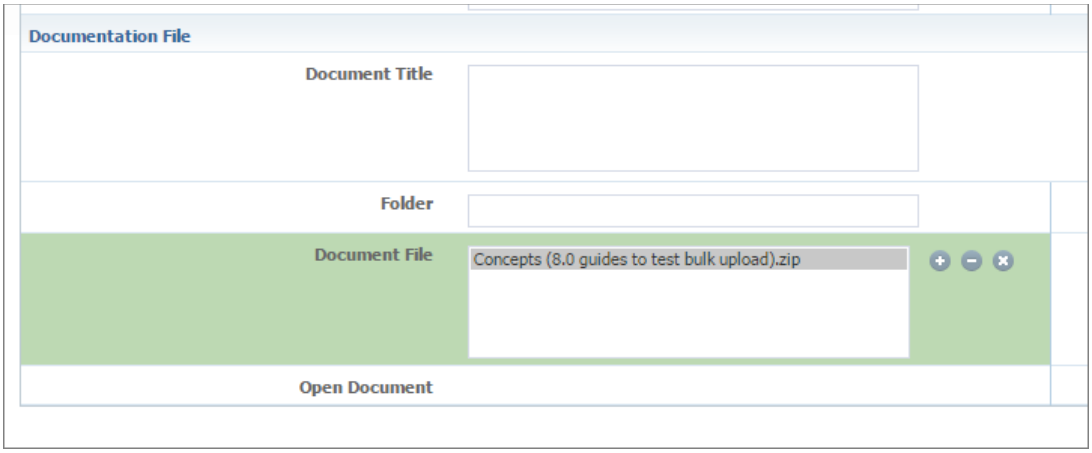


Figure. File Selected for Bulk PDF Upload

7. Click **Update** in the top left corner of the screen in order for the upload to be saved. Once you do this, you will see the file details. You do not need to do anything further on this page (the Parameters tab).

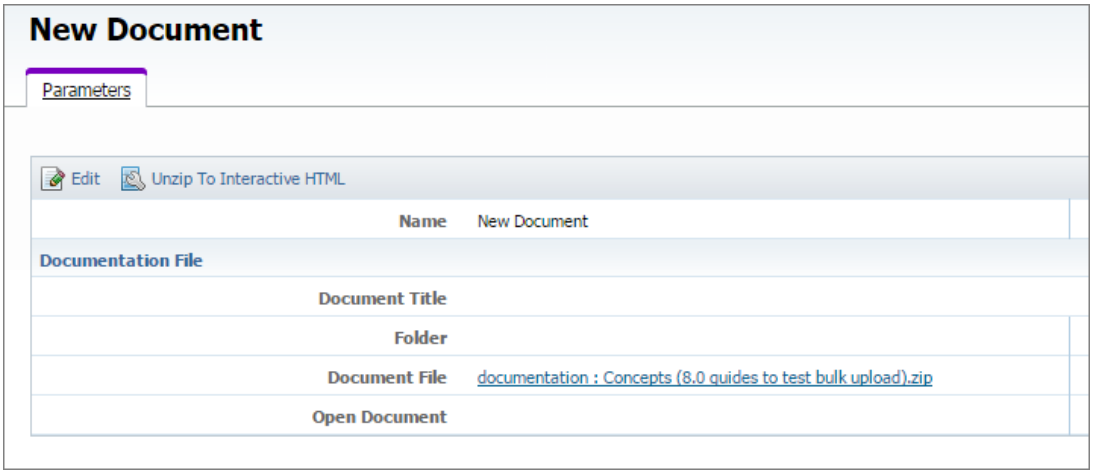


Figure. Updated Parameters Page (Upload Saved)

8. Navigate back up one level to the folder you are in (e.g. Concepts). You will see that there is a file present, with a blank Document Title but a zip file in the Download Document column:

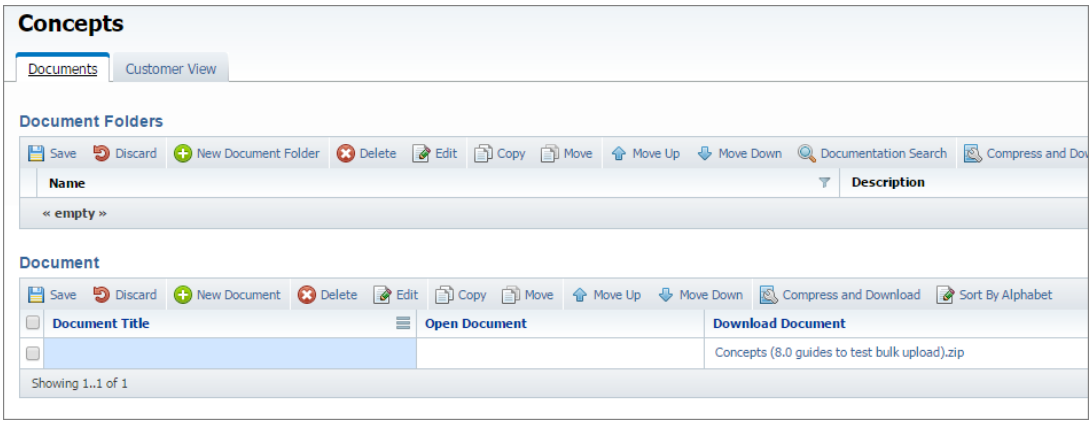


Figure. View of Uploaded Zip for Bulk PDFs

9. Select this row of the table (tick the checkbox beside the blank doc title) and click **Unzip Bulk PDFs**. The system unzips all documents and places them in the **Document** table:

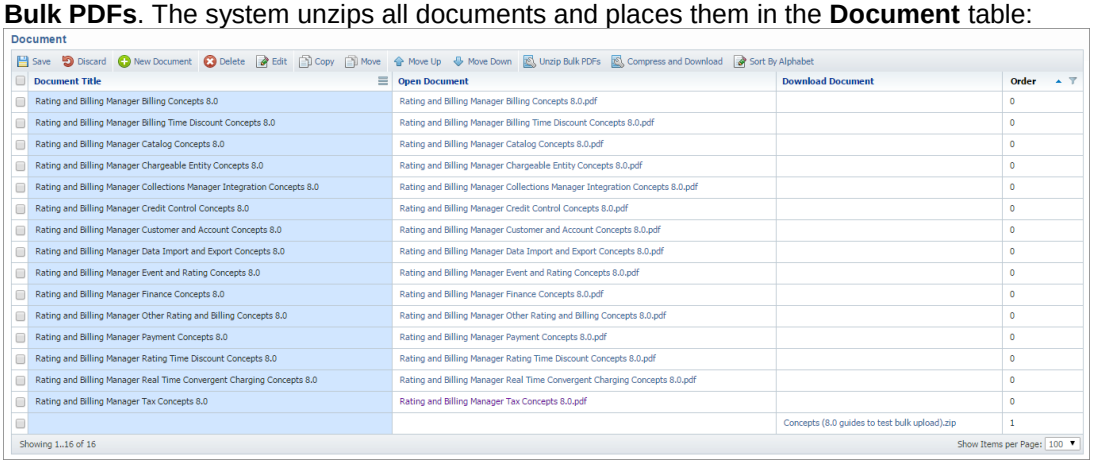


Figure. View After Bulk Unzip Operation

NOTE: After a CSS upgrade in 2016, it appears that zip file name is included in the Open Document link (e.g. concepts/<guide name>.pdf). This is the new normal behavior for the system. However, it would be a good idea to work with Nickolay Sergeenkov to see if the system can revert to the original behavior, where only the guide name is present in the link.

10. Now you need to delete the zip file at the bottom the table (the row with null values for Document Title and Open Document). To do this, select that item (the checkbox to the left) and click **Delete**. You will be asked to confirm.

11. To finalize the actual PDFs, you need to edit the **Document Title** parameter for each file to match the File Title in the BOM (use the copy you have in the delivery area and cut/paste into the CSS page).

    NOTE: The correct format is <Guide Title> - <Product Acronym>. For example, **Billing Concepts - RBM**.

    The quickest way to edit is to click in the cell that you want to edit, using the  tool that appears in the right-hand end. Note that this form of edit does NOT update the internal name of the file (stored in the **Name** parameter when you select a file and click the **Edit** button to view its parameters).

12. Finally, check that all the files appear in alphabetical order, based on the **Document Title** (not the filename in **Open Document**). If necessary, use the **Move Up** and **Move Down** buttons, or select all files in the table and click **Sort by Alphabet**. (Then check them because sometimes the operation applies strange logic.)

10.6.4.4 Uploading PDFs - Single File Upload

When there are only one or a handful of PDFs in a given guide category, use this upload method.

To upload a single PDF:

1. Within the folder where you want to add the PDF, click New Document (in the Document table):

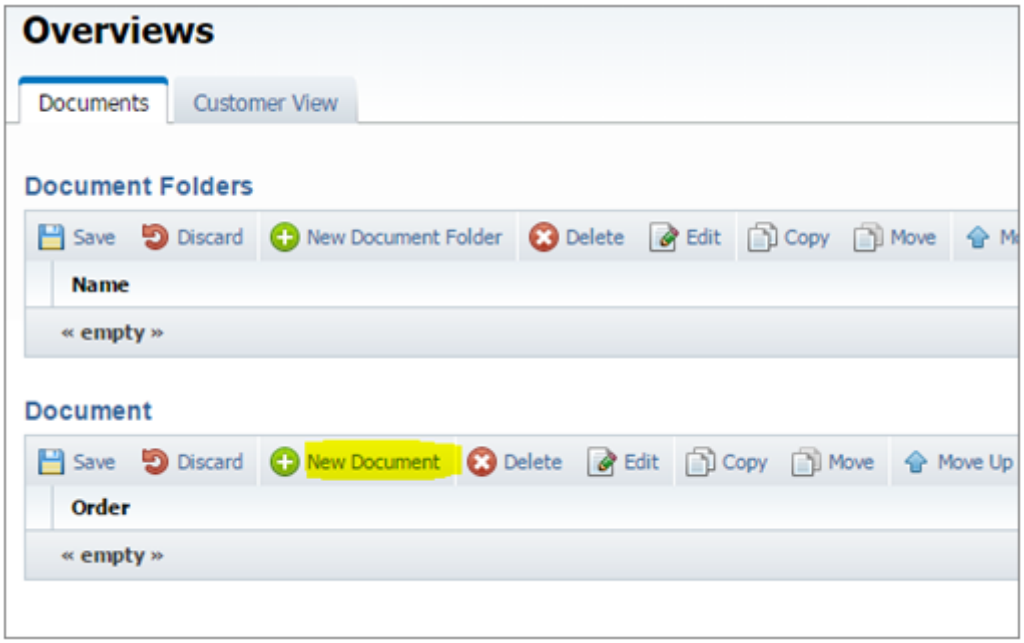


Figure. Creating a New Document (Single PDF Upload)

2. Click the  button in the Document File pane, then use the **Choose File / Browse** button to navigate to the file you want to add and click **Upload**. (For a head release/client release, this will be your SVN delivery area. For a maintenance release, it will be wherever you have the finished PDF.)

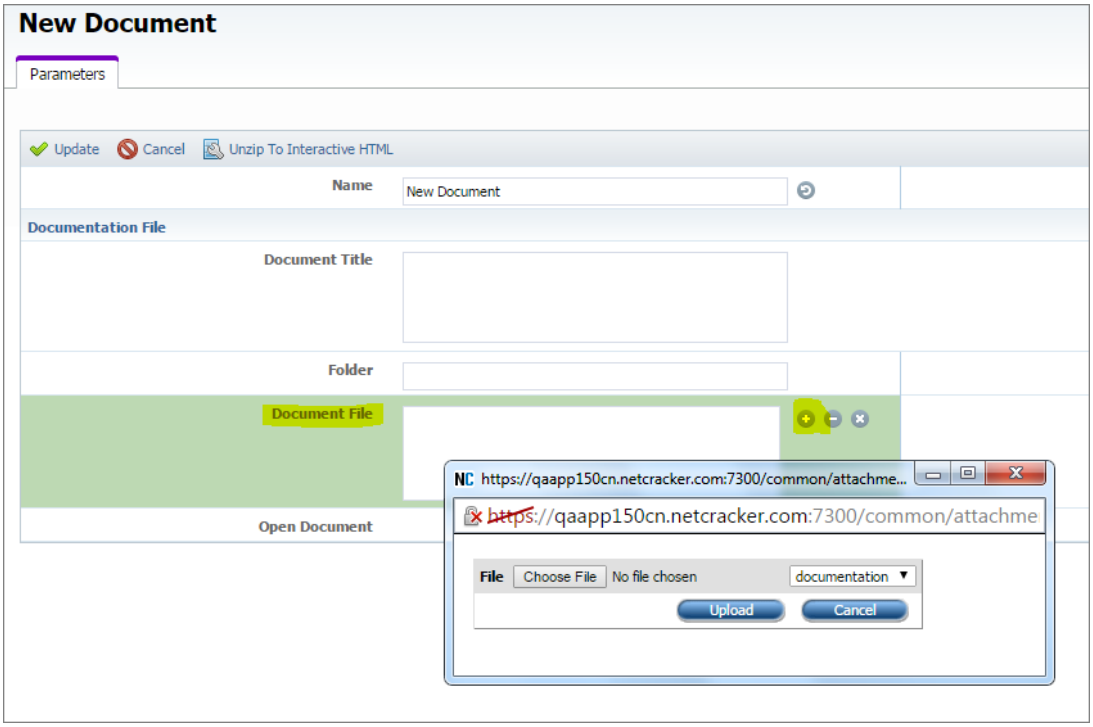


Figure. Selecting a Single PDF File for Upload

3. Once the filename is present in the Document File field, add the remaining details for this guide. Specifically, enter the guide name in both the **Name** field and the **Document Title** field, matching the File Title in the BOM (use the copy you have in the delivery area). (Note that the Name is internal, whereas Document Title is what is presented to the user).
   NOTE: The correct format is <Guide Title> - <Product Acronym>. For example, **Billing Concepts - RBM**.

   For Release Notes, the correct format is Release Notes X.X.X - < Product Acronym>. For example, **Release Notes 8.0.4 - RBM**.

4. Click **Update** at the top left. The Parameters tab for this guide will be presented with the saved details.

5. Navigate back to the folder where you are adding files (e.g. Overviews). Test the link in the **Open Document** column - the guide should open in a new browser window.

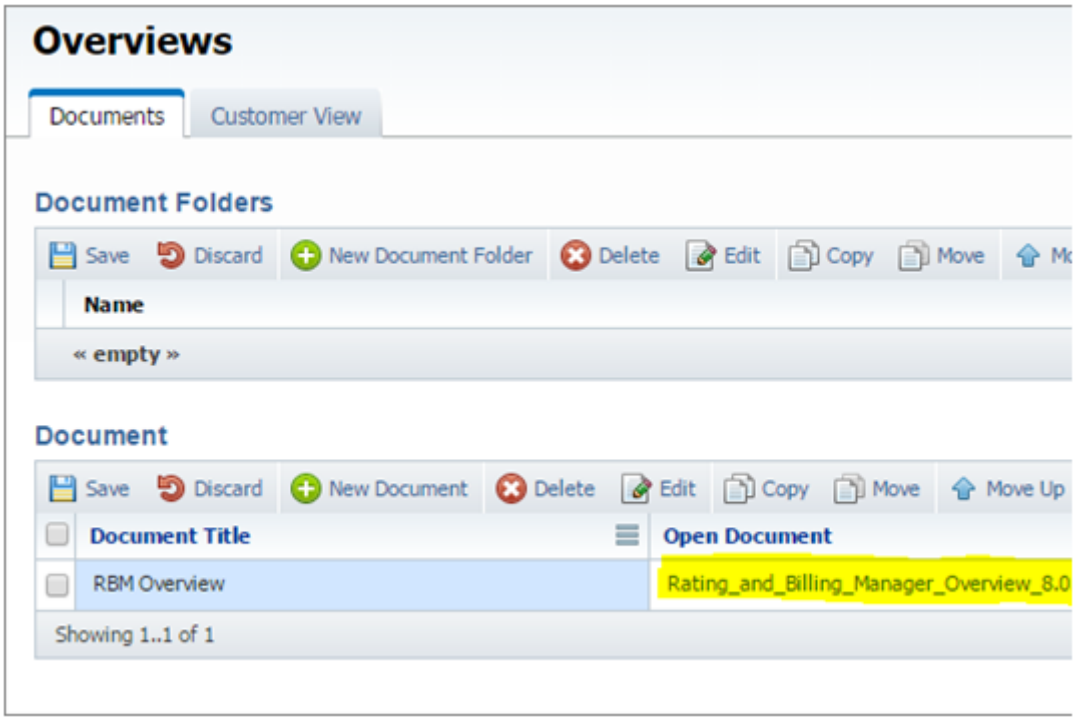


Figure. View of Uploaded PDF

6. Where there are multiple guides in the folder, ensure the guide is in alphabetical order (use the **Move Up** or **Move Down** button).

10.6.4.5 Uploading and Unzipping HTML Guides

This process is used for all HTML guides ("interactives"). You upload each guide individually

To upload and unzip an HTML guide:

1. Within the folder where you want to add the HTML guide, click **New Document** (in the Document table):

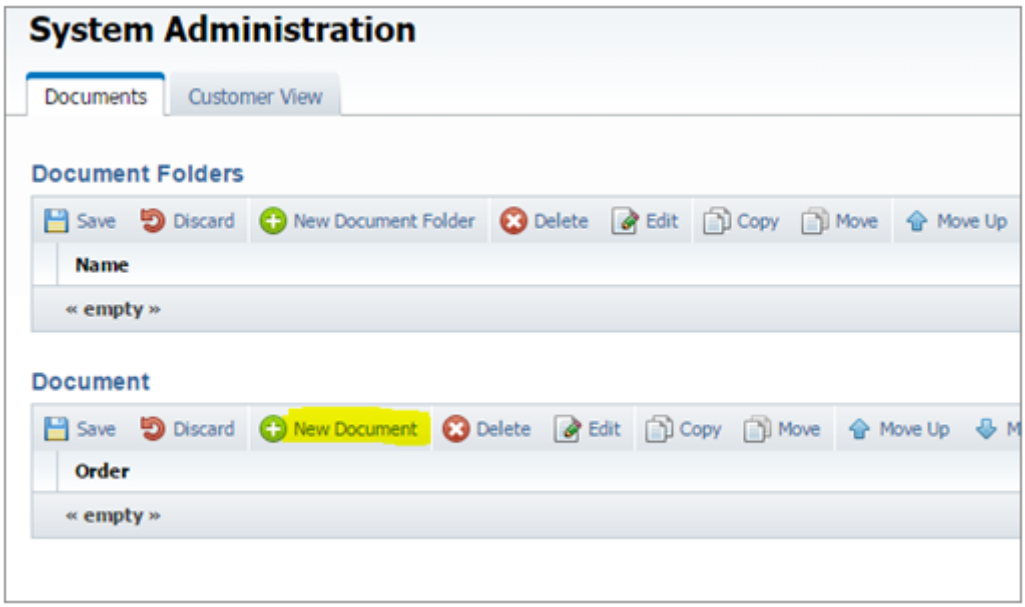


Figure. Creating a New Document (HTML Guide)

2. Click the  button in the Document File pane, then use the **Choose File / Browser** button to navigate to the file you want to add and click **Upload**:

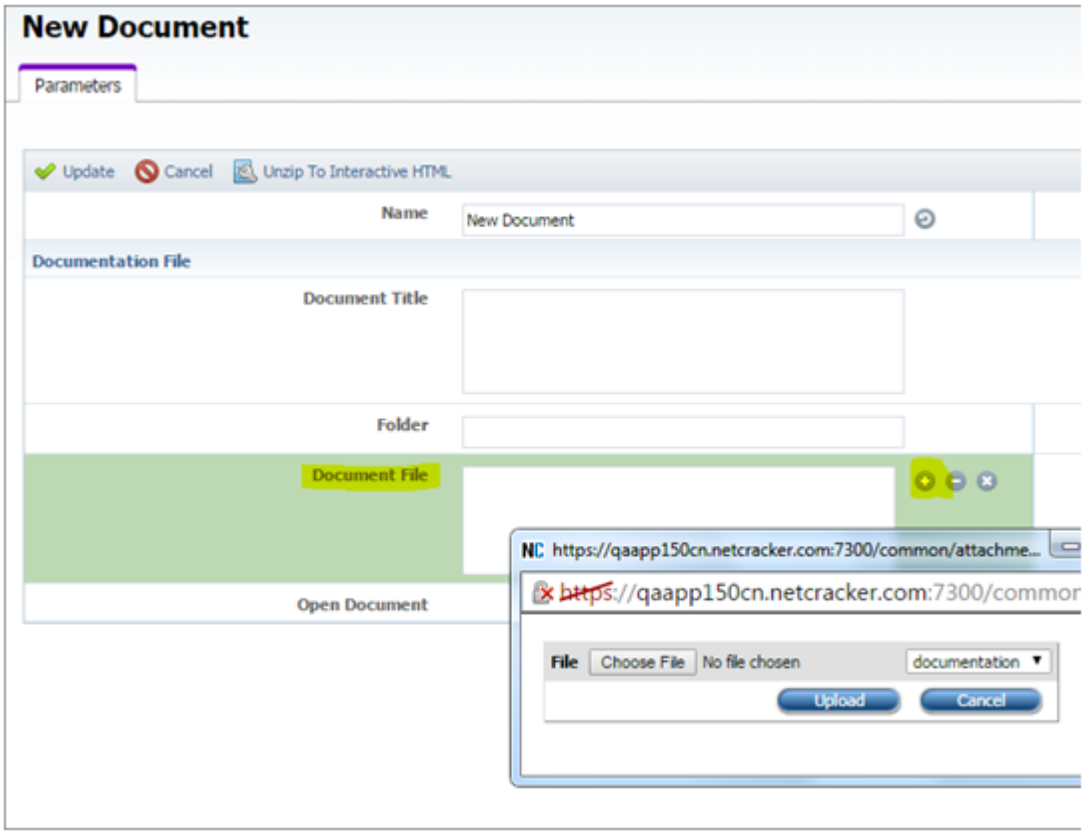


Figure. Selecting a Zip File for Upload

3. Once the file name is present in the **Document File** field, add the remaining details for this guide. Specifically, enter the guide name in both the **Name** field and the **Document Title** field, matching the File Title in the BOM. (The Name field is internal, whereas Document Title is what is presented to the user).
4. Click **Update** to save these changes. The Parameters page will display:

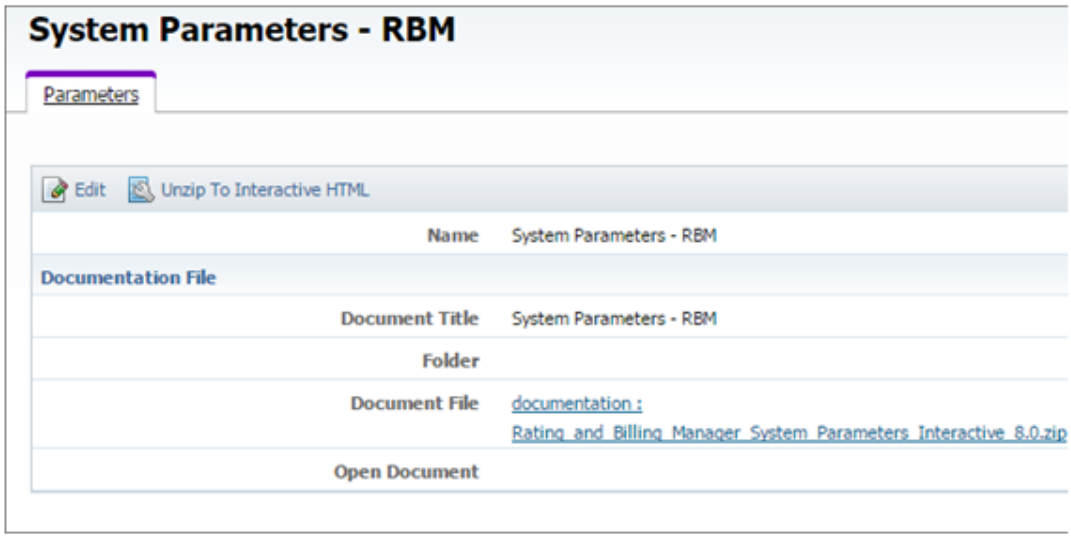


Figure. Updated Parameters Page (Upload Saved)

5. Now you need to unzip the interactive. Click the **Edit** button. On the editable page, click the **Unzip to Interactive HTML** button:

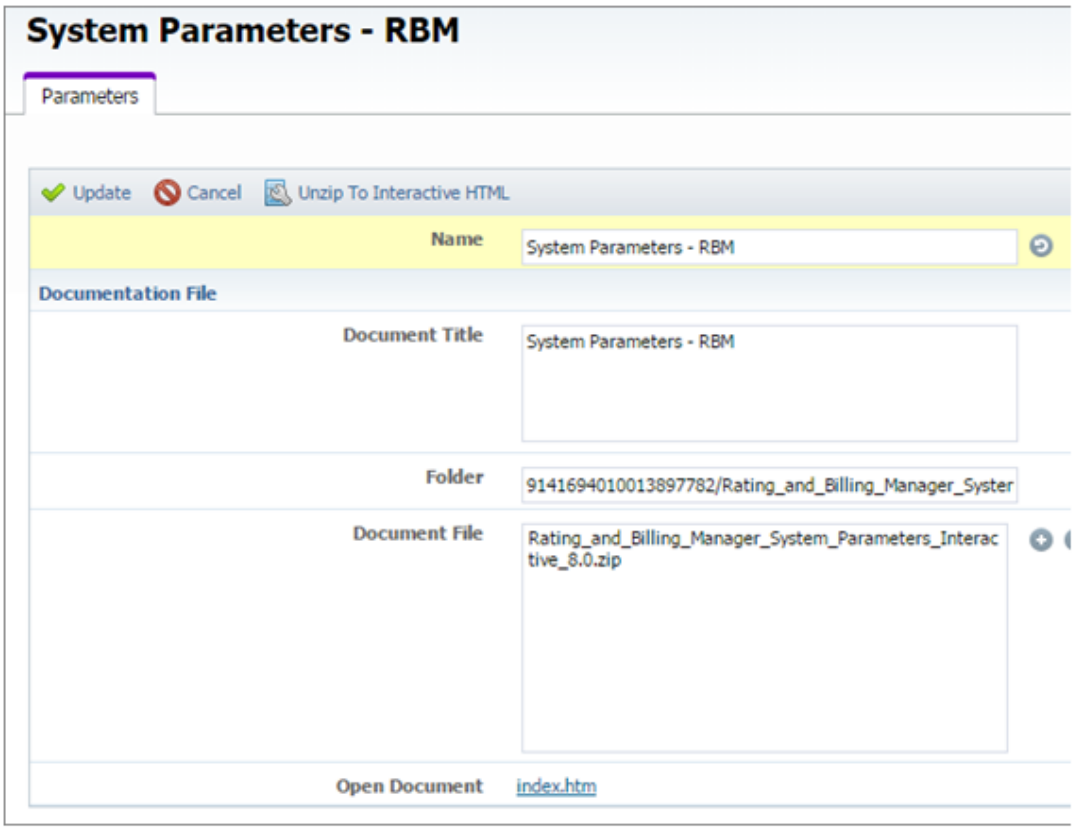


Figure. Using Unzip To Interactive HTML Operation on Zip File

You should get a success message:

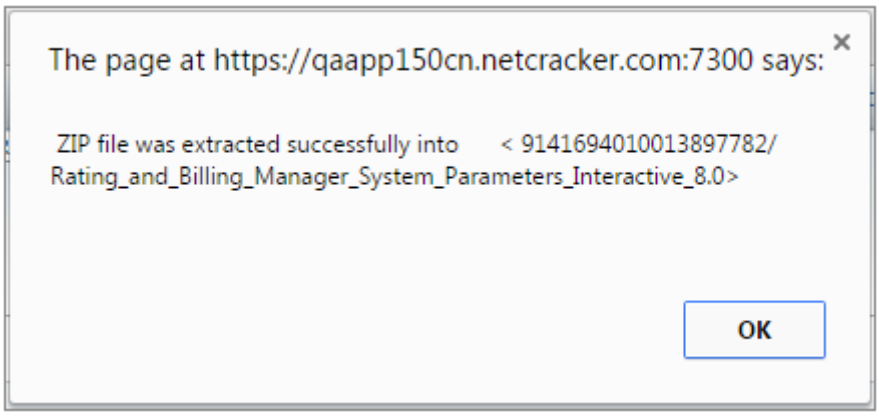


Figure. Unzip Success

6. Click OK. The Parameters tab for this object is updated, including the **Index HTML** field, which defaults to **index.htm**. This is a key field since it's what provides the link to launch the guide from the Documents table**. In most cases, you need to edit this field to provide the actual file name for the interactive's home page. Refer to the BOM for the correct HTML Home Page value for each interactive.**
In the following example, the **Index HTML** value must be changed from **index.htm** to

index.html:

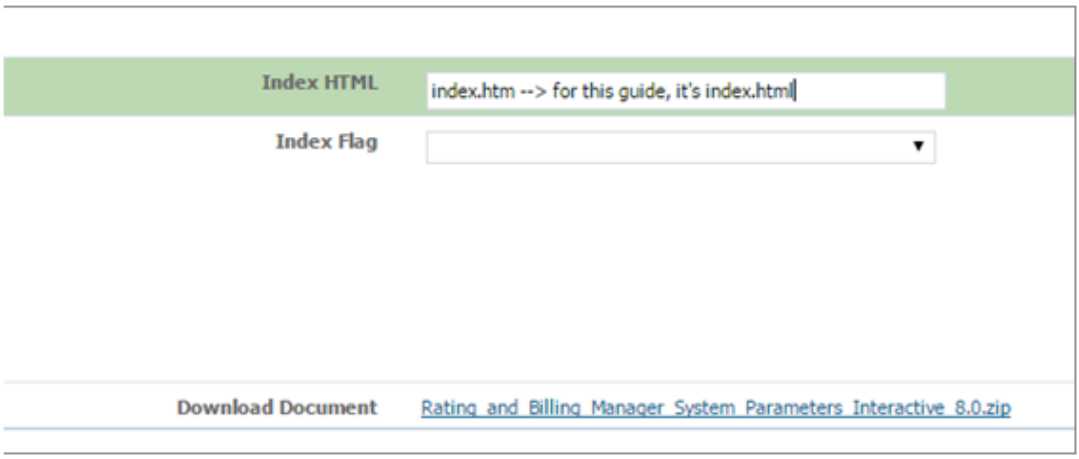


Figure. Example: Editing Index HTML Value (Interactive's Home Page)

7. After you have edited the **Index HTML** field, click **Update**. This saves the change.
8. Navigate back to the folder containing the interactive you have just added and test that the document opens correctly. Click the file name in the **Open Document** column (for example, index.html, default.htm, and so on): this should launch the interactive in a new browser window.

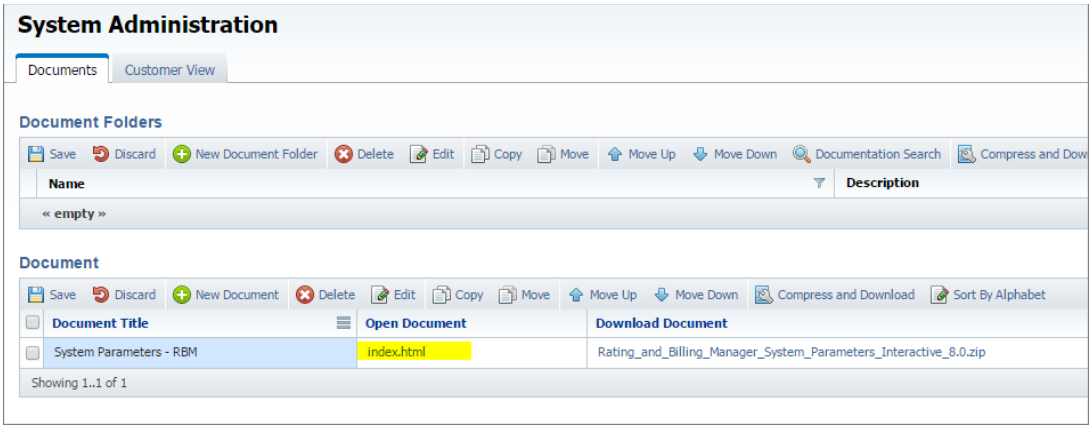


Figure. Testing the New Document's Link

If you get an error page, you have not provided the correct file name and need to edit the value again. (Tick the checkbox to the left and click **Edit**.)

NOTE: If you try to combine steps and unzip the interactive straight after adding it, without first updating the object (by clicking **Update** just after setting the **Document Title**, as in Steps 3-4 above), you will get this error message:

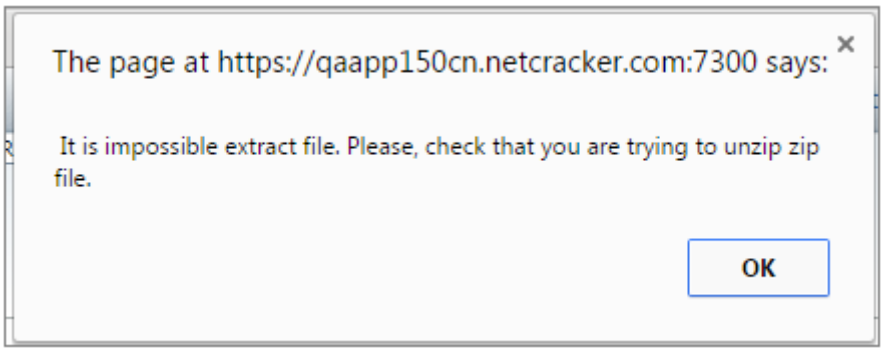


Figure. Error Message on Unzip without Prior Update Operation

If this occurs, you need to abort this Add Document operation and may end up with a blank row in the Documents table. You should then delete the blank row by ticking the checkbox (on the left) and clicking **Delete**.

10.6.4.6 Copying RBM Guides to RBM Extension Doc Sets

For TAP3 and VI, you can copy the RBM guides that are part of these doc sets, rather than uploading them again. This should be done for the Glossary, Installation, and Upgrade guides. Note that you can copy multiple files at once, if they are in the same source folder.

To copy a guide you have already uploaded to a new location:

1. Navigate to the RBM folder that contains the guide you need to copy. Select the row(s) you want to copy and click **Copy** (for Installation and Upgrade, you can do a single copy operation on both guides at once):

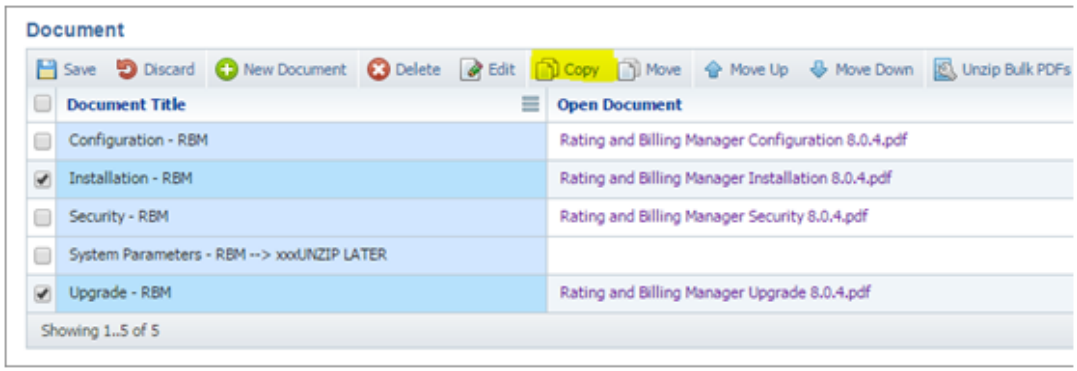


Figure. Selecting the Files to Copy

2. In the Copy Object(s) page, select Choose Target:

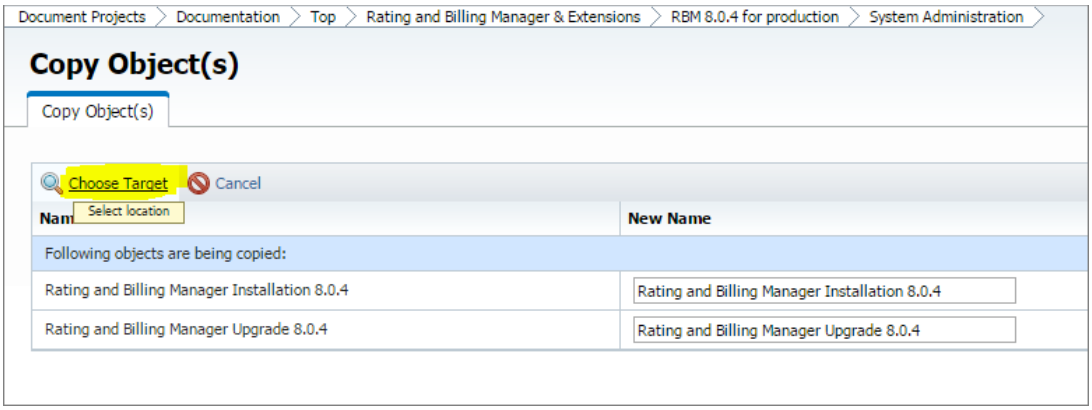


Figure. Choose Target Step

3. A new CSS window opens, containing the normal folder structure. It defaults to the current location. Use the navigation path at the top to go up within the structure and locate the target folder:

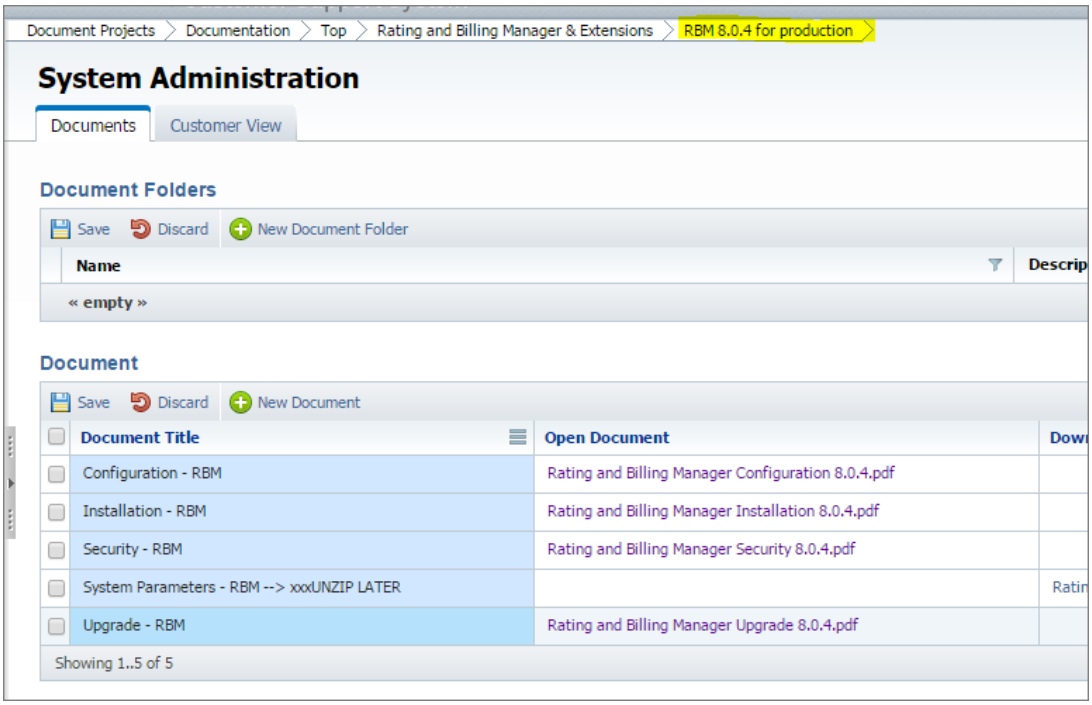


Figure. Navigating to Target Folder

4. Select the *folder* where you want to copy the files (don't go down into this folder or you will find you can't select anything!). Then click **Select** (bottom left) to set this target. **Ensure you have the right target before you click Select - this sets off the Copy operation and it can't be cancelled.** If you copy a file to the wrong location, then go to that location and delete it.
For example, here the target folder is System Administration. The files will be copied inside this folder:

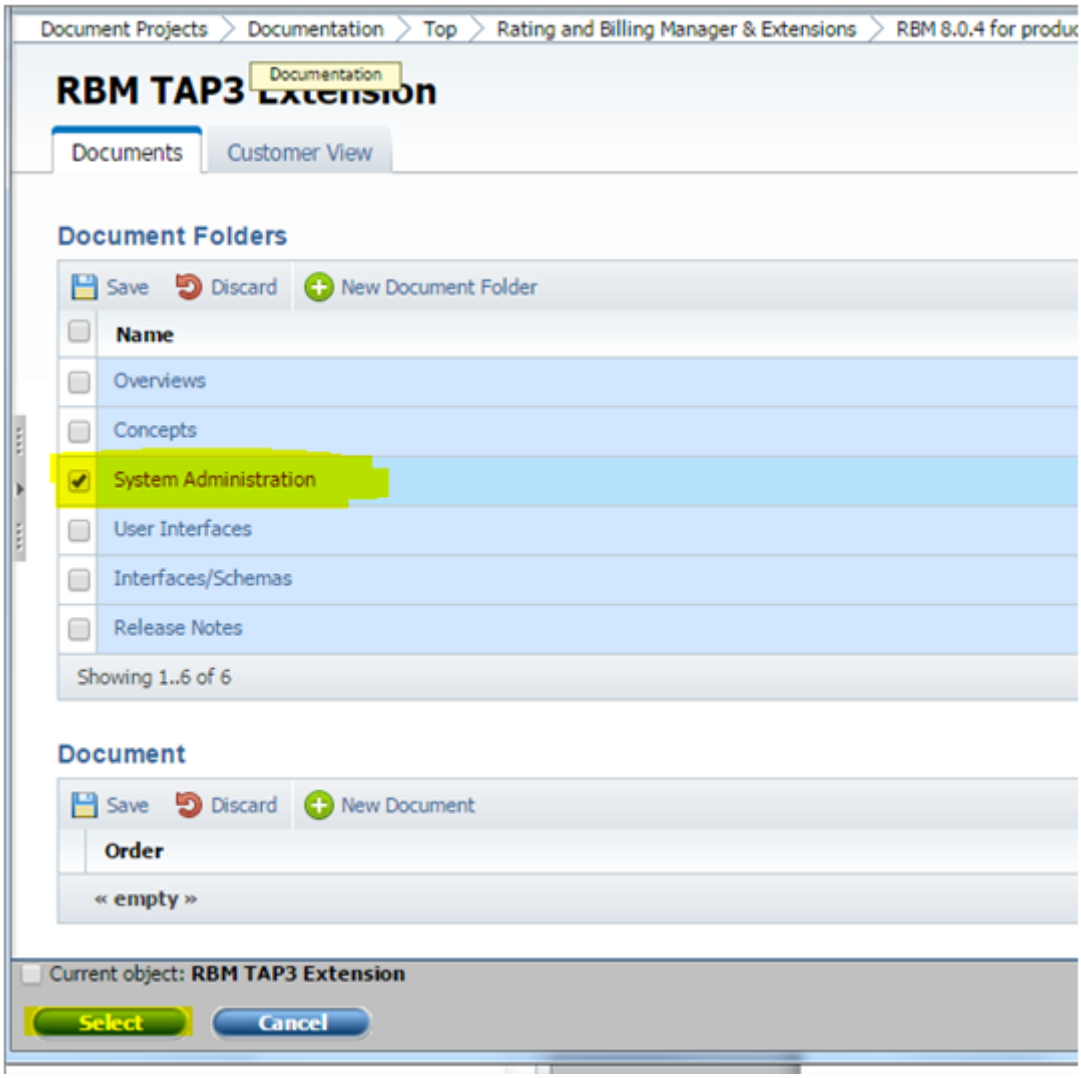


Figure. Example: Target Folder

5. The system automatically copies the file(s) and you remain in the target location (not the source location). Now edit the **Document Title** cell to provide the correct name for the guide within this doc set, as shown in the BOM. For example:

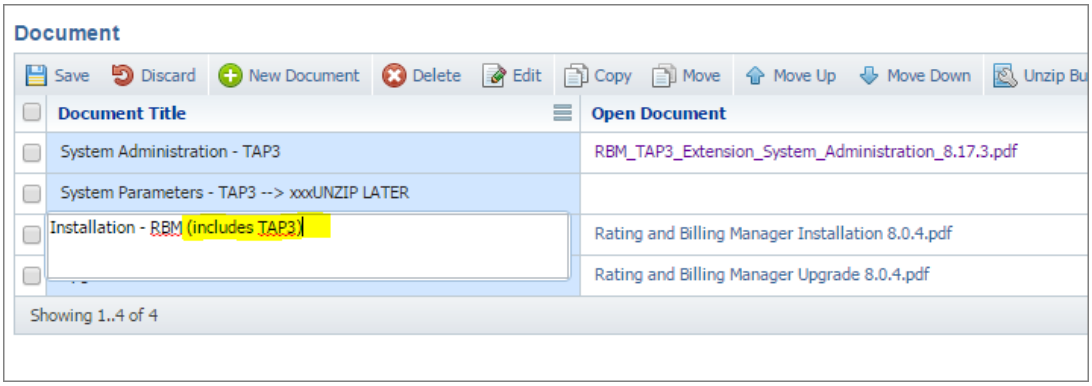


Figure. Editing Document Title on Copied File (Mandatory for RBM Extensions)

6. Once all guides are copied, select all files (checkbox next to Document Title) and click **Sort by Alphabet**:

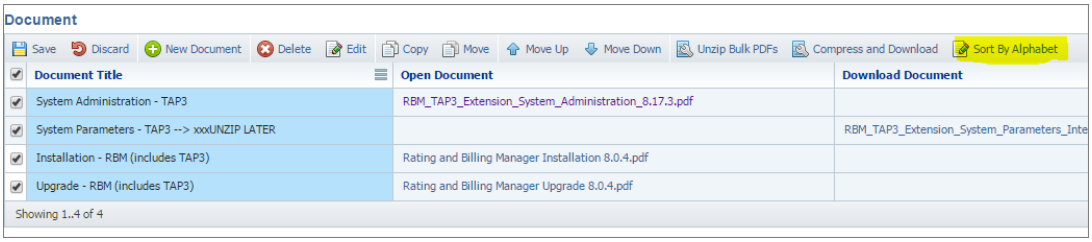


Figure. Sorting Files by Alphabet After Copy

Note that you may need to then do some Move Up/Down manually because the sorting may be incorrect (the logic appears to be that alphabetical sorting is on the actual file name, not the Document Title). In this example, the Upgrade guide needs to be moved down:

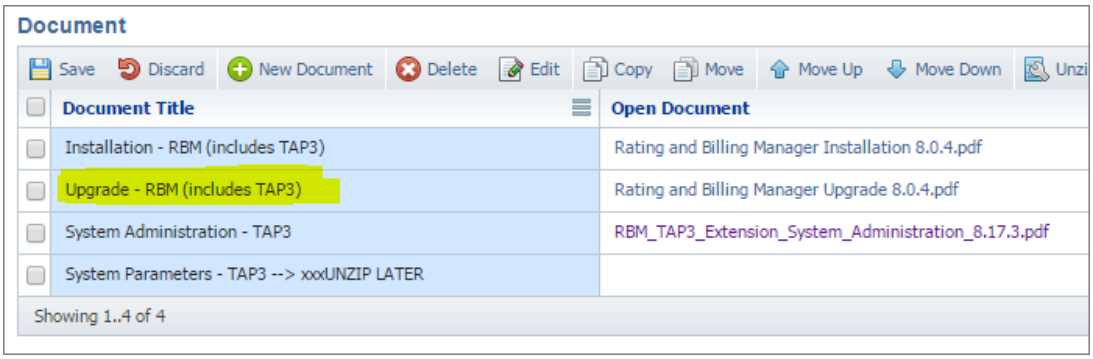


Figure. Manual Fix to Alphabetical Presentation

10.6.4.7 Uploading Other Document Types

XXXCH JACK, RIA: WE MIGHT WANT TO ADD OTHER TYPES USED BY ICOMS HERE, E.G. EXCEL?

The TAP3 doc set includes a file called Standard Template with a **.template** extension. During migration from the CSWS, the CSS was set up to support this document type (it treats it as a text file). Thus, you should be able to upload this guide like a PDF (no unzipping required) and click the **Open Document** link to view it in a new browser window.

1. After uploading the Standard Template file (like a single PDF), click the **Open Document** link:

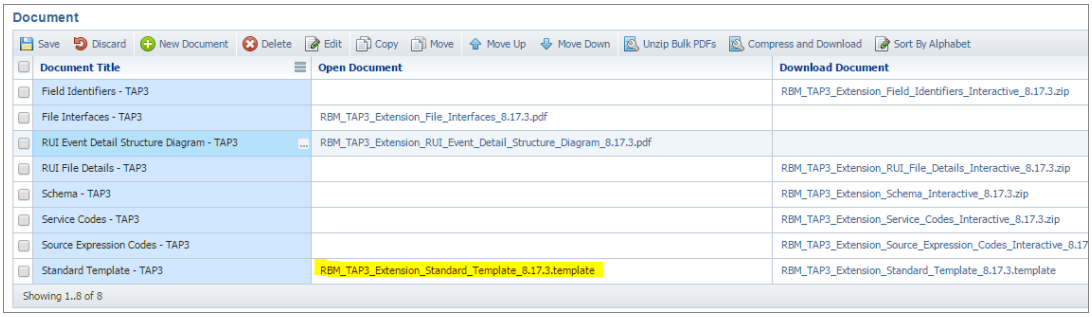


Figure. Opening TAP3 Standard Template File

2. The guide should open in a new browser window and appear as follows:

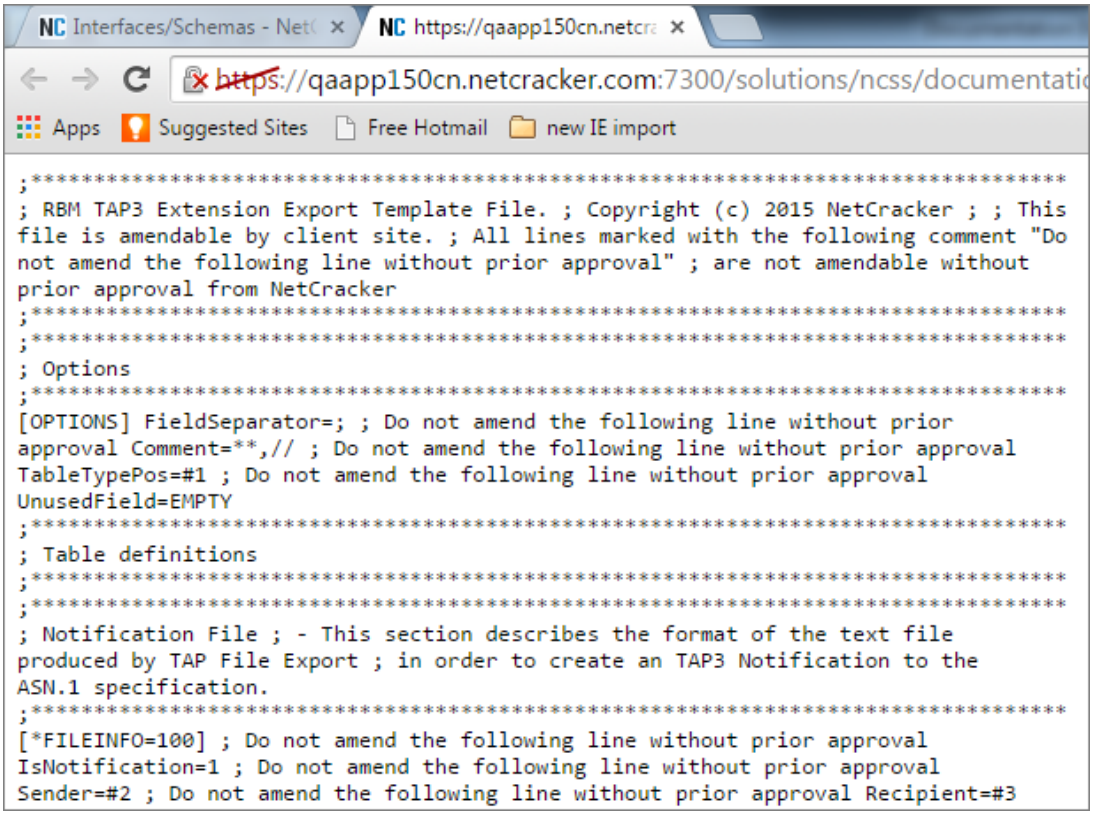


Figure. TAP3 Standard Template File Appearance

If this behavior does not occur, contact Nickolay Sergeenkov's team to resolve the issue.

10.6.4.8 Setting up "Redirection Links" for Incomplete Doc Sets

XXXCH NICK, IS THIS GOING TO WORK IF BUILT IN SANDBOX, THEN MOVED TO PRODUCTS AREA?

NOTE: An alternative to redirection links described in this section is to just copy the relevant guides. However, if you do that and a guide later needs reposting, you would need to update the guide in both locations.

When the new doc set you are uploading is not a complete documentation set (for example, it is a subset release or it only provides selected guides with updates), you may want to ask the CSS support team to set up "redirection links" to allow users to jump easily to the full doc set at the prior release. If this situation arises, you should first discuss it with Nickolay Sergeenkov. Another solution is to copy files to the incomplete doc set, but note that if in future, a document is republished, you would need to re-copy it to that location.

Redirection is normally done between releases in the same release stream, for example, within 8.0.x. For RBM 8.0.4, redirection links were used to allow users to jump to the 8.0 doc set within each relevant guide category.

Redirection can also be used between releases in different (adjacent) streams, if discussed and agreed within the Doc team. This should normally only be done on client request (to avoid providing a "merged" set of folders). For example, if RBM 6.1 is a subset release, it could include redirection links to RBM 6.0 guides for the full doc set. (Note this was not actually done on the CSS; instead, merged folders were used a client request. However, merged folders should be avoided where possible because they make it hard to tell where guide versions are located.)

Redirection links are set up as "dummy" folders on the UAT. During migration to the CSS, these dummies are replaced with links within the relevant Document tables.

To set up the "dummy" folders:

1. Gather a list of URLs from the production CSS for the set of target locations you want to provide links to. For example, if you want to provide a redirection link from RBM 8.0.4 Concepts to RBM 8.0 Concepts, you need to include this link to the 8.0 concepts page in your list:
   https://support.netcracker.com/ncobject.jsp?id=9140966083513280372
2. On the CSS in the SandBox area, navigate inside the category folder (for example, Concepts) where you want the redirection link to appear.
3. In the **Document Folders** table (top of the page), click New Folder.
4. In the Document Folders page that opens, replace the default Name value with this string: "xxxTEMP redirect to "<X.X> <Category>": <URL> (where the text in quotes indicates what will appear in the actual link on the CSS). For example:
   xxxhttps://qaapp150cn.netcracker.com:7300/ncobject.jsp?id=9141848900013936490TEMP redirect to "8.0 Concepts":
   https://support.netcracker.com/ncobject.jsp?id=9140966083513280372

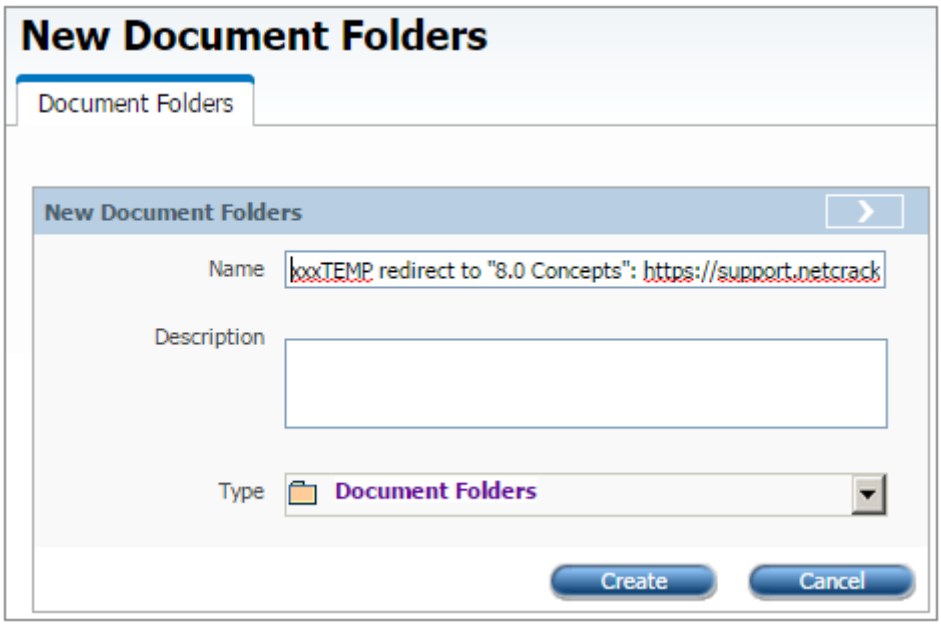


Figure. Setting Up Dummy Folder for Redirection Link

5. Click **Create**. The dummy folder is created.
6. Repeat this process for all other dummy folders you require.
7. Raise a PSUP ticket for the CSS support team to set up the redirection links, using this link:
   https://psup.netcracker.com/browse/NCCSS
8. Ensure the Project value is "NC Customer Support System". Set the Ticket Type to "Task". In the Summary field, ask for the "xxxTEMP" folders to be replaced with links within the relevant Document tables.
9. Once the redirection links are set up, test them to ensure they are correct before closing the ticket.

10.6.4.9 Use of Descriptive Text

It is helpful to use occasional descriptive text on folders in the CSS. However, to remain helpful, it should be used sparingly. Also, any text you provide in the CSS is visible to clients and cannot be set up to appear differently to different clients (it's "all or nothing" for all users). Temporary comments on the CSS should be avoided because they will also be visible to clients (it's a live system).

The CSS is already set up with acceptable descriptive text for older releases and this should be left alone. You only need to provide such text for new releases.

Descriptive text must be used in the following cases:

- For all RBM releases, the extensions within the main folder should be listed, in the format below, where only those extensions that are provided are actually listed (note that in older RBM releases, other extensions also existed, e.g. QCM, PCMI):

"Extensions: TAP3, Vertex Integration, RB to AM Integration"

Note that the extensions should always appear in this order, when present.

Example of required descriptive text:

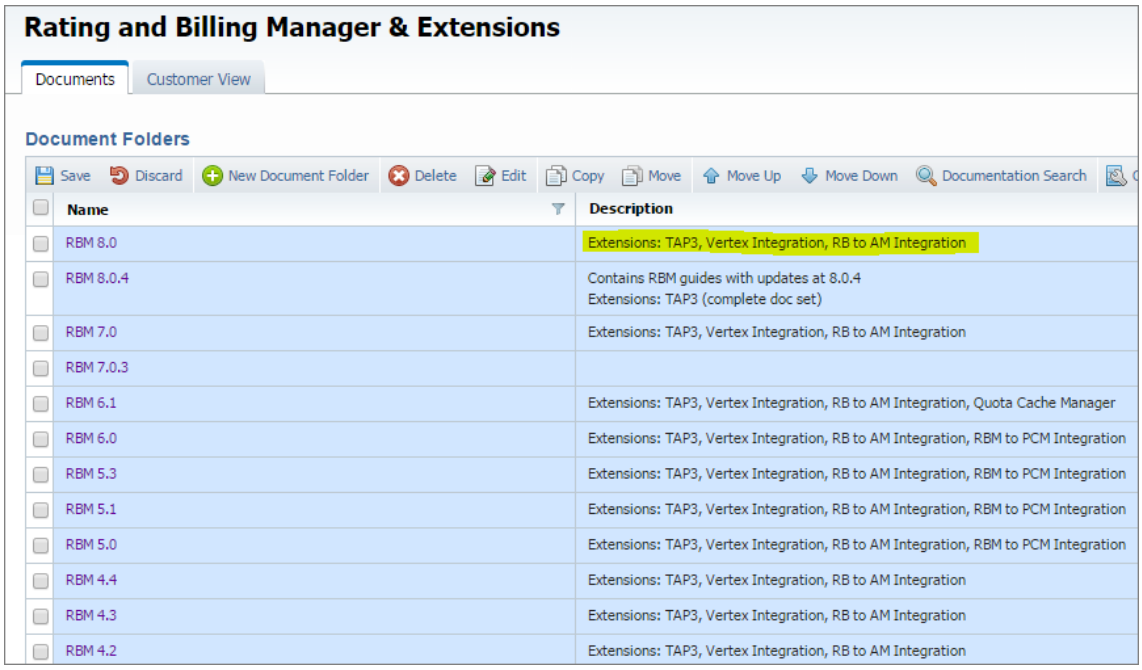


Figure. Example - Required Descriptive Text

Descriptive text can be used in the following cases:

- To summarize the contents of a folder when the contents may be different from what is expected (for example, only guides with changes are included)
- To indicate when there are multiple sub-streams within the folder. This is typical for older RBM releases.
  Note that when there are multiple releases in the stream, you must list them and then state "(Client view may differ)". The reason for this is that the client may only have access to one of these releases, but they will still see the comment listing them all. See the example screenshots below.
- To indicate a merged folder (done on client request). In this case, both releases should be indicated, e.g. "RBM 6.0/6.1".
- To indicate that a folder is present for redirection purposes (typically to Infinys).

Examples of acceptable descriptive text:

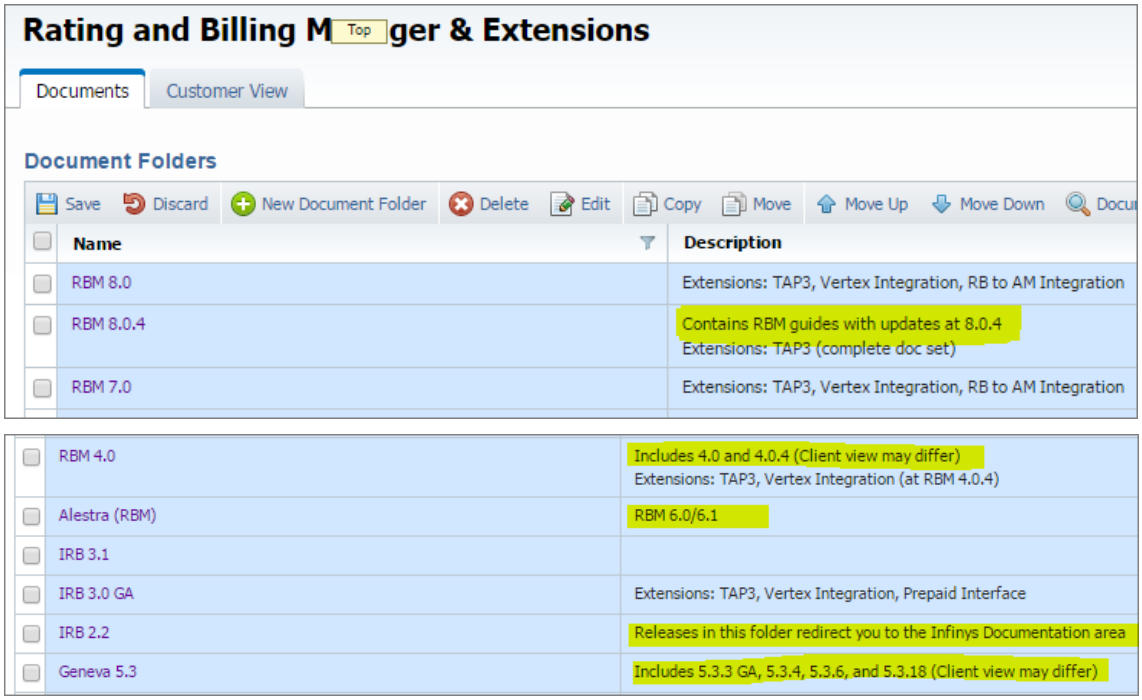


Figure. Examples - Acceptable Descriptive Text

Descriptive text must not be used in the following cases:

- To describe what is obvious, such as "This folder contains Concepts guides" when the folder name is "Concepts".

10.6.4.10 Final Checks and Testing in the Sandbox

There are two final checks to be performed. This should be done as a Testing task by other Tech Writers, not the person who uploaded the files:

1. Check every single guide link to ensure the guide opens correctly and is the right file.
2. Check the Documents table for each guide category to ensure that all guides are presented alphabetically, based on **Document Title** (not file name).
   NOTE: This check does not apply to some doc sets, like ICOMS, where a logical order is used. In that case, check the order of presentation follows standards for that doc set.

The Testers can make fixes, if they have the relevant permissions, or can report issues to the TW who did the upload work.

10.6.4.11 Moving the Complete Doc Set to Live Folder

Once the final testing in the Sandbox is complete, you need to move the entire structure to the "live" location where it will become accessible to all users, including those external users who have permission to see it. Normally, this is in the **Products** folder. If you are building a doc set for a client, it will be in the **Clients** folder.

1. Navigate to the parent folder containing the release. For example, if you are moving Rating and Billing Manager 9.0 and its extensions, move to **Sandbox > BUILDS** so that you see the **RBM 9.0** folder.
2. Select the parent folder using the checkbox on the left.
3. Click **Move**. In the Move Object(s) page, select Choose Target.
4. A new CSS window opens, containing the normal folder structure. It defaults to the current location. Use the navigation path at the top to go up within the structure and locate the target folder.
5. Select the folder to which you want the files to be moved. Typically, this will be the main product folder, e.g. "Rating and Billing Manager & Extensions", "ICOMS", "Collections Manager", etc. (Do not go down into this folder or you will accidentally move the whole

structure to the wrong place. The Move operation puts the folder *inside* whatever destination folder you select.)

6. Then click **Select** (bottom left) to set this target. **Ensure you have the right target before you click Select - this sets off the Move operation and it can't be cancelled.** If you move the folder to the wrong location, then go to that location and do another Move operation to get it in the right location.
7. Notice that after the Move operation, you will be in the new location, not the original location. You can now navigate as normal within the Products area (or Clients area if you are copying a structure there).
8. You now need to get the new folder into the correct location (alphabetical and/or numerical) in the list of releases. The Move operation normally puts the folder at the bottom of the table, for example:

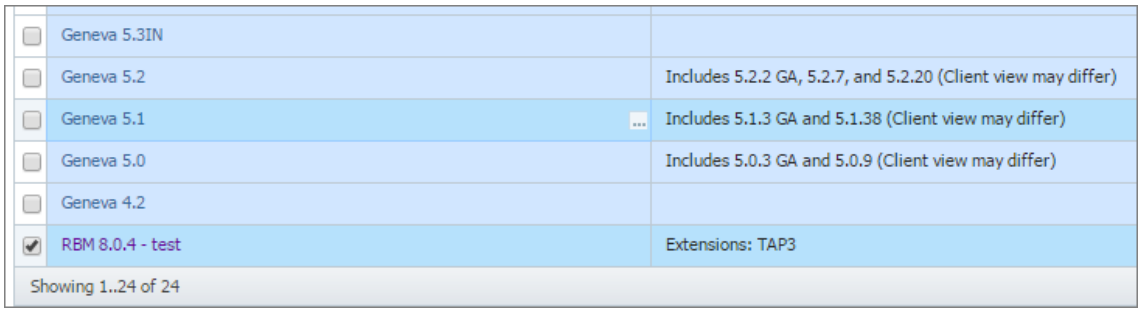


Figure. Move Up Operation on Parent Folder

If the **Sort by Alphabet** option is available (planned for implementation in Q3 2016), use this to reorder the folders (you can select all folders or a subset, as needed). Otherwise, use the **Move Up** and **Move Down** buttons. (Select the folder to move and repeat the operation as many times as needed; or alternatively, move the entire set of rows above the new folder down, i.e. select all folders except the new one and click Move Down.)
The organizing principle for releases is as follows (based on how the CSWS presented releases):

- Head releases go in order of most recent first. E.g. RBM 8.0 is above RBM 7.0.
- Sub-releases within a stream appear after the head release. E.g. RBM 7.0.3 is below RBM 7.0.
- ICOMS has its own organizing principle for how to order releases.

Thus, this is the correct order for some recent RBM releases:

RBM 8.0 RBM 8.0.4 RBM 7.0 RBM 7.0.3 RBM 6.1 RBM 6.0 (etc.)

Here, RBM 8.0.4 belongs after RBM 8.0, as shown. But RBM 9.0 will be added at the top of this list.

10.6.4.12 Post-Migration Testing on the Production CSS

Once the complete doc set has been moved from the Sandbox to the "live" area, it should be retested, using the same checks done earlier (test all Open Document links, alphabetical order, etc).

If redirection links are being used, test each link. Ensure they are correctly named. For example, if the dummy folder was called this:

xxx**TEMP redirect to "8.0 Concepts":**
https://support.netcracker.com/ncobject.jsp?id=9140966083513280372

Then ensure the link is called **8.0 Concepts** or similar (for example, **Concepts (RBM 8.0)** is fine) and that it redirects to this URL. Any redirection links should appear in the top of the relevant Documents table. Note that the **Open Document** and **Download Document** columns will be empty for this row.

For example:

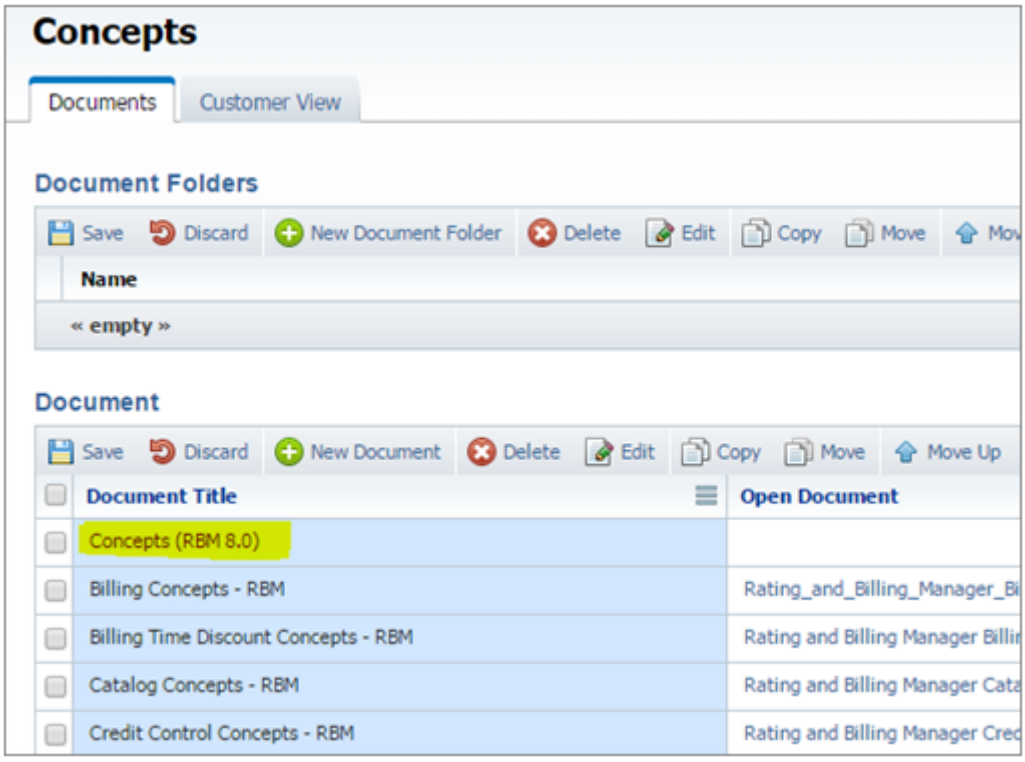


Figure. Example - Redirection Link on CSS

10.6.4.13 Reposting a Guide After a Fix

If you need to repost a guide, for example, because it has a late fix and the copy on the CSS is now out-of-date, you need to remove the old file and then upload the new one. This may occur on either the UAT or the production CSS, depending on the timing.

To repost a guide:

1. Navigate to the appropriate folder. Edit the object:

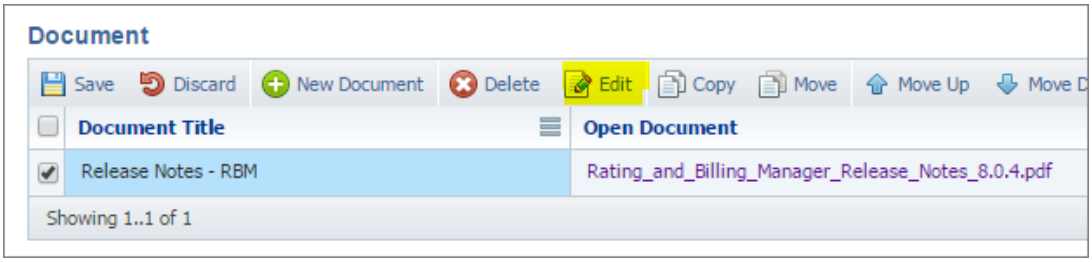


Figure. Selecting File for Editing

2. In the editable Parameters page, select the file in the **Document File** field and click on the **Remove** button (if you don't select the file first, it is not removed):

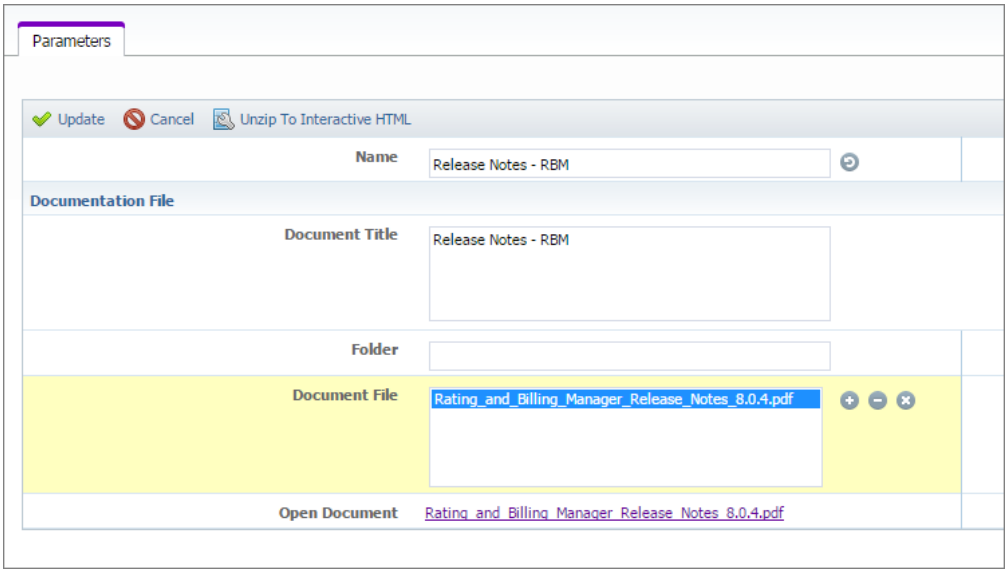


Figure. Removing the File

3. Click **Update**. The file is removed, along with the **Open Document** value. This does not remove the "object" representing this guide, so you do not need to run the Add Document operation again, you just need to upload the newer file. To do this, click the **Edit** button on the Parameters page again to activate the fields, and upload the file (see the relevant topic based on file type).

10.6.5 Linking Documentation Sets to Client Folders

In Q2 2016, a new top-level **Clients** folder was set up to contain individualized folders for all clients accessing documentation on the CSS. Correspondingly, all out-of-the-box (OOB) product documentation is now in a top-level folder called **Products**.

The client folders use a combination of standard folders and "linked folders" to present the appropriate content for each client:

- A standard folder means the objects reside in that location on the CSS.
- A linked folder means the objects actually reside in a different location on the CSS and are being accessed via a link that redirects the user.

For client documentation, standard folders contain customized documentation sets (typically, Netcracker documentation). Linked folders point to OOB documentation sets for the client's solution. Typically, OOB documentation includes RBM, ICOMS, CM, AM and legacy documentation sets (e.g. Infinys and some others).

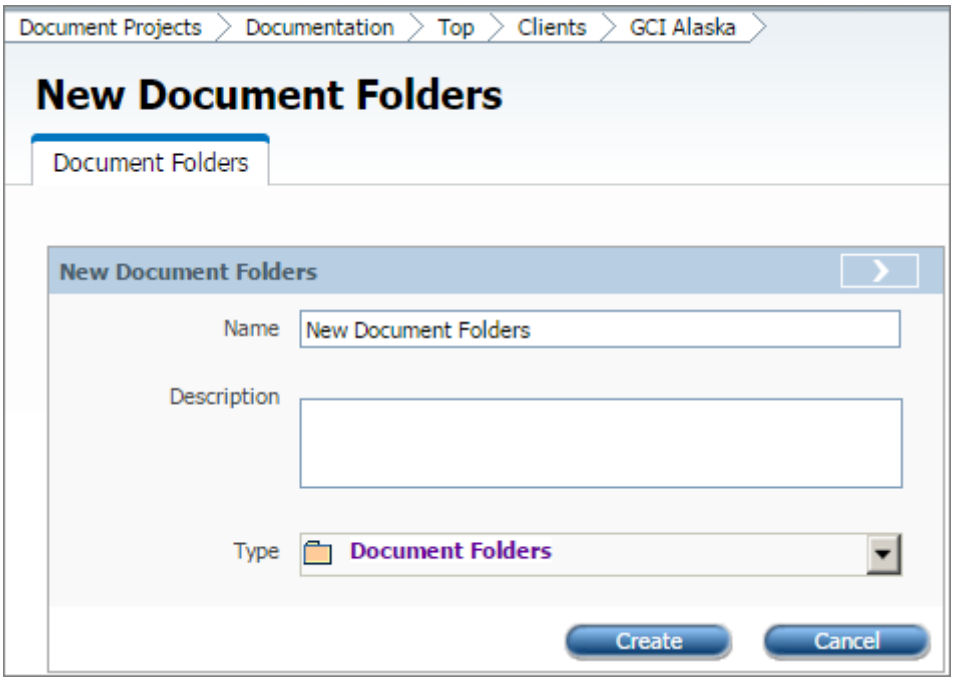
The advantage of the linked folder approach is that a single copy of each OOB documentation set exists on the CSS but can be accessed from multiple locations. When a guide within an OOB doc set is reposted due to a correction, it is available to all users in all linked folders. There is no duplication or chance of missing an update for some clients.

IMPORTANT NOTE: When you add a standard folder within a client folder (for example, for a customized Netcracker release), the client users automatically have permission to view that folder. However, for linked folders, this may not be the case. If you add a new high-level folder (for example, RBM X.X or ICOMS X), then permissions need to be added for the client user group. Always check with Nickolay Sergeenkov and request a test user to determine if the client will be able to see the linked folder.

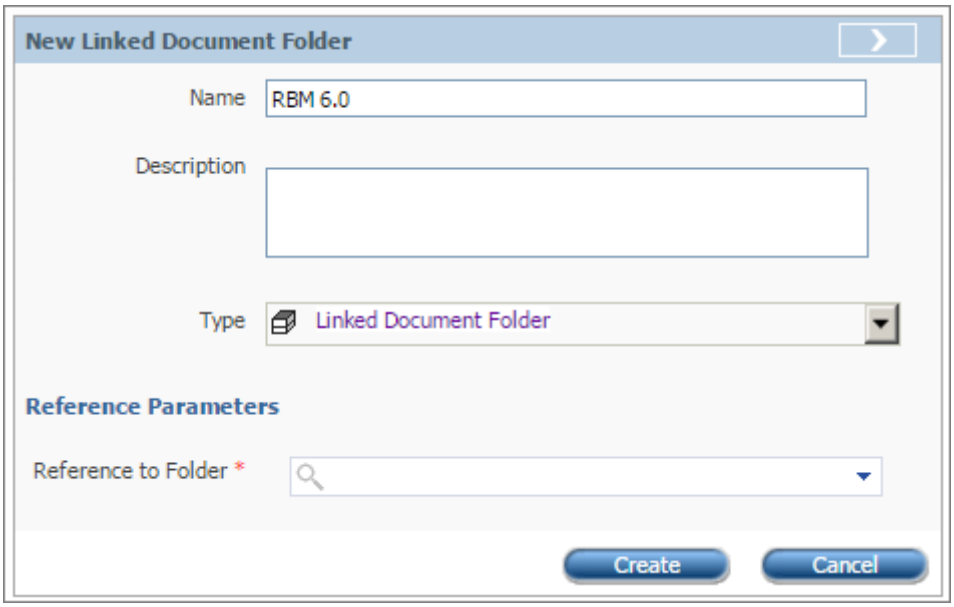
The process for setting up linked folders is similar to standard folders. However, you need to pay attention that you link in the correct folder and that you follow the naming convention stated here. Also note that you are modifying a live system - anything you add will be visible to external users in real-time. Therefore, you should not use any comments or leave work incomplete.

To set up a linked folder:

1. Navigate to **Top > Clients > <Client Name>**.
2. Inside the **<Client Name>** folder, click **New Document Folder**. A Document Folders tab opens:

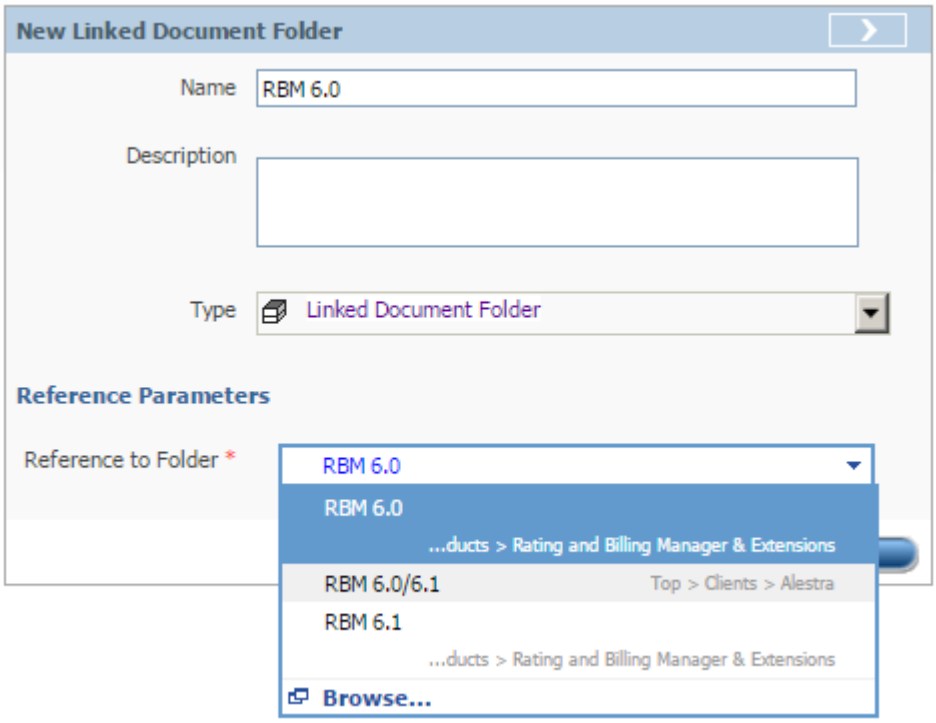


3. In the **Name** field, use the exact product name that matches the standard folder containing the documents. For example, if linking to RBM 6.0, set the name to "RBM 6.0". If linking to ICOMS 8, use "ICOMS 8".
4. Leave the **Description** blank.
5. In **Type**, select Linked Document Folder from the drop-down. The dialog now shows an additional field, **Reference to Folder**:



6. In **Reference to Folder**, begin typing the name of the folder you want to locate, e.g. RBM 6.... (the more you refine what you enter, the more exact the match).

7. A list of options will appear. The details include the name and also the *location* of the folder. This is important information. You must select the correct location, that is, from within the **Products** area.
   For example, if you are linking to RBM 6.0, then **RBM 6.0** from **Products > Rating and Billing Manager & Extensions** is correct but **RBM 6.0/6.1** from **Top > Clients > Alestra** is incorrect:



8. Click **Create**. The linked folder is added and you will be inside the new folder.
9. Navigate up one level and test that you see the contents you expect by following the linked folder name (e.g. "RBM 6.0"). You should see an exact replica of the contents of that release in the appropriate subfolders (for example, for RBM documentation, it will be Overviews, Concepts, System Administration, etc).
10. If client permissions need to be set up for the new linked folder, raise a PSUP ticket: https://psup.netcracker.com/browse/NCCSS. This will always be the case if you are setting up a new client and may be the case if you are adding a new release to an existing client. If you need a raise a PSUP ticket, ensure the **Project** value is "NC Customer Support System", set the **Ticket Type** to "Task", and enter an appropriate summary and other details.
11. You can use the Client Statistics report to look up what the client user groups have access to:
    https://support.netcracker.com/report/result.jsp?report=9144388728613311795&parent=60329513920134970 84&object=1050
    NOTE: If a client user group does not exist yet, it will not appear in the list and you should raise a ticket. If you see the relevant group but they do not have access to the folders you expect, raise a ticket for permissions to be added.

10.6.6 Migrating Documentation from UAT Server to Live CSS

NOTE: This section does not pertain for the normal upload of a single release to the CSS using the Sandbox. This section is only relevant to migration of existing/legacy documentation to the CSS from another system.

We do not copy the completed doc set to the CSS. This is done by the support team for the CSS. You should follow this process once all files are uploaded and tested on the UAT.

To request that documentation on the UAT is copied to the production CSS:

1. Build the entire release on the UAT server, using the link provided by Nickolay Sergeenkov's team. Follow the instructions earlier in this document for setting up the relevant folder structure and uploading files.
2. Once the build is complete and tested, raise a ticket in the PSUP system, using this link: https://psup.netcracker.com/browse/NCCSS
3. Ensure the **Project** value is "NC Customer Support System".
4. Set the **Ticket Type** to "Task".
5. In the **Summary** field, add this text: "Copy New <Release Details> Doc Set to Production CSS. For example, "Copy New "RBM 8.0.4" Doc Set to Production CSS".
6. Set a due date that is at least 1 day prior to the committed delivery date for live publication.
7. In the Description, provide the URL that shows the page with the new doc set on the UAT server.
   Then clearly identify the folder to be migrated (name it) and state it should be copied to the equivalent location on the CSS. If there are redirection links to be set up, mention this. Ask for the "xxxTEMP" folders to be replaced with links within the relevant Document tables. (This does not pertain for ICOMS.)
8. Set Nickolay Sergeenkov, Oleksandr Iakushev, and Yuliia Lukianenko as watchers. Their NC names are sergeenkovn, olia0514, and yulu1214, respectively. Also include any other Doc Team members or other stakeholders who need to see this ticket.
9. Set any other mandatory fields. Click **Create**.
10. Once the new doc set has been copied to the CSS, resolve/close the ticket as requested by the CSS support team.

10.6.7 Appendix: Document History

Date	Summary of ChangesChangesSummery	Author
Q2-3 2015	Initial draft following migration from CSWS to CSS	Caroline
June 2016	Removed use of UAT server for standard upload of a doc set and replaced with Sandbox Added section on Client Folders Moved section on migration from UAT to CSS to new last section - relevant for major migration efforts.	Caroline
	(fill in as needed in future)	

10.7 Error Message Generation Process

- 1. Purpose
  - 1.1. The Error Messages Interactive
  - 1.2. What Do You Need Before You Start
  - 1.3. Process Overview
- 2. Updating the Interactive
  - 2.1. Identifying Changes
  - 2.2. Generating the Error Message Interactive
- 3. Checking the Deliverable

10.7.1 1. Purpose

This section provides an overview of the error message generation process. The Error Messages interactive provides users with information relating to system errors. The interactive links the error type (RATE, RDISC, RCOST, etc) to a probable cause and the potential solution.

10.7.1.1 1.1. The Error Messages Interactive

It's easiest to understand the operation of the Error Messages interactive by viewing it and navigating the links. The interactive can be accessed at:

http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/interfaces_schemas/Rating_and_Billing_Manager_Rating_Engine_Error_Messages_Interactive_8.0/index.htm

The navigation bar across the top of the screen contains the different categories of errors supported by the system. Click on the appropriate domain to research a particular error.

The main portion of the screen contains the following types of information pertaining to the error:

- Error code – indicates the error domain and number, such as RATE00295. The Solution link indicates the possible solution to the error message. The Solution link is located under the Error code column.
- Error category – indicates the error category. Click on error category number to open a list of all error categories, such as Category 7 = subscriber data error.
- Message – indicates the cause of the error.

10.7.1.2 1.2. What Do You Need Before You Start

You need to have the following:

- Access to **CM Synergy PRD database** for development source materials. **[Note, May 2015: SVN is now being used instead of CM Synergy. This needs to be updated.]** You need access to:
  RATE project
  VPACORE project

We previously maintained the dev error messages in an ID_ERRORS project within the PRD database. This project appears to have been removed between 4.4 and 5.0. Best to get files straight from the two projects now listed above.

- Access SVN (the documentation database) for source materials. You need access to: https://svnca.netcracker.com/RBMDOC/branches/RB/ (release folder > interactive_data/interactive_error_messages/interactive_error_messages.zip)

- Zip Genius installed on your (virtual) PC. A version is available at: http://zipgenius.altervista.org/dlc/zipgenius/index.htm
(Note: you can also just use whatever zip application you have installed on your machine.)

- TextPad editor installed on your (virtual) PC. A version is available at: http://www.textpad.com/download/index.html#downloads

- Xenu link checker software installed on your (virtual) PC. A version is available at: http://home.snafu.de/tilman/xenulink.html#Download

10.7.1.3 1.3. Process Overview

To complete the Error Message interactive, you need to complete the following processes:

1. Identify the new/modified/deleted error messages for the current release. This process is detailed in the “Identifying Changes” section.
2. Generate the Error Message interactive. This process is detailed in the “Generate the Error Message Interactive” section.

10.7.2 2. Updating the Interactive

Before you create the Error Message interactive, you must identify the changes between the current release and the last release. The interactive is only generated at each head release; however, it is updated at each release. For example, the Error Message interactive was not published at 5.1, but it was updated with all changes made between 5.0 and 5.1.

10.7.2.1 2.1. Identifying Changes

Before you create the Error Message interactive, you must identify the changes between the current release and the last release.

Use the following procedure to identify changes in the error messages

1. Using CM Synergy, access the RATE and VAPCORE projects (Original instruction stated ID_ERRORS project) (find a working version for this release belonging to any developer and use "show project" to view it). The following files (parts of the Rating Engine) should be available: **[Note, May 2015: SVN is now being used instead of CM Synergy. This needs to be updated.]**

> All Hosted Rating messages were removed at Release 5.1

File	Project
RATEmessages.mess	RATE project
RBINDmessages.mess	VPACORE project
RCOSTmessages.mess	VPACORE project
RDISCmessages.mess	RATE project
RGUIDEmessages.mess	VPACORE project
RLmessages.mess	RATE project *Note this contains some hosted rating*

	content that needs to be removed during RBM 5.1 work

2. Right click on the given *.mess file and select **Show History**.
3. Identify the last version from the previous release (for example 4.0.4) and double click to open the file. Slide to the left side of screen. *(Note: normally, the last version should be in the status "released".)*
4. Identify the latest version of the file for the current release (for example 4.3.3) and double click to open the file. Slide to the right side of the screen.
5. Compare the two files you selected using TextPad. Use Tools > Compare Files. The comparison appears in the bottom pane of TextPad, with the results from both files shown in order and identified by the file. (Since all the *mess files from Synergy include a version number, you can identify the older and newer files.)
   Note: You are trying to identify changes in the error messages. Warnings, informs, traces, and other lines should be ignored.
6. Record all new, modified, and deleted error using a TextPad file.
7. Repeat steps 2-6 for all portions of the Rating Engine (see step 1 above).
   Note: If you need further information (for example cause and potential solution) about an error message, use the following URL to identify the appropriate manager:
   http://intranet.emea.convergys.com/prd/ownership/
   In addition, it's helpful to talk to the RB author who last work on the interactive to get contact names of SMEs.
8. Once you have identified the new error messages, email the SMEs to request the information not available in the *.mess files. This normally includes the Reason and Solution for each error message. You may also need to confirm the category.
   RBM Contacts at RBM 5.1:
   RATE domain - Lavanya Dodla
   RBIND domain – Vijayanathan Vijesh
   RCOST domain - Savita Patil
   RDISC domain – Narayan Ramamurthi/ Srikanth Avisetty/ Bala Raveendranath Araveeti
   RGUIDE domain - Savita Patil/ Krishna Madagani
   RL domain – Lavanya Dodla
   Any Hosted Rated Engine related query: Priyanka Khargonkar

   As of RBM 5.0, there is a Word document maintained in RBDOC that you can use to request this information. See **error_msg_updates.doc**. If using this, remove all content from the previous release to create a blank document. Then add the new messages you are working with for the current release.

   Alternatively, once you've identified the new error messages, draft an email similar to the following to request the additional information:

   "It appears that the following new RATE error messages have been created:
   error 00280 RATE_CALLBACK_LANG_CURRENCY_ERROR "Failed in callback function RATEgetLanguageAndCurrencyCodes"
   error 00281 RATE_DERIVED_ATTR_SIZE_OVERFLOW "For derived attribute <1>, the attribute value string has a size <3> larger than the allowed size <2>."

   I am looking for the following information for the RATE Error Messages:
   Category
   Reason for the Error
   Solution to the Error

9. Once all new error messages and pertinent data have been identified move forward to "Generating the Error Message interactive".

10.7.2.2 2.2. Generating the Error Message Interactive

Use this procedure to generate the Error Message interactive.

1. Extract the contents of the interactive_error_messages.zip file on your virtual machine.
2. Use TextPad to open the **index.htm** file in your work area on the virtual machine.
3. Edit the file as required. It is easier to cut and paste an existing error message into the file and then modify the text. This ensures the proper tagging is applied. There may be numerical gaps between some error messages (for example 00287, 00288, 00290); this is normal. Ensure the date and release number are updated for all .htm files.

   TIPS ON WORKING IN THE INDEX.HTM FILE – INCLUDING JAVASCRIPT SYNTAX

   The Javascript section starts here:

   <a href="javascript:SolutionOpen(

   until the closing bracket here:

)">Solution</td>

   A) When cutting/pasting, ensure you replace all the elements shown in bold here (this is an example using RGUIDE-00061). Do NOT change anything else, including the single quotes or commas around the text strings in the javascript section.

   Note that the message string appears twice, i.e. first within the javascript area and again at the bottom. YOU MUST REPLACE BOTH WITH THE STRING FOR THE NEW MESSAGE. The one at the bottom is what appears on the main page of the interactive. The javascript elements are visible on the Solution page for a given message.

   <tr><td class=heading>Error Code</td><td class=heading>Category</td><td class=heading>Message</td></tr>

   <tr><td class=data>**RGUIDE-00061**
<a href="javascript:SolutionOpen(

   '**RGUIDE-00061**',

   '**Failed to retrieve the Internal Currency Code for the event tyhpe with id <1>.**',

   '**This error occurs when internal currency code is not available in the EVENTTYPE table.**',

   '**INTERNAL_CURRENCY_CODE must be configured in the EVENTTYPE table.**'

)">Solution</td>

   <td class="data" width=100>**1**</td>

   <td class=data>**Failed to retrieve the Internal Currency Code for the event type with id <1>.**</td></tr>

   B) In order to use quotes (or apostrophes) within the Javascript section, you must use a backslash before the symbol and you can only use single quotes (double quotes cause a javascript error). For example:

   GPARAM SYSdomainingStrategy set to \'T\' or \'R\', but domain group ID is -1.

   Product associated with event source <1> and event type <2> has \'Pending\' status on date <3> and time <4>.

   Note that in the standard HTML, these message strings do NOT require the backslash, e.g. 2nd example here would be:

   Product associated with event source <1> and event type <2> has 'Pending' status on date <3> and time <4>.

   C) In the Javascript section, the message, reason, and solution text strings must be within single quotes. After each line except the last, there must be a comma. There must not be any periods outside the ending quote. The correct syntax is this:

   'This is the message text.',

'This is the reason text.',

'This is the solution text.'

D) If you need to use line breaks within the Javascript section, use

 at the end of the line where the break belongs.

If you need to use an ordered list or unordered list within the Javascript section (i.e. numbered list or bulleted list), the syntax must include a backslash (\ ) before the closing HTML tag, e.g. must appear as <\/ol>.

Syntax for both is shown in this example:

'RATE-00015',

'The buffer size is not set. You need to specify the buffer size on the command line. It should have a value greater than the commit size.',

'The <tt><nobr>-bufferSize<\/nobr><\/tt> parameter determines how many events can be held by the Active Rating Engine\'s internal buffer (when the Active Rating Engine is run in batch mode). If the commit size is provided as a parameter, you must provide a parameter for the buffer size.**

**

If you are running the Active Rating Engine using System Monitor, an internal application error is probably the cause of this error. If you are running the Active Rating Engine using the command line, then it is likely that the <tt><nobr>-bufferSize<\/nobr><\/tt> parameter has not been specified.',

'Do one of the following:

If you are running the Active Rating Engine using System Monitor, contact your local Convergys representative.**<\/li>**

If you are running the Active Rating Engine from the command line, ensure that the <tt><nobr>-bufferSize<\/nobr><\/tt> parameter is specified. The integer value for the <tt><nobr>-bufferSize<\/nobr><\/tt> must be greater than that for the <tt><nobr>-commitSize<\/nobr><\/tt>.**<\/li>**

<\/ul>'

)">Solution</td>

E) When making updates in index.htm and checking them on the web page as it appears in the browser, ensure you hit F5 (Refresh) on the main page before you click the solution link. Otherwise, any changes to the Javascript section will not be generated on the Solution page.

4. After you finish the edits, save the **index.htm** file.
5. Regenerate the **interactive_error_messages.zip** file in your work area using Zip Genius.
6. Use Xenu to check the **interactive_error_messages.zip** file for broken links.
    a. Open Xenu application on your virtual machine.
    b. Select **File – Check URL**.
    c. Select the correct path for the **interactive_error_messages.zip** file. Click the **Check external links** box.
    d. Click **OK** to test the links.
    e. Fix broken links as required. You may get broken links messages for the javascript sections saying "Could not parse URL". This does not necessarily represent a problem. Test a few of these Solution links in the interactive to be sure.
7. Check out the **interactive_error_messages.zip** file from CM Synergy and delete it. Copy the **interactive_error_messages.zip** file from your virtual machine to CM Synergy and check in the file.

8. Complete the Interactive Author Checklist for the Error Messages interactive and store in appropriate SharePoint location.
9. Identify reviewer to complete section 3.

10.7.3 3. Checking the Deliverable

You should perform the following checks on the interactive after it is complete:

1. Check that the release and document versions on the front page are correct.
2. Check that the dates of the copyright are correct in the HTML files.
3. Check that the legal page is the most recent – you will have been told during a release if the legal statement has changed.
4. Go for a quick tour of the pages in the interactive, drilling down as far as you can. Check that the look and feel of the document is as expected (e.g. the style sheet has been applied appropriately and there are no red bullets).
5. Use Xenu to check the **interactive_error_messages.zip** file for broken links.
    a. Open Xenu application on your virtual machine.
    b. Select **File – Check URL**.
    c. Select the correct path for the **interactive_error_messages.zip** file. Click the **Check external links** box.
    d. Click **OK** to test the links.
    e. Fix broken links as required.
6. Complete appropriate checklist after your review and store in appropriate SharePoint location.

10.8 ETC and Web Services Interactives Processes

- 1. Purpose
    - 1.1. What and Why
    - 1.2. What are ETCAs, PCMI and Web Services Interactives?
    - 1.3. The Interactives
    - 1.4. What Do I Need Before I Start
- 2. ETCA
    - 2.1. Automatic Build
    - 2.2. Preparing the ETCA for Release
        - 2.2.1. Integrate the Javadocs
        - 2.2.2. Modifying the ETCA Interactive
- 3. Web Services
    - 3.1. Automatic Build
    - 3.2. Preparing the Web Services for Release
        - 3.2.1. Integrate the Javadocs

        - 3.2.2. Modifying the Web Services Interactive
- 4. Checking the Interactive
- 5. Distribution
    - Setting up the ETCA Generation Environment
    - Setting up the ETCA Release Environment

10.8.1 1. Purpose

This section provides an overview of the requirement for the process.

10.8.1.1 1.1. What and Why

This process describes the modification of source documents and the generation of the interactives for the following:

- Enhanced and Template-based Care API (ETCA)
- Web Services

> The interactives are not subject to a technical RAT review or a formal editor check when complete.

10.8.1.2 1.2. What are ETCAs, PCMI and Web Services Interactives?

These systems provide an "integration ready" interface enabling external systems to be easily and rapidly integrated with the Smart Apps Suite. They separate out a layer of Smart Apps Suite business logic and provide it as Enterprise JavaBeans. This allows for tight integration with external systems, while still maintaining the Smart Apps Suite functional model.

10.8.1.3 1.3. The Interactives

The interactives are available as zip files in the following locations in Synergy:

- ID_RBDOC\interactive_data\etca\rb_etca_javadocs.zip
- ID_RBDOC\interactive_data\webservices\rb_web_javadocs.zip
- Contact Phanendra K Akurathi for the PMCI javadocs

Both files unpack into the following:

- A javadoc directory. This directory contains all the files provided by development. Documentation does not modify these files – we place the latest versions within our zip file.
- Other files. Documentation owns and modify these files for version and dates.

10.8.1.4 1.4. What Do I Need Before I Start

You need to do the following:

- Be familiar with the interactives and terminology. The following is an example of the ETCA interactive:
  http://hocdl22.emea.convergys.com:8080/PDFDoc/Inf_rb_4_2/changes/rb_etca_javadocs/etca.htm
  The Web Services interactive can be found on the CSWS (soon) or in Synergy.

- You will need to check out and reconfigure the following project in the CB5 database in synergy, if you have not already done so:
  ID_RBDOC

- You will need to check out the following projects in the PRD database in synergy, if you have not already done so:
  ECA
  Note: When you create this project you must ensure that the Work Area Properties **Translate ASCII Files** option is unchecked.

You need the following software:

- Xenu – locates broken links.
- TextPad – used to update files.
- Macromedia Dreamweaver – use the multi-file function to search and replace text.

10.8.2 2. ETCA

> The ETCA interactive is not subject to a technical RAT review or a formal Editor Check when it is complete.

The build process produces the ETCA content for documentation. This content is then integrated into the documentation deliverables to produce the final interactive deliverable.

10.8.2.1 2.1. Automatic Build

For major releases, the javadoc files are automatically created every day during the build process (usually performed in the evening). Currently you can pick up the ETCA javadocs file from the following location:
\\pelican\bce\build\web\RBAPI-sqaX.Y.Z\RBAPI\build_output\distrib\external\javadoc.zip
Where X.Y.Z is the latest release required e.g. 4.3.3. If the documents are not in the expected location or are not dated today or yesterday (as they should be regenerated every night), you should contact the ECA team to find out the location of the Javadocs.
If the Javadocs are for a maintenance release or a minor build, then you should contact the ECA team to find out the location of the Javadocs.
Note: The ECA Development Team web page posts the current Java file on the Rating and Billing
http://intranet.emea.convergys.com/prd/eca/

10.8.2.2 2.2. Preparing the ETCA for Release

Once the automatically generated part of the Javadocs have been made available from development, it is necessary to integrate the javadocs with our ETCA interactive.

10.8.2.2.1 2.2.1. Integrate the Javadocs

The javadocs should be integrated with our interactive in the following way:

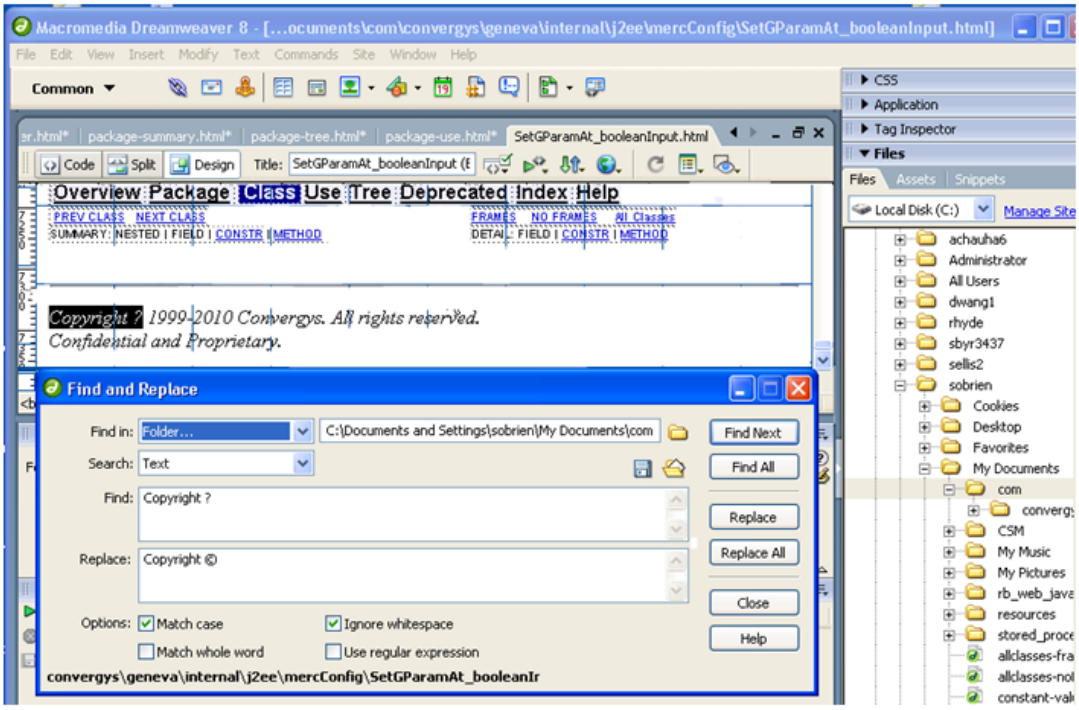
1. Check out the interactive from synergy in the following location:
   ID_RBDOC\interactive_data\etca\rb_etca_javadocs.zip
2. Copy the **rb_etca_javadocs.zip** file to your local drive and unpack it. Delete the **rb_etca_javadocs.zip** file.
3. Delete the content of the **javadoc** directory.
4. Copy the development generated **javadoc.zip** file into the **javadoc** directory on your local machine. Unpack the file. Delete the **javadoc.zip** file.
5. Make any changes required to the interactive. See "Modifying the ETCA Interactive" for details.
6. Do a final check of the interactive. See "Checking the Interactive" for details.
7. Zip up the interactive into the **rb_etca_javadocs.zip** file, ensuring that the directory level of the content is the same as required (i.e. the top level directory of **rb_etca_javadocs** is included).

10.8.2.2.2 2.2.2. Modifying the ETCA Interactive

The interactive will need some modifications once it has been created:

Correct Copyright:

1. The wrong copyright symbol is used at the bottom of all HTML pages in the **javadoc** directory. You should use a multi-file modification system (e.g. Dreamweaver which can check all subdirectories) to change the copyright symbol. For example, from:
   Copyright ? 1999-2009 Convergys
   To:
   Copyright © 1999-2010 Convergys
   Note: PR40906 and PR43362 have been entered for development to fix this. 3/26/2011 this may have already been corrected, leaving details, as it may be an issue in 2012.



   This could take several minutes. If you get a Not Responding message, try running on subfolders.

2. A number of broken links currently exist. **Note:** PR43362 has been entered for the ECA team to fix this. Run the Xenu link checker (http://home.snafu.de/tilman/xenulink.html#Download) against the complete interactive. Fix any broken links. See Appendix C Check for Broken Links.

3. Check that the version on the front page is correct. Also check here to make sure that the BETA is showing (for non-GA release) or not showing (GA release).

4. Check that the dates of the copyright are correct in HTML files documentation are responsible for and in the javadoc files generated by development. If many changes are required, use Dreamweaver to do a multiple search and replace (remembering that each of our HTML files has three instanced of the copyright).

5. Check the table in the **functionality_supported.htm** page. You should add to this table for any new releases. Open the file with TextPad to make changes.

6. If necessary, update the legal statement page.

10.8.3 3. Web Services

> The Web Services interactive is not subject to a technical RAT review or a formal Editor Check when it is complete.

The build process produces the Web Services content for documentation. This content is then integrated into the documentation deliverables to produce the final interactive deliverable.

10.8.3.1 3.1. Automatic Build

For major releases, the javadoc files are automatically created every day during the build process (usually performed in the evening). Currently you can pick up the Web Services javadoc files from the following directory:
\\pelican\bce\build\web\RBAPI-sqaX.Y.Z\RBAPI\build_output\webservices\javadoc
Where X.Y.Z is the latest release required e.g. 4.3.3. If the documents are not in the expected location or are not dated today or yesterday (as they should be regenerated every night), you should contact the ECA team to find out the location of the Javadocs.
If the Javadocs are for a maintenance release or a minor build, then you should contact the ECA team to find out the location of the Javadocs.

10.8.3.2 3.2. Preparing the Web Services for Release

Once the automatically generated part of the Javadocs have been made available from development, it is necessary to integrate the javadocs with our Web Services interactive.

10.8.3.2.1 3.2.1. Integrate the Javadocs

The javadocs should be integrated with our interactive in the following way:

1. Check out the interactive from synergy in the following location:
   ID_RBDOC\interactive_data\webservices\rb_web_javadocs.zip
2. Copy the **rb_web_javadocs.zip** file to your local drive and unpack it. Delete the **rb_web_javadocs.zip** file.
3. Delete the content of the **javadoc** directory.
4. Copy the development generated files from the development **javadoc** directory into the **javadoc** directory on your local machine.
5. Make any changes required to the interactive. See "Preparing the Web Services for Release" for details.
6. Do a final check of the interactive. See "Checking the Interactive" for details.
7. Zip up the interactive into the **rb_web_javadocs.zip** file, ensuring that the directory level of the content is the same as required (i.e. the top level directory of **rb_web_javadocs** is included).

10.8.3.2.2 3.2.2. Modifying the Web Services Interactive

The interactive will need some modifications once it has been created:

1. The copyright is incorrect at the bottom of all HTML pages in the **javadoc** directory. You should use a multi-file modification system (e.g. Dreamweaver which can check all subdirectories) to change the copyright symbol. For example, from:
   Copyright © 2009 Convergys Corp
   To:
   Copyright ©; 1999-2009 Convergys
   3/26/2011 this may have already been corrected, leaving details, as it may be an issue in 2012.
2. A number of broken links exist. Run the Xenu link checker (http://home.snafu.de/tilman/xenulink.html#Download) against the complete interactive. Fix any broken links. See Appendix C Check for Broken Link. **Note:** PR CB1#50683 has been created.

3. Check that the version on the front page is correct. Also check here to make sure that the BETA is showing (for non-GA release) or not showing (GA release).
4. Check that the dates of the copyright are correct in HTML files documentation are responsible for and in the javadoc files generated by development. If many changes are required, use Dreamweaver to do a multiple search and replace (remembering that each of our HTML files has three instanced of the copyright).
5. Check the table in the **functionality_supported.htm** page. You should add to this table for any new releases.
6. If necessary, update the legal statement page.

10.8.4 4. Checking the Interactive

You should perform the following checks on the interactive after it is complete:

1. Check that the release and document versions on the front page are correct. Also check here to make sure that the BETA is showing (for non-GA release) or not showing (GA release).
2. Check that the dates of the copyright are correct in HTML files documentation are responsible for and in the javadoc files generated by development. If many changes are required, use Dreamweaver to do a multiple search and replace (remembering that each of our HTML files has three instanced of the copyright).
3. Check that the legal page is the most recent – you will have been told during a release if the legal statement has changed.
4. Go for a quick tour of the pages in the interactive, drilling down as far as you can. Check that the look and feel of the document is as expected (e.g. the style sheet has been applied appropriately).
5. Check all the links in the interactive using Xenu. (http://home.snafu.de/tilman/xenulink.html#Download). Where ever possible fix links, because you are working in a copy of the files. It is recommended a PR is opened to let the ECA team know about broken links.

10.8.5 5. Distribution

Zipped files are packaged with the Rating and Billing Manager software. This is done via a hot request; hot requests are created by one of the documentation team members, check project plan to see who is assigned to this task. The zip files must be checked into CM Synergy, before the hot request is created.

Zipped files are also placed in a staging folder on a shared drive provided by David Wang. David Wang then places the interactive and the zip file on the Client Support Website.

A. Generating ETCA from Source

In the past, documentation generated the ETCA Javadocs from source code. This process was time consuming, but it had the advantage that there was no dependency on an external development team. This practice has now been stopped, in favor of the ECA team providing us with the Javadocs directly. Build also generates the Javadocs as part of the build drops that occur closer to a release.

> The process in this section is provided for reference purposes and for the unlikely event that the ECA team or Build are not in the position to provide documentation with the relevant Javadocs. The method for generating Web Services is currently undetermined.

10.8.5.1 Setting up the ETCA Generation Environment

The ETCA build environment only needs to be set up once. Any subsequent ETCA Javadoc builds use the same build environment. The build environment is a collection of the following software packages, resource files and documentation:

1. ECA SETUP DOC
2. Java JDK (1.5.0.11)
    - Make sure to install JDK so that JAVA_HOME_1_5_0 points to: JAVA_HOME_1_5_0=C:\jdk1.5.0_11
    - For information on the installation process, refer to section 3.1 of the ECA SETUP DOC.
3. Java Editor (TextPad 4.7.3)
4. The Mercbuild File
    - For information on the installation process, refer to section 7.1 of the ECA SETUP DOC.
5. Set up the environment variables
    - For information on what variables to set up, refer to section 4 of the ECA SETUP DOC.
6. Install JBoss

10.8.5.2 Setting up the ETCA Release Environment

The ETCA specific release environment is a collection of projects and files from CM Synergy that are used to build the Javadocs interactive.

> It is not possible to reconfigure an old project with a new release tag. A new project must be checked out for each new release tag. This process must be completed for each new ETCA release.

In addition to setting up the ETCA specific release environment, it is necessary to install JAVACORE. JAVACORE only needs to be installed once.

1. Log into the PRD CM Synergy database.

2. Find the release specific version numbers for the path set up.

- Show the history for: H:\RBAPI-squX.X\RBAPI\env.properties (the version number is not critical at this point).
- Identify the CMS version with the BASELINED release tag (for example 3.1.0) in the history tree.
- Open env.properties with CMS version identified under the previous point. This file contains path specific information that is required for building the ETCA documents. The lines of interest are (numbers 3, 1, and 0 are relevant to this example only and will differ at more recent releases):
    - set PRODUCT_MAJOR_VERSION=3
    - set PRODUCT_MINOR_VERSION=1
    - set PRODUCT_PATCH_VERSION=0

3. Checkout out RBAPI and subprojects (for extra information on the checkout process, refer to the ECA SETUP DOC).

4. Reconfigure RBAPI and its subprojects.

5 Check out JAVACORE (for extra information on the checkout process, refer to the ECA SETUP DOC).

6. Reconfigure JAVACORE.

7. Install a mercebuild file and make sure the correct version of Java is installed.

- Copy a mercebuild file into the following location: C:/Documents and Settings/(your user name)/ (for this example, the file name should be: mercbuild_3_1_0.properties)
- Make sure the following environment variables are set in the mercebuild file:
  irb.nonplatform.build=yes
  javadocs.on=true

8. Make sure your system environment variables are set up correctly:

- Set Variable name: JAVA_HOME_1_5_0 and Variable value: C:\jdk1.5.0_11
- Set Variable name: ORACLE_HOME_10_2 and Variable value: C:\oracle\ora92 (or any other oracle version you are using)
- Set Variable name: CCM_PREFIX and Variable value: (your user name)

9. Set the date (replace XXX with release numbers as necessary):

- Open H:\RBAPI-XXX\RBAPI\build\build.xml.
- Find 2002, 2007, and the latest year date and update the date in two locations.
- Save the file. It may be necessary to make it writable.

10. Clean the java environment (replace XXX with release numbers as necessary):

- Open a "Command Prompt"
- Navigate to: H:\RBAPI-XXX\RBAPI\
- Run the command: build.bat clean

11. Access build help that may be release specific (replace XXX with release numbers as necessary):

- Open a "Command Prompt"
- Navigate to: "H:\RBAPI-XXX\RBAPI\"
- Run the command: build.bat help

12. Build the ETCA (this can take around 60 minutes on a VmWare machine) (replace XXX with release numbers as necessary):

- Open a "Command Prompt"
- Navigate to: "H:\RBAPI-XXX\RBAPI\"
- Run the command: build.bat eca
- The ETCA is written to: H:\RBAPI-XXX\RBAPI\build_output\eca\javadoc\index.html

B. Comparing Files Using TextPad

The ETCA source files have to be editor checked before every release. This requires you to check out Javadoc source files, update their documentation sections and check the files back into CM Synergy.

Remember that all changes you make directly to .iml files also have to be blessed.
Further information on blessing tasks can be obtained from: http://infdev.oz.convergys.com/mediawiki/index.php/CPU:IRB:BCE:Process:GateKeeper
The list of tasks that have or have not been blessed can be accessed here:

http://cherry.emea.convergys.com/taskgate/.

A formal process is in place that allows you to check for documentation differences in the .iml files. This process allows you to find differences at a faster rate than is possible if you were to use the jdiff output to find inconsistencies and then try to track down the relevant .iml file that contains the content you want to update.

The process uses search and compare facilities within TextPad to create a comparison history file. This file is updated once per release and then checked into CM Synergy after editor checking has been completed for the particular release. This ensures that the most recent editor changes are captured in the latest comparison history file.

Prerequisites to the process:

1. An installation of TextPad.
2. A comparison dump file (IML_dump.txt). This is located in ID_RBDOC\interactive_data\javadoc_editor_check_tracking

The editor checking process operates as follows:

1. Check out the latest RBAPI source file project. This contains the ECA project with the .iml files.
2. Open TextPad and search for "doc>" in all ".iml" files that exist within the \RBAPI\ file structure. This gives you the source for a new comparison history file.
3. Open a new window in TextPad and copy and paste the comparison history into the new window.
4. Order the content of the comparison history data in the new window in case sensitive, alphabetical order. TextPad provides a facility for this. Save this window to a temporary file

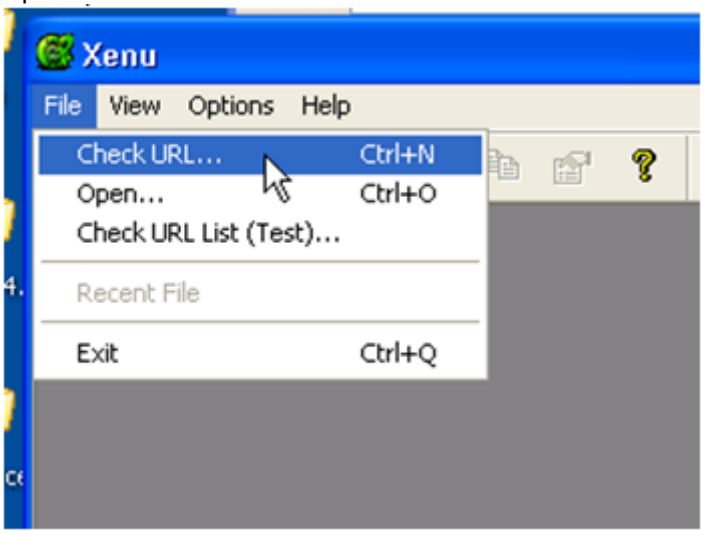
   This is not the source for a new IML_dump.txt file and should not be checked into CM Synergy.
5. Compare the content of the IML_dump.txt file to the content of the comparison history files you just created, using the TextPad specific file comparison mechanism.
6. Use the results from the file comparison to perform editor checks on files listed. The comparisons output provides you with the exact path and file name of the .iml files that have changed. The line numbers also indicate from which line on you would expect to find changes.

   You must ensure that you only update documentation content that is enclosed by the following XML tags: "<doc>" and "</doc>".
7. Once you have completed the editor check, you have updated the IML files, and checked them back into CM Synergy, you must create a new comparison history file as described in points 2, 3, 4 and check that file into CM Synergy. This is the IML_dump.txt file that will be used for editor checking the ETCA at the next release.

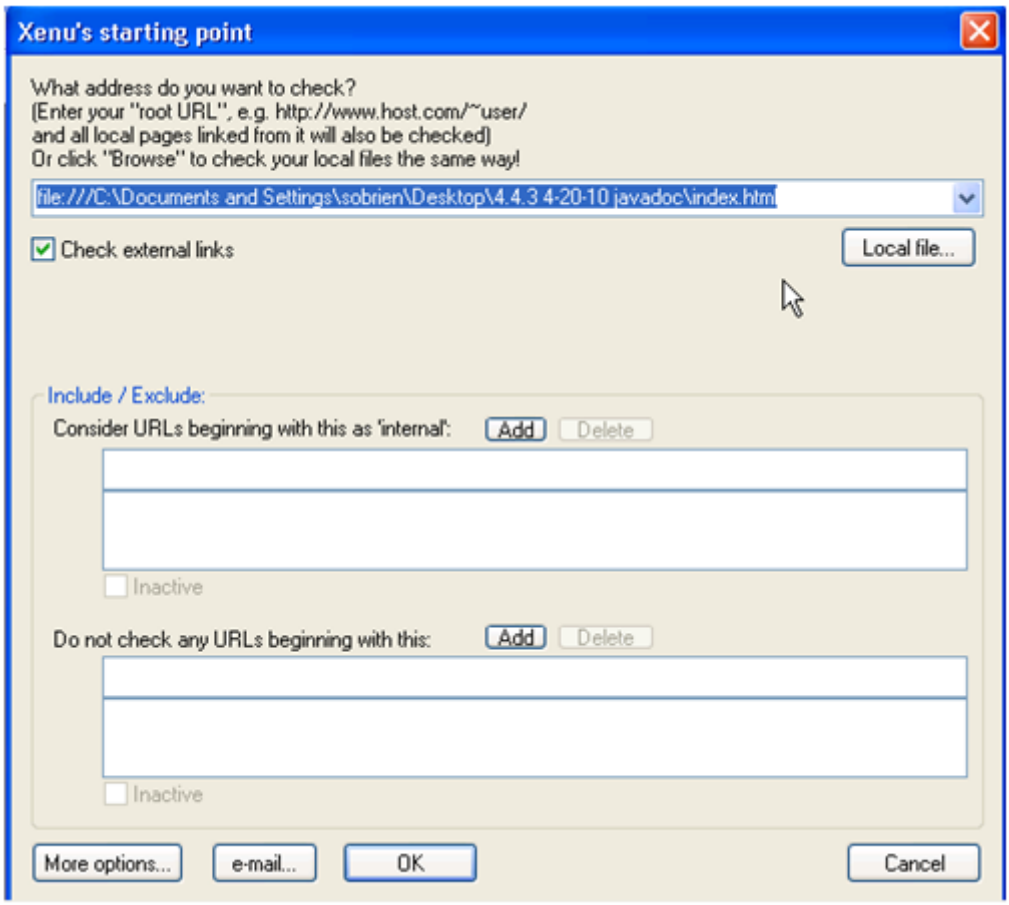
C. Check for Broken Links

Locate the Javadoc.zip file copy it to your hard drive then unzip it into a folder on your hard drive, if you have not already.

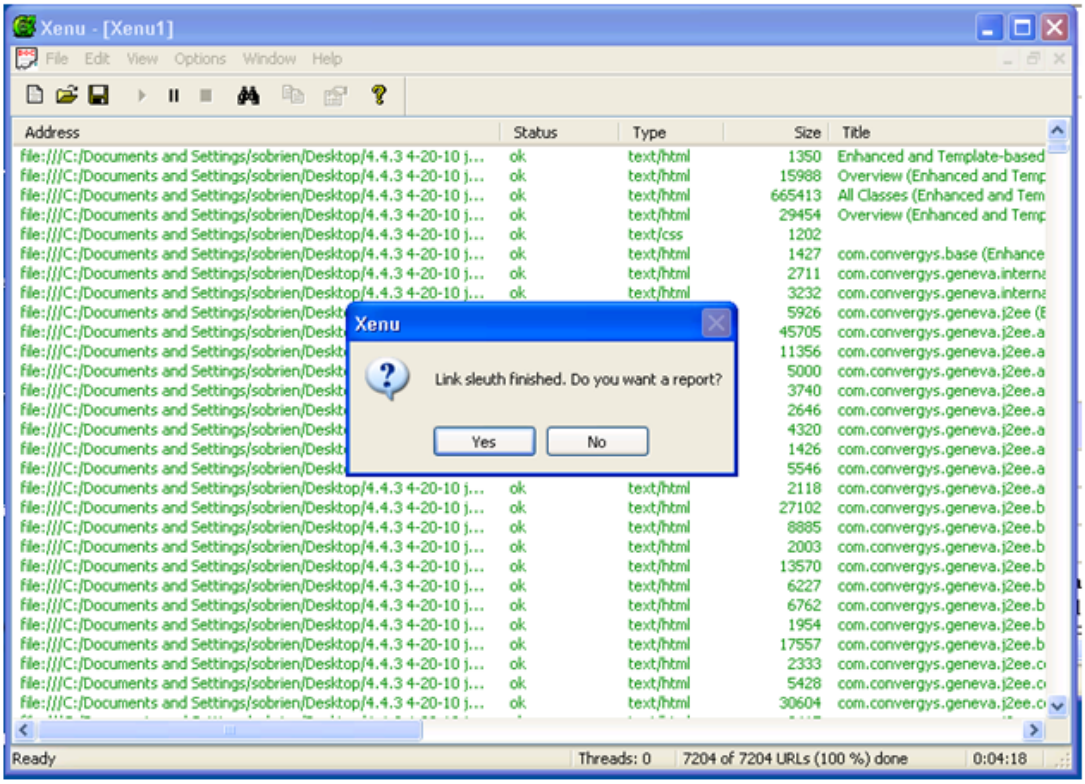
1. Open Xenu Link Sleuth. **File** > **Check URL…**



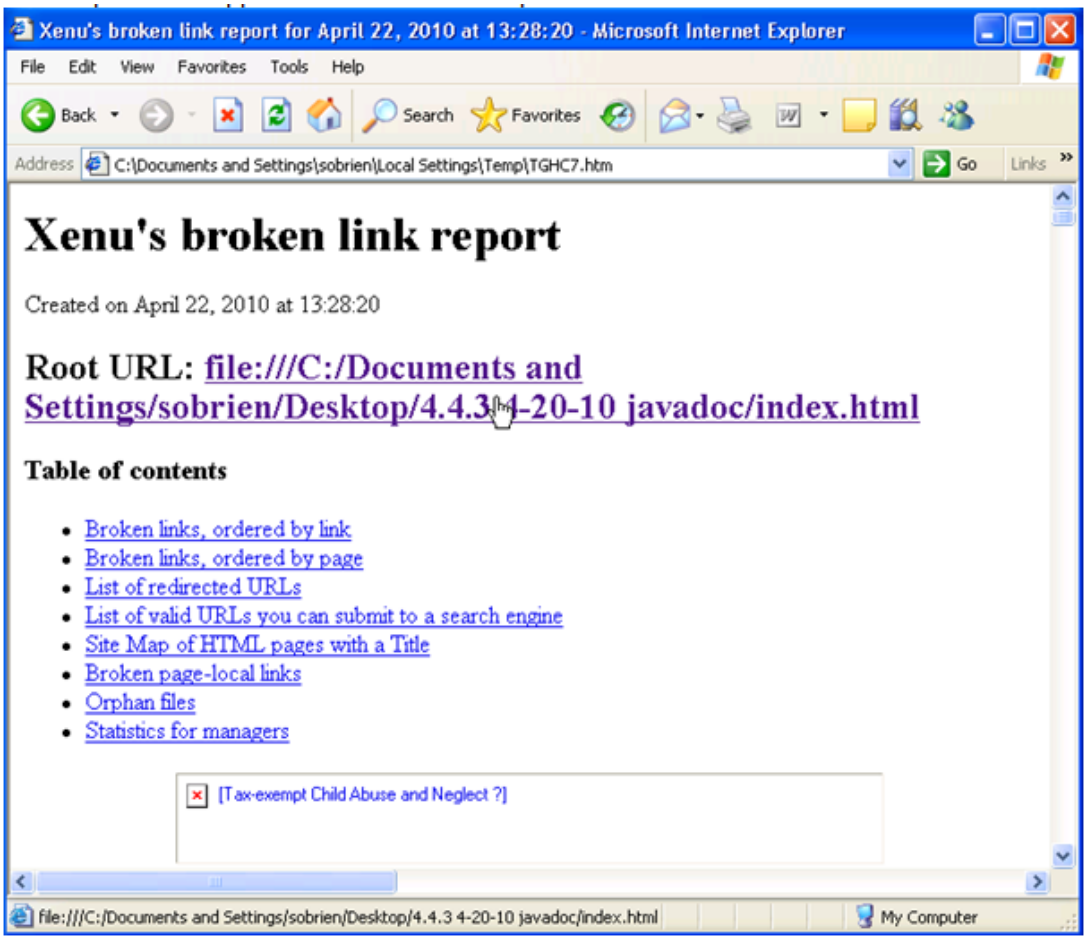
2. Locate file.



3. Click **OK**. Running this takes a few minutes.
4. Get a report. Click **Yes**. While the report is runs you are given the option to Abort.



The Report then appears in an Internet Explorer window behind the Xenu Sleuth window.



5. Fix broken links. On your desktop copy of the file navigate to the file indicated and open the file in TextPad to make corrections.

10.9 Handling Interim Release Guide Updates to Current Release

- Handling Interim Release Guide Updates to Current Release
  - Holding Folder
  - Copying Files
  - Update the Current Release
  - Mark the File Complete in the Holding Folder
  - Tech Review

10.9.1 Handling Interim Release Guide Updates to Current Release

An interim release is a release between any two releases for which a doc set was or will be published. Typically an interim release is between two head releases, but it could include client releases or maintenance releases. For example, suppose RBM 9.0 is the current release. Therefore, the RBM 8.0 full doc set files are copied to the RBM 9.0 folders in SVN as the starting point for 9.0 updates. Later, there is a request for the RBM 8.0 doc set to be updated to RBM 8.0.4, so the RBM 8.0 full doc set files are copied to the RBM 8.0.4 folders in SVN (again, as the starting point). The interim 8.0.4 updates are made and the doc set published. Now the updates made to the 8.0.4 doc set need to be applied (rolled forward) to the RBM 9.0 doc set. This document covers this process, as follows:

- Location of the holding folder
- Copy updated interim files to the holding folder
- Update the current release files
- Rename interim file in the holding folder to indicate update was made to the current release
- Send the rolled up content in the current release for tech review

10.9.1.1 Holding Folder

A holding folder is created in the current release. This holding folder is where the interim files are copied. The naming convention for the holding folder will include both the interim release and the current release. For example:

- make_8.0.4_updates_in_9.0

Note: This folder would be found in the RB\9.0.x folder in SVN.

Inside the holding folder you will create sub folders for your files. The folder naming convention is feature/ACPD/CR number and your name. For example:

- A1234_Sandy
- ACPD_6789_CR12345_Sandy

10.9.1.2 Copying Files

After the updates to the interim doc files have been tech reviewed and edited, copy the files to the holding folder. Keep in place the colored text and EnLabel tags. When copying the interim files to the holding folder, ensure that you:

1. Copy the file to the feature specific sub folder within the holding folder.
2. Rename the file by appending the PR; CR; ACPD number and your initials. For example:

- rb_syp_accurals_extract_generator_CR12345_sjo.fm

10.9.1.3 Update the Current Release

When it is time to roll forward the update in the current release:

1. Open the file from the holding folder.
2. Open the file in the current release. This is the master file.
3. Copy the updates related to your PR, CR, or ACPD in to the corresponding current release file. Ensure that you do not overwrite any other changes in the master file for the current release (e.g. changes arising from other rolled forward features, or updates for the current release).
4. Update the EnLabel tag details to include the release number it rolled from. For example:
    - A1234/CR12345/ACPD1234 rollup from X.X.X.

    Note: Do not remove colored text or EnLabel tags at this stage.
5. If further changes are needed to the rolled forward content at the current release, make them at this stage (consult with SME). For example, at 8.0.4 all features used APIs to modify the database, but at 9.0 user interfaces are being added for many of these features.

10.9.1.4 Mark the File Complete in the Holding Folder

Rename the file by adding the prefix "DONE" to indicate the work is complete.

- DONE_rb_syp_accurals_extract_generator_CR12345_sjo.fm

10.9.1.5 Tech Review

Send the updated master file for tech review and editing, following the standard protocol.

Note: As part of the edit and the removal of the EnLabel tag and font color you may need to reapply some styles, e.g. character styles like “x-ref external no-link”.

10.10 How to Create a New Ticket

PSUP Link: https://psup.netcracker.com/secure/Dashboard.jspa

When creating a ticket in PSUP, the correct project is PSUP Documentation and Online Help, and the Project key is PSUPTW.

See the following slides for additional information:
https://sps3.netcracker.com/sites/proddoc/Team/Internal%20Training/PSUP%20Tracker.pptx

10.11 RAT Review Instructions

Go to http://infdevca.netcracker.com/review/ and click the **Create New Review…** button on the opening page.

10.11.1 Create Review Page

Select the **Start new review set…** option button and click **Continue**.

Enter or select the fields on the Create Review page:

- Review Group: Select INFDEV – Infinys Development
- Review Set Notes: Enter notes for your SME about the review (include the enhancement # and what to review). For example: Technical review of 5863. Please search for 5863 to

locate changes. (NOTE: You cannot edit this field at a later time. It will always be associated with this review.)

- Roles: Author – you, Moderator – <the Approver's name>, Scribe – leave blank, Approver – (a fellow technical writer; for RBM, usually Tony, Caroline, or Julie)
- Review Notes: Another place for you to enter notes to your SME (NOTE: You can edit this field at a later time.)
- Return Type: Desktop
- Return Comments By: Select one week from the date you are submitting the review.

Click **Create Review**.

10.11.2 Select Work Product for Review Page

Enter/select the following fields on the Select Work Product for Review page:

- Work Product Source: URL (usually)
- URL: The link to the files on SVN.
- Work Product Type: E2E v2.0, Construction, Product Documentation Deliverables
- Client: Convergys
- Product/Component: the component that you are working on (for example, Rating and Billing) – note: this drop-down list is very old
- Release: leave as None Selected (no one has updated this drop-down in a long time)
- Type: Leave as section or select a different option if you wish
- Version or date: the current day's date

Click **Add Work Product**.

10.11.3 Select Elements To Review page

Scroll down on this page and select the files that you want to be reviewed. You will want to have PDF files reviewed for technical reviews since SMEs do not have FrameMaker.

Click **Mark Selected Elements as Under Review**.

10.11.4 Work Product Selection Page

Verify the work product that is under review (should be accurate) and click **Proceed to Next Step**.

10.11.5 Select Requirement for Review Page

Click **Skip Adding a Requirement** (you don't need to do this).

10.11.6 Manage Reviewers for Page

Enter SME name(s) in the **Add Reviewers** section (you only need names – you don't need to select roles) and click **Add Reviewers**. The name(s) should appear in the **Key Reviewers** section after you click **Add Reviewers**.

After you have entered all of the reviewers, click **Advance Review to Awaiting Reviewers Form**.

10.12 How to Document Stored Procedures in RNs

Ask your SME to send you details about the new/updated stored procedure (if not documented in the HLD or DLD).

If the stored procedure is modified, determine what has changed by looking at the last stored procedure that was posted. Highlight the changes in **bold**, under the Stored Procedure section of you Release Change chapter. For example:

gnvservpolicycontrol.deleteServPolicyControl3NC (IN 00005994)

A new version has been created to ….

procedure deleteServpolicycontrol3NC(

p_PolicyId IN integer,

p_PolicyName IN varchar2,

p_PolicyTypeId IN integer,

p_PolicyDiaryType IN integer,

p_PolicySubscriptionType IN integer,

p_ActionOverrideType IN integer,

p_PredicateId IN integer,

p_PolicyDesc IN varchar2,

p_PolicyPriority IN integer,

p_PolicySuspStartDtm IN date,

p_PolicySuspEndDtm IN date,

p_PolicyUsageAttrNum IN integer,

p_KeepPeriods IN integer,

p_PolicyAttrUnitsDesc IN varchar2);

10.13 How to Update the Glossary Interactive

***UPDATE ON 11/10/15: Starting with RBM 9.0, the Glossary is no longer an interactive. The Glossary will be published as a PDF, and individual writers will update the guide as needed. Note that there will still be an owner for this guide (for reviewing and pdfing).**

Process to add or update terms for a release.

10.13.1 Gather Data

1. Check the **Deliverable > Glossary >** row in the respective RB_Docs_Project spreadsheet for each new feature.

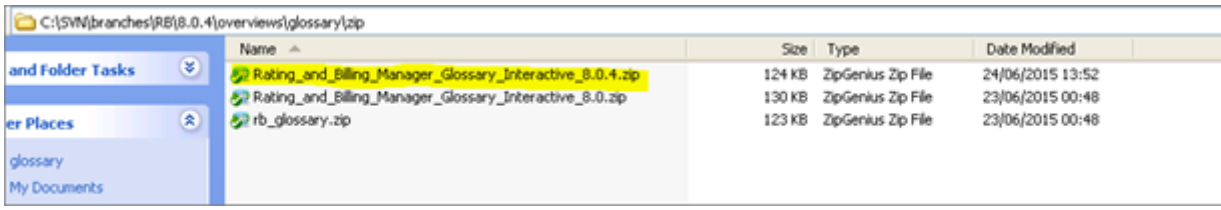
A	B	C	D
		Colour-coding for changes:	Analysis complete - Ready for Enhancement Author
Architect: Caroline CR #62388			Analysis complete - Not for Enhancement Author's attention
			Analysis complete - Not to be documented at current release
A4639-Account Payment Attributes			Author completed work
Feature Mgr: Vara Prasad Anupoju			
Remember to notify your SME(s) of tech review in advance. Always aim to complete analysis for Installion/Upgrade first			
Deliverable	**New/Mod**	**Section (if applicable)**	**Analysis (Work Instructions)**
Overviews			
RB Glossary	New	1 new term from this feature, 2 new terms to address gap	Add an entry for "account payment attribute". Also, entries are missing for existing "customer attribute" and "account attribute" (though they are mentioned in other related entries). Add definitions for all 3 terms. Update the entry for "attribute" to mention account attributes, account payment attributes, and customer attributes. Currently only event attributes and product attributes are mentioned.

2. Follow-up with the respective authors to obtain the term and definition after it has been SME reviewed. Collate this informtion locally.

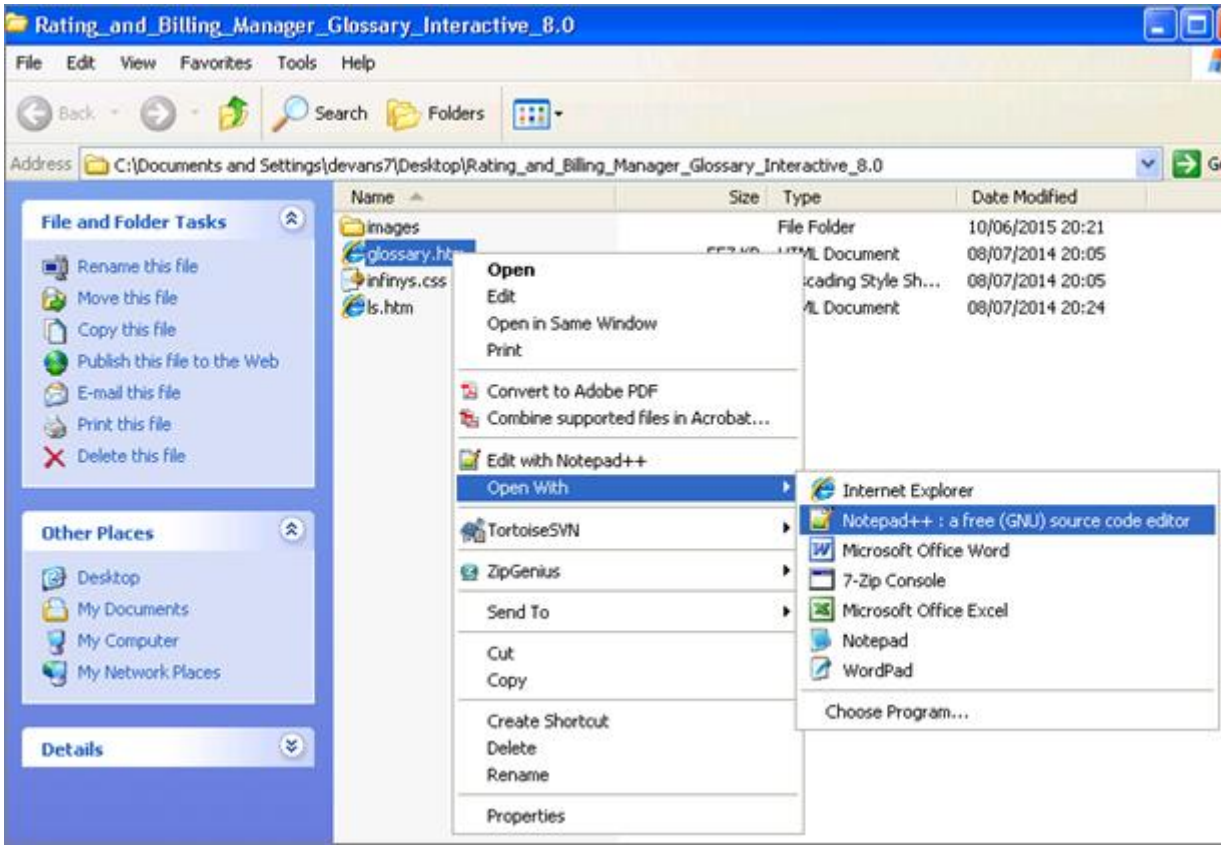
10.13.2 SVN

Follow these steps to add a new term or modify an existing term.

1. Check out the zip folder of the respective project and release. This is located in **Overviews > glossary > zip** folder.
    a. For example, check out "**Rating_and_Billing_Manager_Glossary_Interactive_8.0.4.zip** file.



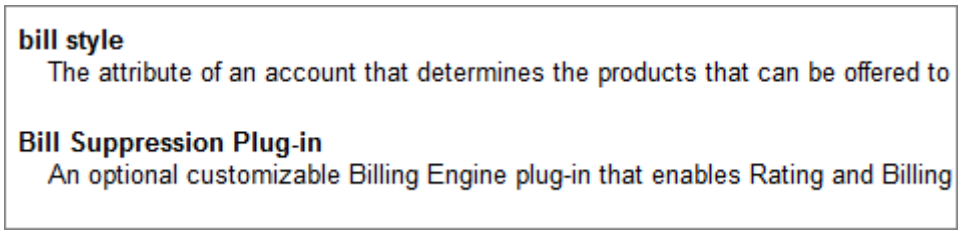
    b. Unzip the file in your work area/ local C drive.
    c. Right-click on **glossary.htm** file and select **Open With > Notepad++**.



d. Double-click and open the glossary.htm file. It displays the HTML version of the glossary guide in alphabetical order.

e. In the HTML version, identify where you need to add the new term.

f. Search for and copy the term with the style/format for an existing term that comes before or after the new term. For example, new term **Bill Summary Archiver Deleter** with its defintion must be added after the existing term **bill style** and before the existing term **Bill Suppression Plug-in**.



g. View in Notepad++:

bill style

The attribute of an account that determines the products that can be offered to the customer and helps to determine the bill template to be used for formatting the bills produced for the account.

bill style

The attribute of an account that determines the products that can be offered to the customer and helps to determine the bill template to be used for formatting the bills produced for the account.

h. Replace the **highlighted** text with the new term and definiton, **Save** and refresh the HTML version. The new term and definition displays.

i. Follow the same steps to add all new terms.

j. You can modify existing terms directly in Notepad++

k. After all the new terms and modifcations are completed, **Save** them.

l. Update the release number in the glossary.htm file

```
    <tr>
    <td>
    <td align=left><p class=release_header>Release 8.0.4</td>
    </td>
    <td align=right> <p class=release_header>(Including Extensions and Product Integrations)</td>
    </td>
    </tr>
```

m. Update the copyright date in the glossary.htm file. **Save** and **Close** the file.

```
<meta name="copyright" content="Copyright © 1999-2015, NetCracker.
<meta http-equiv="Content-Type" content="text/html; charset=utf-8"
<meta name="generator" content="Adobe RoboHelp 8" />
<title>glossary</title>
<link rel="STYLESHEET" type="text/css" href="infinys.css" />
</head>
```

n. Update the copyright date in the ls.htm file. **Save** and **Close** the file.

```
 <title>Legal Statement</title>
<link rel="STYLESHEET" type="text/css" href="infinys.css">
<meta name="copyright" content="Copyright &copy; 1999-2015, NetCracker.
</head>
```

o. Refresh and open the HTML version, ensure that all the new terms or modified terms display.

p. Close the glossary_htm file.

q. Right-click the **glossary.htm** file and **Open With Microsoft Office Word**

r. To make it easier for the editor to review, highlight the terms that have been modified or added

s. Save the document and send it for edit review.

t. After an edit review make the changes in Notepad++. Save the changes.

u. Check the HTML version again, zip the folder and check it back in to SVN.

10.14 How to View the Related Documents for PDIMCR from TMS or PR Page

Suppose you have a PDIMCR and want to write the NF/RC content; however, you do not have the related PR or TMS link and need to know the following:

- Are there any SCR documents?
- Has an RN entry been entered?

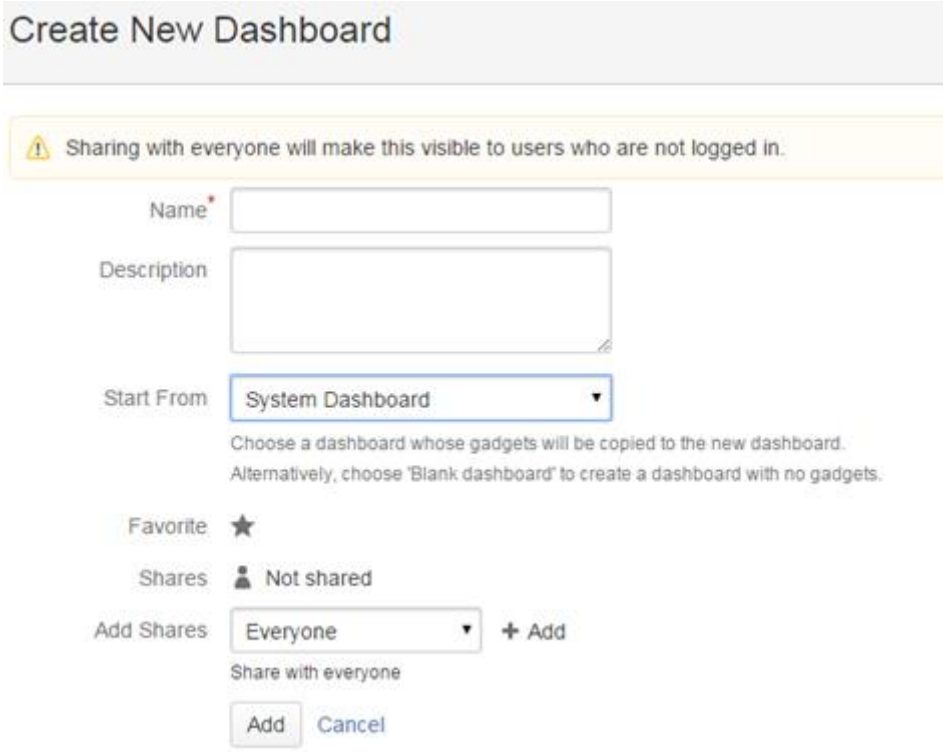
- Who is the SME (dev. complete)?
- Are any subsystems impacted?

Note: This information is on the PR page.

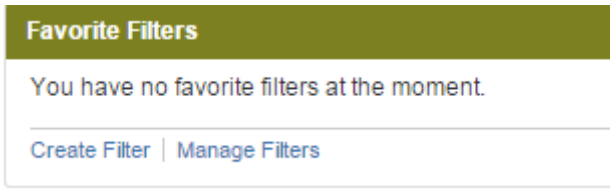
To access the related documents:

1. Access TMS: http://tms.netcracker.com/secure/Dashboard.jspa
2. Create your own dashboard by selecting the following:

   Dashboards > Manage dashboards > Create new dashboard

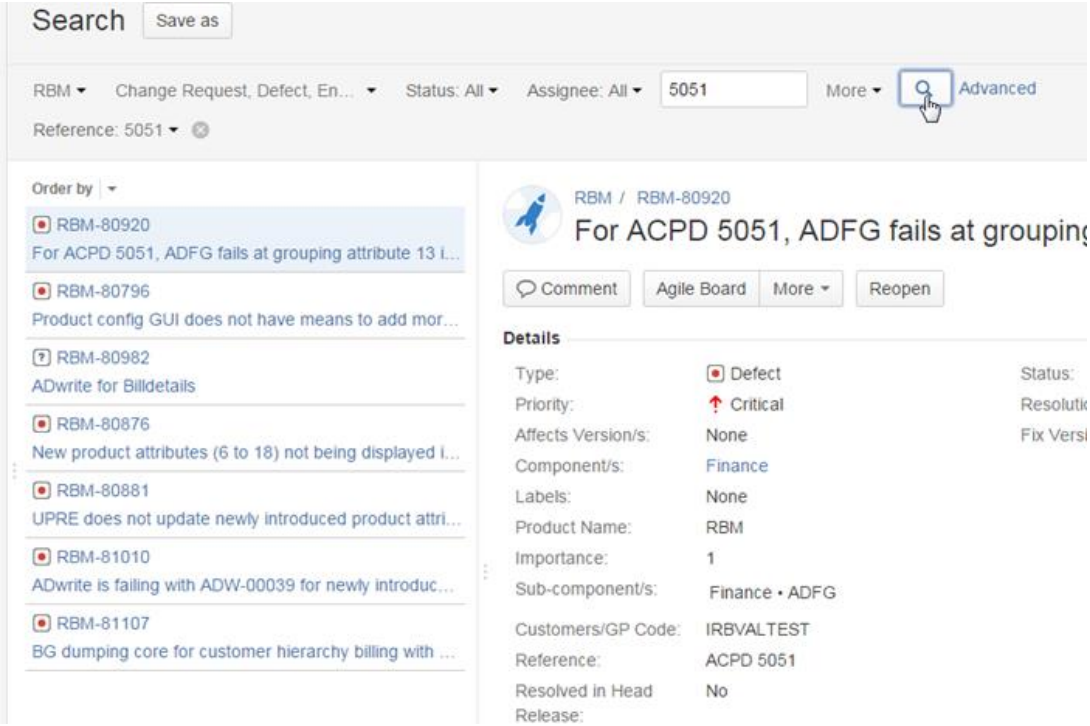


3. Specify the required details and click **Add**.
4. On the dashboard page, under the **Favorite Filters** section, click **Create Filter.**



5. From the **Search** category, select the Project, Ticket Type, and Status accordingly.
6. Enter the PDIMCR number in the **Text** box, and from the **More** drop-down list, select the option **Reference**.

   For example:



7. The search result displays the TMS pages for this PDIMCR. For example: http://tms.netcracker.com/browse/RBM-80920

   Note: This is actually the PR. You can access it from the PR page: http://intranetca.netcracker.com/prd/cpt/pr.asp?prnumber=80920

8. From the PR page, you can open the PR in TMS, verify the SCR pages, Deliverable list, and SME details for the PR page.

10.15 Infrastructure

Obsolete

10.16 Message Interfaces RLA Updates

- 1. Message Interfaces RLA Updates
  - 1.1. Updating the Current Real-Time Message Format
    - 1.1.1. Introduction
    - 1.1.2. Sources of Information
    - 1.1.3. Updating the Real-Time Message Format Chapter
  - 1.2. Updating Older Real-Time Message Formats
    - 1.2.1. Sources of Information
    - 1.2.2. Updating Appendix A in the Guide
  - 1.3. Updating the Native Diameter Interface
    - 1.3.1. Introduction
    - 1.3.2. Sources of Information

        - 1.3.3. Updating the Native Diameter Interface Details
    - 1.4. Updating Outbound Message Formats
        - 1.4.1. Introduction
        - 1.4.2. Sources of Information
        - 1.4.3. Updating theOMFormats Chapter
    - 1.5. Updating Other Chapters
    - 1.6. Document History

10.16.1 1. Message Interfaces RLA Updates

The *Message Interfaces* guide was historically published as part of the RBM full documentation set. However, in future, it may be published as part of the SA set of deliverables.

This guide contains a number of important interfaces that are regularly updated and that are important for client implementations. Starting from RBM 7.0, this guide is being updated as an RLA (release level activity) task, instead of relying only on feature-driven updates. (The updates generally do come from features but using features to organize the work has led to many updates being missed in the past.)

The important interfaces to update each release are:

- The **real-time message format**, which is documented in multiple versions. See Updating the Current Real-Time Message Format for updating the "current" version. See Updating Older Real-Time Message Formats if corrections need to be made in the older formats documented in Appendix A of the guide.
- The **Native Diameter interface**. See Updating the Native Diameter Interface.
- The **outbound message formats**. See Updating Outbound Message Formats.

Generally, the other chapters do not change, but you should try to verify if there are updates. See Updating Other Chapters.

In many cases, information exists in Development documents and other internal sources such as the schema to allow you to update the information independently of feature/ACPD design documents (which tend to be unreliable for the final implementation). The updates need to go to the relevant SMEs for review. The sections below include SME names where known. Please keep this document up to date for SME names if possible.

10.16.1.1 1.1. Updating the Current Real-Time Message Format

10.16.1.1.1 1.1.1. Introduction

The real-time message format (also often referred to as the RTRI format or RTRI protocol by developers) is used to pass messages from the network to RBM and back to the network. The messages are handled via the Real-time Event Distributor and the Real-time Rating Interface (RTRI) Plug-in into the Active Rating Engine. (There is some conceptual information on the real-time message format in the *RTCC Concepts* guide.)

The real-time message format is critical since clients rely on it for real-time rating. Errors in the documentation can lead to operators attempting to send data to the Active Rating Engine that then fails rating, so there is a lot of client visibility (and irritation!) if this format is incorrect. One of the aims in looking at this format each release is to avoid doc PRs against this chapter in the *Message Interface*s guide.

Format Structure

You can read the details in the main chapter on the Real-Time Message Format in the guide. However, here is a summary:

- A real-time message consists of a header and a subrecord. The header contains network information and some "meta"-information about the message, including the message type (e.g. initiation request, advice of charge request, etc.) and the message type version (i.e.

the version of the real-time message format that this message is using; see Format Versions).

- The subrecord part of the message is either a "request" or a "response" (with a couple of exceptions, see below). The "request" is the data that comes from the network/mediation to RBM to allow the Active Rating Engine to rate the event. The "response" is the outcome of the rating process that is sent back to the network (e.g. to authorize usage, provide advice of charge details, etc.)
- The "request" message may be sent in older format versions. The "response" message always uses the latest version. Hence the need to document all supported versions. Before RBM 6.1, all older versions were supported.
  Note: As of RBM 6.1 onwards, only two older formats will be supported, along with the current format. For example, if 61A is the current format, then the older formats 53A and 44A are supported but anything older than that (e.g. 41A) is not supported. As of Nov 2013, the guide is correct for release 5.3, 6.0, 6.1 and 7.0 w.r.t. the supported formats. Older guides (before 5.3) will be somewhat incorrect but should not be corrected unless there is a client demand.
- In addition to "request" and "response" messages, there are two other kinds of subrecord (as of RBM 7.0): RAR message subrecords and RPMU subrecords. These are simple subrecords that are used for something other than standard rating interactions between the network and RBM. Essentially, the real-time message format is being used to piggyback some other functionality (e.g. the RAR message is used with a Quote Cache Manager system).

Format Versions

The real-time message format is versioned. See the first table in the Real-Time Message Format chapter for details of how the format versions map to RBM releases. The important point to note is that not all RBM releases introduce a new format. Some do and some don't. For example, the 61A format is used for both RBM 6.1 and RBM 7.0.

However, the latest format may still change slightly without the format version changing! Thus, you cannot assume that if the format version is unchanged, the guide doesn't need an update! For example, at RBM 7.0, the format version is still 61A. However, a new message type (MsgType = 26) was introduced, leading to a new type of subrecord format, the RPMU format. This was added to the 7.0 guide, but is not present in the 6.1 guide. But both guides are documenting the 61A format.

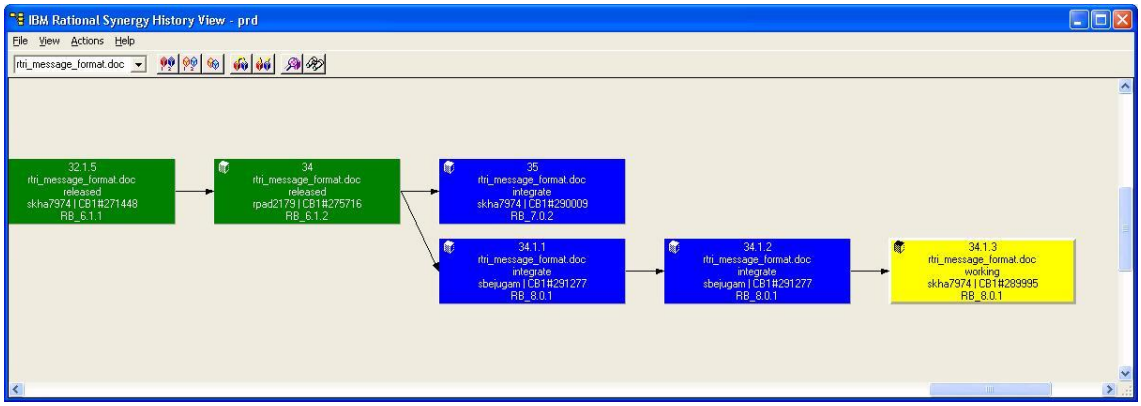
The other important point to note is that, these days, the format version number derives from an RBM release number. For example, RBM 6.1 introduced format 61A. This convention holds back to the 41A format. Before that, the format versioning was different (e.g. versions 002, 001 and 3.0 are the oldest versions). The version is always 3 characters long.

10.16.1.1.21.1.2. Sources of Information

Locate the main SME for the real-time message format and work with that person for any updates. (Sumit was the previous SME, but he is no longer with the company.)

****** 5/28/15 NOTE: CM Synergy has gone away. The following text in italics may still be useful but is definitely outdated. Ask your SME for the current rtri_message_format.doc file. ******

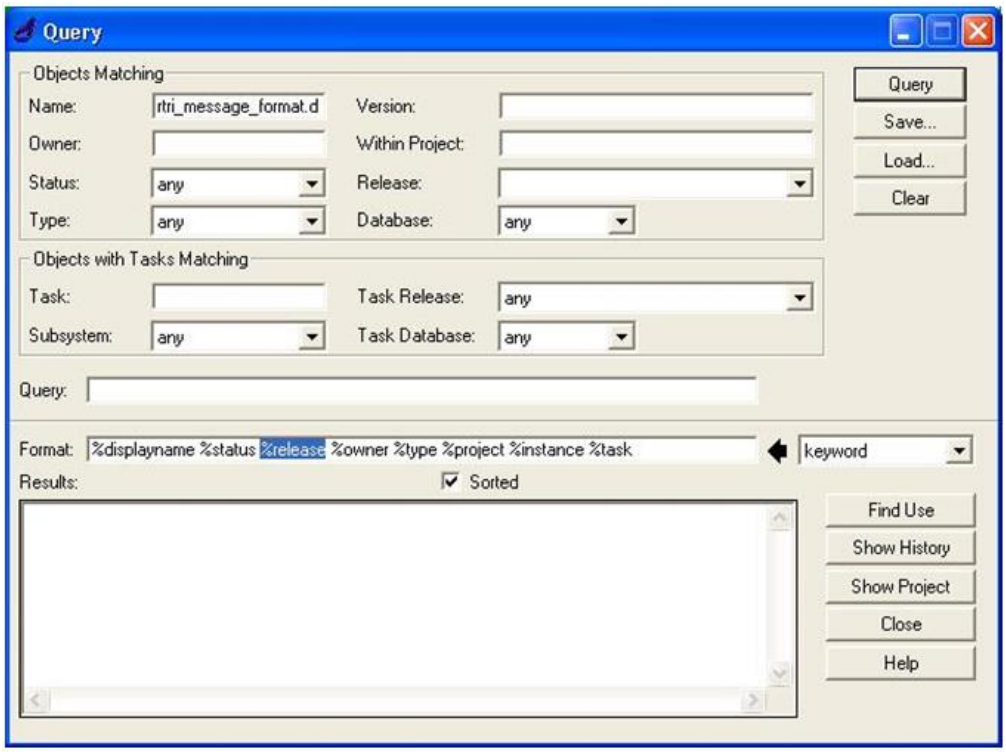
The main documented source of information is an internal document called ***rtri_message_format.doc****. This is maintained in the PRD Synergy database. For example, here is its recent history as of Nov 2013:*



Locating the Correct Version of rtri_message_format.doc

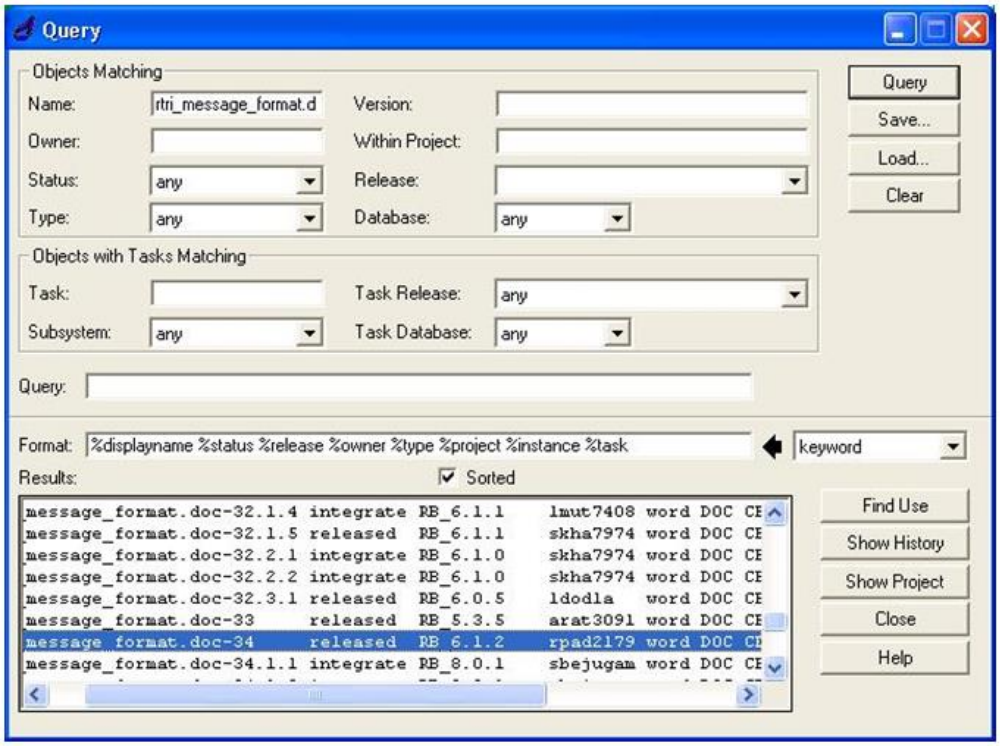
*To locate the latest version of **rtri_message_format.doc**:*

1. *Log into the PRD database (same username as for CB5, but change the path to **/ccm/prd**). Ensure you select the "Allow multiple sessions" checkbox if already connected to CB5.*
2. *Go to Actions > Query. In the **Name** field, enter "rtri_message_format.doc" (case-sensitive). In the **Format** line, add "%release" after "%status" – you have to see the release number to locate the correct version of the document:*



3. *Click on **Query** to return all versions of this document. Scroll through the list to locate the released status version for the RBM release you need (bearing in mind that each head release usually has two tags, x.x.1 and x.x.2 – you need the x.x.2 version if it exists; otherwise find the x.x.1 released version).*

   For example, suppose you needed the version that was released for RBM 6.1. Select v34 in the list since the 6.1.2 version should supersede the 6.1.1 versions:



It is very important that you find the right version for the current release, so if in doubt, check with Sumit. Also see the table in this section: Making Corrections in Older Formats

A couple of notes:*Once you've identified the correct version, click on **Show History**. From that view, double-click the object version you need and it will open in Word. Save it as a local copy.*

- *The correct version may have a whole number or a multiple number. In the screenshot above, the correct version for 6.1.2 is v34, but the correct number for MR 6.0.5 is v32.3.1. Don't make any assumptions based on whether the version is a whole number – go on the status of the file (released vs. integrate) and the release tag.*
- *Occasionally, I've seen file versions in the PRD db that lack a release tag. If you see this and think you need that version, confirm with the SME (it may not be Sumit who has checked out the file, but you can start with him).*

****** END OF OUTDATED TEXT ******

Issues with rtri_message_format.doc

There are some issues to bear in mind with working with the internal document, **rtri_message_format.doc**. Specifically, there have been doc PRs (raised by clients against our guide) that are NOT reflected in the internal document as of Nov 2013.

You cannot assume the internal document is correct and the guide is wrong. Based on detailed updates I made during 6.1 and 7.0 (and rolled back to the 5.3 and 6.0 guides), our guide is more likely to be correct. If you find a discrepancy, discuss it with your SME, don't just "correct" the guide! At some point, your SME should be updating the internal document to match the guide.

For example:

- In the internal document, the attribute event_dtm_secno is listed with a max length of 20. This is actually incorrect – the max length is 10 for the reason explained in our guide. (This was part of doc PR 56711.)

- At 6.1/7.0 Sumit and Caroline discussed a lot of max length issues. In particular, we changed all money/balance/usage fields to show a length of 18, not 10 or 16, representing the true max length that can be stored in the RBM schema. So discuss with your SME before you update details like max length based on the internal document.
- Sometimes the descriptive information does not appear to match between the internal document and the guide. E.g. for the bMPEexpand attribute, the internal document states "Whether or not this event should be expanded as a multiparty event. Set to FALSE when submitting unloaded events. Otherwise, set to TRUE." However, the guide states "This must be set to 0 (zero). Multi-party events are not supported with real-time rating (this includes Real-Time Convergent Charging (RTCC) deployments)." The statement in the guide is correct (Caroline confirmed with Sumit in summer 2013) and is more useful information than what is in the internal document.
- The internal document lists the type for many attributes as "Boolean". This is correct, but doesn't distinguish between integer Booleans (1, 0) and string Booleans (T, F). Our guide distinguishes by using "N (Bool)" for numeric Booleans (most of them) and "A (Bool)" for alphanumeric i.e. string Booleans (a small number of them). Please continue to use that convention for any new attributes added. You can tell the difference from the attribute name because numeric Boolean attributes typically start with "b" (e.g. bMPEexpand) whereas string Booleans end with _boo (e.g. modified_boo).

In addition to this, the internal document MAY contain highlighted rows in the tables, and/or tracked changes, that actually derive from a previous release!!! This can be very confusing as to what is genuinely new in the release. Please check with your SME if you see highlighted/tracked elements in the internal document that are ALREADY PRESENT in the guide. It probably means the internal document is highlighting changes that should have been accepted prior to the new release.

Other Potential Sources of Information

There may be information about RTRI message format changes in feature design documents, but these could be unreliable. Always use the internal **rtri_message_format.doc** in preference to any design doc.

However, there can be some useful information in the header file for the rating input plug-in interface (**RATEeventInterface.h**). This includes valid values for certain attributes in the subrecord formats, especially the response subrecord. However, the **RATEeventInterface.h** file is long (50+ pgs printed!) and difficult to work with if you are unfamiliar with it, so I would just check a single piece of information in this file (see below). *But NOTE – this information should also be available in the internal document! You may not need to consult the header file at all!*

Valid Values for the authorised Attribute

In the response subrecord format, the "authorised" attribute (UK spelling is correct!) supports different values at different releases. For example, at 53A, values from 10 to 29 are supported. At 61A, they added support for three new values, 30, 31 and 32, so the full range is 10 to 32.

To find out if there are new supported values, use **RATEeventInterface.h** (find it in the PRD db using the query method in Locating the Correct Version of rtri_message_format.doc). Within the header file, search on the string "EVIFauthReturnType_t" (you will get 2 hits, you want the first one). This enumeration lists the valid values that can be returned by the Active Rating Engine for an authorization request. This is the same data that goes back to the network in the "authorised" attribute for the real-time message, so this is what we should document in the message subrecord format. You can use the comments (text within /* … */) to write the description for any new valid values.

For example, in the 5.3.2 version of **RATEeventInterface.h**, the values are as follows and this is what the 53A format will support:

typedef enum {

EVIFnoSuchAuth_e = 10, /* The authorisation does not exist/timed out */

EVIFeventSourceMismatch_e = 11, /* Event source auth/event do not match */

EVIFinUseByPartialStream_e = 12, /* Trying to use against an auth in use by a partial stream */

EVIFcostExceedsAuth_e = 13, /* Event cost exceeds auth */

EVIFauthSuccess_e = 14, /* Event was authorised OK */

EVIFinvalidExternalAuth_e = 15, /* Null/invalid authorisation code supplied for external case */

EVIFduplicateAuth_e = 16, /* Duplicate external authorisation number supplied */

EVIFmodifyPreviousAuth_e = 17, /* Not used by RATE. Alter an existing authorisation request. */

EVIFauthSuccessReduced_e = 18, /* Event was authorised at a reduced level */

EVIFnotEnoughBalance_e = 19, /* Event was not authorised due to insufficient balance (PR29060) */

EVIFeapRefusedAuth_e = 20, /* Event Authorisation plugin (BAL plug point)denied Authorisation */

EVIFaccountUsageLock_e = 21, /* Account Usage is Locked */

EVIFservicePolicyDenied_e = 22, /* Account has a policy set that denies the service */

EVIFspendingLimitCrossed_e = 23, /* Event was not authorised as spending limit was crossed */

EVIFcreditCheckSuccess_e = 24, /* Credit check was successful */

EVIFdiscountDepleted_e = 25, /* If discount balance is exhausted */

EVIFaccountInTransferDeny_e = 26, /* If account is in transfer */

EVIFcentralUnitDeterminationFailed_e = 27, /* If CUD determination failed, introduced for A3043 */

EVIFpolicyCheckSuccess_e = 28, /* Policy Check was successful */

EVIFquotaChange_e = 29 /* This status would indicate the need of interim event to change the profile */

} EVIFauthReturnType_t;

In the 6.1.2 version of **RATEeventInterface.h**, the values are as follows, and this is what the 61A format will support:

typedef enum {

EVIFnoSuchAuth_e = 10, /* The authorisation does not exist/timed out */

EVIFeventSourceMismatch_e = 11, /* Event source auth/event do not match */

EVIFinUseByPartialStream_e = 12, /* Trying to use against an auth in use by a partial stream */

EVIFcostExceedsAuth_e = 13, /* Event cost exceeds auth */

EVIFauthSuccess_e = 14, /* Event was authorised OK */

EVIFinvalidExternalAuth_e = 15, /* Null/invalid authorisation code supplied for external case */

EVIFduplicateAuth_e = 16, /* Duplicate external authorisation number supplied */

EVIFmodifyPreviousAuth_e = 17, /* Not used by RATE. Alter an existing authorisation request. */

EVIFauthSuccessReduced_e = 18, /* Event was authorised at a reduced level */

EVIFnotEnoughBalance_e = 19, /* Event was not authorised due to insufficient balance (PR29060) */

EVIFeapRefusedAuth_e = 20, /* Event Authorisation plugin (BAL plug point)denied Authorisation */

EVIFaccountUsageLock_e = 21, /* Account Usage is Locked */

EVIFservicePolicyDenied_e = 22, /* Account has a policy set that denies the service */

EVIFspendingLimitCrossed_e = 23, /* Event was not authorised as spending limit was crossed */

EVIFcreditCheckSuccess_e = 24, /* Credit check was successful */

EVIFdiscountDepleted_e = 25, /* If discount balance is exhausted */

EVIFaccountInTransferDeny_e = 26, /* If account is in transfer */

EVIFcentralUnitDeterminationFailed_e = 27, /* If CUD determination failed, introduced for A3043 */

EVIFpolicyCheckSuccess_e = 28, /* Policy Check was successful */

EVIFquotaChange_e = 29, /* This status would indicate the need of interim event to change the profile */

EVIFdqcCudNotEnabled_e = 30, /* This status would indicate that cud is not enabled for DQC auth event*/

EVIFdqcAttrMissing_e = 31,

EVIFproactiveAuthRefused_e = 32 /* This status is introduced to refuse the proactive macro enabled auths */

} EVIFauthReturnType_t;

10.16.1.1.31.1.3. Updating the Real-Time Message Format Chapter

This chapter, along with Appendix A (the older formats) is the most complex in the guide to update if there are any major changes. However, the guide is in pretty good shape as of 6.1 and 7.0, so it should be relatively straightforward to update in future.

General points:

1. The **rtri_message_format.doc** should highlight the changes in a given release by making any new rows green in the big tables listing out all the attributes (or by otherwise indicating a change). Or the developer may have used tracked changes (or both). However, there can be issues with how this has been done (see Issues with rtri_message_format.doc).
   Note: From looking at the current available version of the 8.0 document in PRD (v34.1.2), it seems that the format version is changing from 61A to 80A but that there are no new fields (attributes) added at this version. This is a little unusual! Please check the implications with Sumit, and see below for how to copy the 61A format to the guide's appendix (Updating Older Real-Time Message Formats).
2. You should ALWAYS update the following locations in the chapter to list the current RBM release and the relevant real-time message format:
   - Chapter intro: " Mapping of Real-Time Message Formats to RBM Releases" table and info note below it
   - Message Header Format: " Message Header Format for <VERSION>" table, MsgTypeVersion row
3. You can assume that, if there are changes, they are LIKELY to occur in some or all of these sections of the chapter:
   - Supported Message Types
   - Message Header Format, including the example data and the Mandatory Values in Start-Up Messages subsection
   - Message Subrecord Format > Request Message Subrecord Format
   - Message Subrecord Format > Response Message Subrecord Format
   - Discount Data in Response Messages > Examples (only if there are certain changes to the response subrecord format, see below)
   - Error Messages

4. You can assume that the following sections of the chapter are UNLIKELY to change, though confirm with Sumit:
    - Format of Exchanged Messages
    - Calculation of the LRC Check-Byte
    - Message Subrecord Format > Mandatory Values in Message Subrecords
    - Additions to the Message
5. If the format version has changed at all (even just the format number), you MUST copy the entire existing format to Appendix A first, before updating the main chapter. That way, the appendix has the correct details for the existing format, which becomes a "previous" format.. See Updating Appendix A in the Guide for what to do after pasting in the previous format (such as demoting heading levels).
6. Do use the Frame10 "tracked changes" feature for updating this guide. You really need to leave an audit trail of updates (e.g. so your updates can be seen in future if there are issues with the guide) and make it easy for Sumit and/or other SMEs to review the changes.

Details are given in the following sections.

Updating the Chapter Intro/Release Information

After you have copied the entire existing format into Appendix A and are ready to start updates in the main chapter, do the following:

1. Add the new RBM release to the table called "Mapping of Real-Time Message Formats to RBM Releases". List the new version that is supported, and two previous versions.
2. Replace all examples of the previous format version with the new one (e.g. change 61A to 80A). This includes in headers, table titles, text, and sample data.
3. Replace all mentions of the old RBM release with the new one (e.g. change Rating and Billing Manager 7.0 to Rating and Billing Manager 8.0), except in the mapping table mentioned in Step 1, where you want to list all RBM releases, back to RBM 4.0 and earlier. Search on just the release number since it may appear within different text strings.

Updating the Supported Message Types

If there are new supported message types at this release:

1. Update the "Supported Message Types for <VERSION>" table.
2. Update the information note underneath the table. For example, if the new message type is a "request" type of message, add it to that statement. If the new message type is in its own category (like types 25 and 26), add a new statement summarizing it and cross-reference any new section you're adding.

Updating the Message Header Format, including Example Data

Update this section as follows (mandatory updates):

1. Ensure that in the "Message Header Format for <VERSION>" table, the MsgTypeVersion description is updated for both the new RBM release number and the new real-time message format version. Remember they may or may not match (e.g. at RBM 6.1, it was 61A; at RBM 7.0, it was also 61A).
2. In the Example section below the table, update the data as follows:
   0000000000000000000010000000003xxxxxxGENEVATEL10727201318082908 9+12300103 61A990001
    - Update the text in green to the current year (e.g. 2014). This is a date/time stamp and it's helpful to roll it forward each release.
    - Update the text in yellow to the new format version (e.g. 80A).
    - Do not make any other updates. Do NOT remove the "blank" spaces before GENEVATEL1. This padding (done with whited out X's) was specifically requested

by a client to ensure the sample data matches the way real data must be padded in the message headers!

3. Update the text below the example data to use the new date in the phrase "… generated by the network element GENEVATEL1 on July 27, <YYYY>."
4. Update the "Mandatory Values in Start-Up Messages" subsection as follows:

- In the first bulleted list, update the MsgTypeVersion example values to use the new version and the previous version only. For example, if the new version is 80A, then change the highlighted text below to "80A or 61A" (drop the oldest version).
  MsgTypeVersion = <value representing the current release supported by mediation, for example, 61A or 53A>

- In the second bullet list, update the MsgTypeVersion to use the new version. For example, change **MsgTypeVersion** = 61A to **MsgTypeVersion** = 80A

IF there are any other changes to the message header, such as a totally new attribute, then update the "Message Header Format for <VERSION>" table to include the relevant details, and update the introductory text to give the new number of attributes (currently it is 10). Note that such an update is pretty unlikely, but it could happen.

Updating the Subrecord Format – Requests

The **Request Message Subrecord Format** section, along with the response subrecord section, is where the real-time message format changes over time. Using the **rtri_message_format.doc** as your guide to new attributes, and assuming there is a new format version, do the following:

1. Update the "Request Message Subrecord Format for ..." table title to the new format version.
2. Add new rows to the table for any new attributes, in the exact order they appear in the internal document. Make sure you copy the attribute name exactly as it appears in the internal document (e.g. there should be NO spaces; let long attribute names wrap within the column in the Frame table without adding any soft returns).
3. Use the descriptive info in the internal document as a starting point, but write a description for the guide that adheres to our standards/terminology rules, etc. Include any details that may be helpful, such as notes about constraints (e.g. only mandatory in certain case), mentions of gparams, or elements from the rating input plug-in interface (e.g. EVIFeventType_e), plus valid values for the attribute.
4. Copy the Mandatory and Max Length info from the internal document, but if you have any doubts about whether the internal document is correct, check with Sumit. E.g. if you know where the data comes from in the schema and the max length for that schema column doesn't match, check with Sumit what is really correct for this attribute.
5. Once you've added the new attribute(s) to the request subrecord table, add the same attributes (in the correct order) to the response subrecord table in that section. The description should use the existing boilerplate text ("Derived from request message"). Note we don't include the mandatory/optional information in the response. The attribute name and max length will be identical to what appears in the request subrecord.
6. Now make any updates to existing attributes, such as a new valid value, any change to constraints or system behavior for this attribute, etc. Such changes *should* be highlighted in the internal document (if you see they are already present in the guide, then they are not new and the internal doc is not having its changes accurately tracked for this version).

Updating the Subrecord Format – Responses

The **Response Message Subrecord Format** section, along with the request subrecord section, is where the real-time message format changes over time. Using the **rtri_message_format.doc** as your guide to new attributes, and assuming there is a new format version, do the following:

1. Update the "Response Message Subrecord Format for ..." table title to the new format version.
2. Add new rows to the table for any new attributes, in the exact order they appear in the internal document. The same rules apply as for updates to the request message: copy attribute names exactly, allow them to wrap, take the max length from that document but confirm with SME if you think it could be wrong in the internal document, etc.
3. Again, for the description, it's helpful to include all additional details about system behavior, valid values, constraints, etc.
4. Make sure you did add new "request" attributes at the top of the response subrecord table, in the correct location.
5. Make sure any changes to existing attributes are covered (e.g. new valid values).
6. If any new attributes are added AFTER the **eventDiscountId** attribute and BEFORE the **iNumMessages** attribute, then you must update the discount data section. See Updating the Discount Data, including Example Data.
7. If any new attributes are added AFTER the **bAIaccountBalanceError** attribute and BEFORE or AFTER the **dPendingPaymentsMny** attribute (currently, the last attribute in the format), then you may need to update two things:
    a. The details within the following attribute descriptions for the starting/ending attributes for that chunk of AI (account inquiry) data, for example, if new attributes were added at the end of these "chunks" of data:
        - iNumAIevents
        - iNumAIdiscounts
        - iNumAIrecharges
        - iNumAIlifecycles
        - iNumAccInqPendingPayments

        For starting/ending attributes in the descriptions in these rows, look for the wording "where each record starts with ….".
    b. The information about AI repeating data in the "Account Inquiry Data in Response Messages" section. Again, you might need to adjust the starting/ending attributes, or it's possible that for AI data that currently cannot repeat more than once (see the section called "Other Repeating Data"), they are lifting this constraint. If this occurs, you need to remove that AI data item from "Other Repeating Data" and add a new subsection above it, similar to the existing ones (like "Repeating Chargeable Event Data") and cover this specific type of AI data that can now repeat multiple times.

For all of the above work in Steps 6 and 7, please consult with Sumit. Also read the existing information in the guide about repeating data to try to understand this area of the format. The internal document helpfully marks off these "chunks" of repeating data for discounts, discount deltas, and AI data, using sidebars.

Updating the Discount Data, including Example Data

If any attributes are added or removed between in the discount data part of the response subrecord, and/or the discount deltas part of the response subrecord, you must update the example discount data in this section:

- The discount data attributes are numberOfDiscounts through usagediscounted inclusive (thus, this chunk of data includes the discount deltas information)
- The discount delta attributes are numberofdiscdeltas through usagediscounted inclusive.

To update the sample data, work with Sumit to add appropriate data in the appropriate location for the new attributes (or to remove data, though that is unlikely to happen). The way to do this

is to count the fields, starting from the first bit of real data after the angle brackets. For example, suppose the existing example data is this:

<response subrecord up to cautiousRating field>,1,9999,946707780,

50,949386180,50,1,0,0.000000,0.110000,0.000000,0.110000,0.000000,

0.110000,0.000000,0.110000,<subsequent fields in message>

The first data field here ("1") is the numberOfDiscounts attribute. And suppose you know that a new attribute (newAttrSample) was added after the existing attribute usageEndDtmTicks, which is the 4th attribute after numberOfDiscounts. In that case, the new data for newAttrSample would be inserted in the string where highlighted (make sure you add another comma separator after it, with no spaces):

<response subrecord up to cautiousRating field>,1,9999,946707780,

50,949386180,50,xxx,1,0,0.000000,0.110000,0.000000,0.110000,0.000000,

0.110000,0.000000,0.110000,<subsequent fields in message>

Then fix the line wrapping to avoid splitting any data item across a line and to avoid large "gaps" in the data lines – put a soft return after the comma separator to force the line to wrap where it will "fill up" the line best.

Updating Error Messages

The error messages may change as new functionality is added to RBM. It is easiest to check with Sumit.

For example, at version 61A, error message 22 (Origin address not found) was added, related to Quota Cache Manager functionality.

One-Off Changes for 8.0

As we discussed in the training meeting, it might be good to add the format version (e.g. 61A, 80A) to any subsection titles that are missing this detail. Please take care of this during the 8.0 release. The format should appear in brackets at the end of the title line, e.g. "*xxx title* (80A)". Then for any tables that in the subsection, append "for <format>" to the end of the title, e.g. "*xxx table title* for 80A".

Also do this for the formats in the appendix.

10.16.1.2 1.2. Updating Older Real-Time Message Formats

The real-time message format is supported in older versions (that is, the operator can send in message for rating using older formats, even though the Active Rating Engine always replies using the current format). Because of this, we maintain the older formats in an appendix in the Message Interfaces guide.

The most regular update you will need to make is to move the previous "current" format to the appendix and adapt it to the appendix heading structure. For example, when format 61A is superseded (e.g. by version 80A), then you need to move 61A to the appendix.

If there is no change to the latest format (for example, 61A was still used with RBM 7.0), you should not move any content from the main chapter to the appendix.

Starting with RBM 6.1, we are no longer supporting all the old message formats. Instead, only 2 previous formats are supported. For example, RBM 6.1 and RBM 7.0 both use the 61A format. At both these releases, operators can still send in messages in the 53A format or the 44A format. But they cannot send in messages in the 41A format. Thus, the 6.1 and 7.0 guides should no longer document the 41A format.

Thus, as soon as a new format is introduced, you need to delete the OLDEST format from the appendix. For example, when format 80A is introduced, then the appendix should cover 61A and 53A. Format 44A should be removed.

Apart from that, you should not need to make updates to the details of the older formats. However, there can be times when you do need to "rol back" fixes, e.g. from doc PRs. If there are changes to attributes in the current format and the same error exists in the older format, you need to fix all instances of the error. See Making Corrections in Older Formats.

10.16.1.2.11.2.1. Sources of Information

There are two "sources" of information. Mainly, the fact that a new format has been introduced should trigger you to update the appendix!
Additionally, the source of information may be a doc PR against either the existing format or older formats, or both.

10.16.1.2.21.2.2. Updating Appendix A in the Guide

Moving the Previous Format to the Appendix

NOTE: always confirm with Sachin Rathee about dropping the oldest format. He's the SME who indicated during 6.1/7.0 guide work that only to support 2 older versions will be supported, starting with RBM 6.1.

When there is a change to the latest format (for example, 61A is superseded), you need to do the following:

1. Copy the previous format (in this example, 61A) from the main chapter to the appendix and place it at the top of the appendix, before the existing content. Demote all headings by one level (H1 becomes H2, H2 becomes H3, etc.). The only headings you should leave intact are the Examples (i.e. in **Example** paragraph style). Ensure all cross-references are still correct. You may have to rebuild them.
   Copy all sections from the main chapter, starting with "Supported Message Types" and ending with "Error Messages". Do NOT copy the chapter introduction (the mapping table and surrounding text).
2. Remove the oldest format from the appendix. (In this example, when 61A becomes an older format, you would remove the 44A format.)
3. Update the chapter introduction to add a cross-reference to the new section and drop the cross-reference to the oldest format, which you have removed. The xref style is "Hdg".

Making Corrections in Older Formats

If any of your work in the main chapter on the real-time message format involves correcting EXISTING attributes, you must roll back these changes to the same attributes in the older formats. Additionally, since the response message includes all the attributes from the request message, if an attribute is missing in one table (request) it must also be added to the corresponding response table! This is tricky and painful work, so find a way to be meticulous and keep track of what you're doing!!

Such corrections may arise from doc PRs or because you find errors in the main chapter (for example, based on SME input).

In addition, when rolling back changes, you have to be careful because the same attribute MAY NOT require identical information at different format versions. For example, the max length details should be the same but the descriptive information may differ.

Here are some examples of corrections I had to roll back, illustrating the care you need to take:

Example 1 – missing attribute (doc PR).

PR56711 raised the fact that the bReturnDiscounts attribute was missing in the guide. This needed to be added, but the issue you need to check is: how far back does this attribute go? As it turned out, it needed to be added in several versions – don't assume you can make a fix like this only in the current format!

You can find out when an attribute was introduced by looking up all the "released" versions of **rtri_message_format.doc** and checking when this attribute makes its appearance. In this case, bReturnDiscounts was added at 44A, thus it needed to be rolled back to the 53A and 44A formats, but not earlier.

For future reference, here are the correct Synergy versions of **rtri_message_format** to use for the various format versions (at head releases only):

Real-Time Message Format	**rtri_message_format.doc Version in PRD**
61A (at 7.0.2)	Version 35 (integrate status – includes new RPMU message type, otherwise the same)
61A (at 6.1.2)	Version 34 (released)
53A	Version 32 (released)
44A	Version 24 (released)
41A (applies to RBM 4.1 and 4.3)	Version 14 (released)
002, 001 and 3.0	Version 3 (released)

Please update this table for RBM 8.0 and later.

Example 2 – new valid values for an existing attribute:

The attribute called "authorized" has been present in the real-time message format since the beginning (version 3.0) but the valid values change over time as new functionality is added. When rolling back fixes from the 6.1 guide, I found that the information needed to be corrected in older formats. For example, the 53A format (which goes up to value 29) was missing valid value 12. The 44A format (which goes up to value 24) was missing values 12 and 24.

Again, to correct errors like this, rely on the "released" versions of the rtri_message_format document, per the table above.

Example 3 – different constraints on the same attribute at different versions:

The cautiousRating attribute (a Boolean field) originally had some constraints on when it could be used, described like this in the guide:
Note: Cautious rating can only be used with initiation authorizations. It does not apply to continuation authorizations.

However, this constraint was removed at version 44A. From that version onwards, the note has changed to read:
Note: Cautious rating is enabled (supported) for all authorization types except cancel authorization, credit check authorization, and credit check increase authorization.

This change can be found by checking the **rtri_message_format.doc** at the different versions listed in the table above.
The rule of thumb is – don't assume anything! Check the internal document! Even with the faults it has, it is a good source of information about the changes to the real-time message format over time.

10.16.1.3 1.3. Updating the Native Diameter Interface

10.16.1.3.11.3.1. Introduction

The Native Diameter interface was introduced in RBM 6.1. It allows the operator to communicate directly between the network (using the Diameter protocol) and RBM, without needing the Active Mediation component to handle the transactions. You can find conceptual information on it in the *RTCC Concepts* guide. The interface itself is documented in *Message Interfaces*.

10.16.1.3.21.3.2. Sources of Information

At this point (Nov 2013), we have not had to update the interface since it was introduced. The best source of information is the SME Sachin Rathee (based in Cincinnati). Check with him to find out if there are updates in a given release and where to pick up details.

Within the documentation team, Julie Busken has the best knowledge of this interface since she did the work at 6.1.

10.16.1.3.31.3.3. Updating the Native Diameter Interface Details

In general, my guess is that Native Diameter interface updates will be driven by core features (this may occur with RBM 8.0). If this is the case, then the feature author is responsible for updating this chapter. As the Message Interfaces RLA updates author, your role is to ensure that any interface updates are not missed. Cross-check with the feature author to be sure they are doing the updates coming from the feature. Check with Sachin Rathee for any other updates that may be needed.

Please update this section with any useful information once the first updates to the Native Diameter interface occur.

10.16.1.4 1.4. Updating Outbound Message Formats

10.16.1.4.11.4.1. Introduction

Outbound message formats define the specific data that is sent out in outbound messages sent from RBM to external systems. Each format corresponds to a "message type/message subtype" combination, plus its associated message type attributes.

The outbound message formats we supply with RBM are controlled by static data in these tables:

- MESSAGETYPE (parent table) – controls the message type ID and message subtype ID, plus the message type name and description
- MESSATYPETYPEATTRIBUTE (child table) – controls the specific attributes for each message type ID/message subtype ID combination, i.e. for each "message format"

Documentation of outbound message formats is in the *Message Interfaces* guide. Related conceptual information is in *Other Rating and Billing Concepts*, Outbound Messages chapter. For the message interfaces sharing session from fall 2013, see Sharepoint: **Team > Sharing Sessions (Caroline, Q4 2013) > Outbound Message Formats Q4 2013.ppt**.

Starting from RBM 8.0, updating the Outbound Message Formats chapter in Message Interfaces is being handled as an RLA task (Release Level Activity). Thus, the work is assigned to a single writer, rather than multiple feature authors. Use the sections below to make the updates each release.

10.16.1.4.21.4.2. Sources of Information

Since outbound message (OM) formats are controlled by static data, the schema updates for the given release schema are the main source of information.

Note that for head releases, you need to check two schema versions, the RBx.xA and RBx.xB schemas. The schema changes for a release are typically done mainly in the RBx.xA schema, but late/final changes can occur in the RBx.xB schema.

Depending on when in the release cycle you are doing the Message Interface RLA work, there are two methods for determiningOMformat changes. In reality, you probably need to use both of them:

1. Use the SCR Log to find out the planned schema changes. You have to use this method if the internal schemas are not available yet. You should also use it even when the internal schemas are up so that you don't miss any changes (e.g. to existing formats).
2. Use the internal schemas to look up the implemented schema changes. Use this method if the internal schemas are available – this is the quicker method, but still use the SCR log to double-check you're not missing any updates.

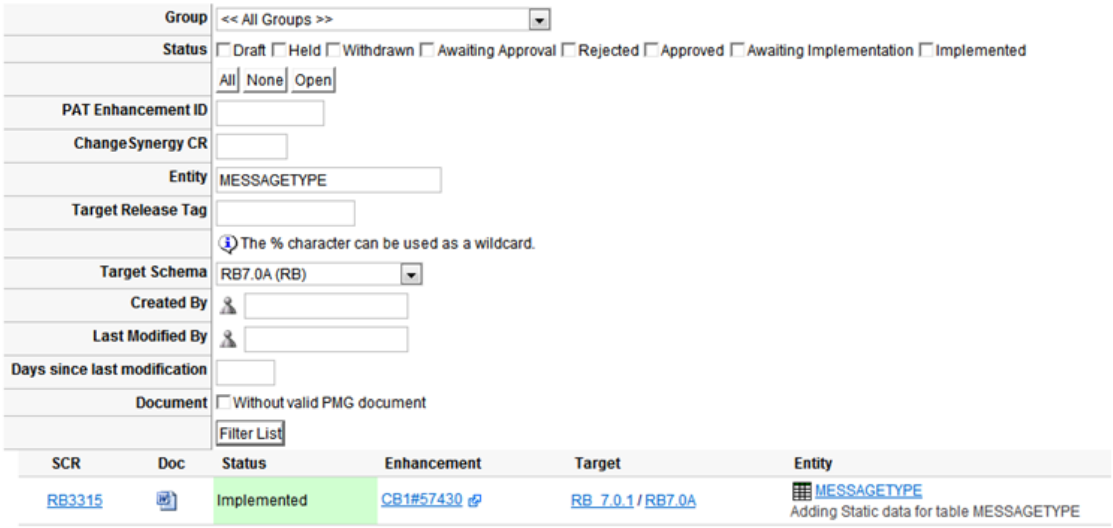
Part 1: SCR Log

Use the **SCR Log** (Schema Change Request Log) to locate all planned updates to the MESSAGETYPE and MESSAGETTYPE tables:

1. Open the SCR Log search page: http://infdevca.netcracker.com/scr/scr?action=search

2. In the **Entity** field, enter MESSAGETYPE.
3. In the **Target Schema** drop-down, select the relevant **RBx.xA** schema for the current head release.
4. Click **Filter List**. This returns a list of all SCRs for this table for this release. It's helpful to take a screenshot of this list and keep it or print it if there are a lot of changes.
5. Download the individual SCRs by following the links in the "SCR" column (1st column). Always look for the latest version of each SCR (e.g. if you see v1, v2 and v3, download v3.)
6. Repeat Steps 2-5 for the **RBx.xB** schema.
7. Repeat Steps 2-6 for the MESSAGETYPEATTRIBUTE table for both RBx.xA and RBx.xB schemas.

Example 1A – MESSAGETYPE SCRs for RB7.0A schema:



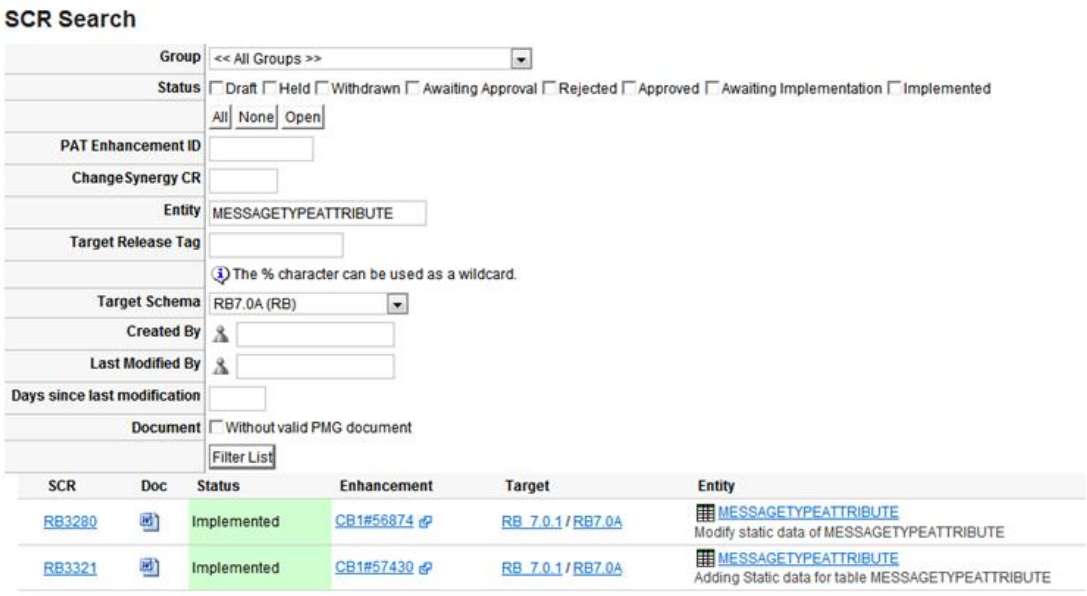
This example has a single SCR (RB3315) coming from enhancement 57430.
Note: if you click on the enhancement number, you get the complete list of SCRs for that enhancement.

If you want to find out the "core feature" enhancement number, use a different page, the internal PR search page:

http://intranetca.netcracker.com/prd/cpt/

In this example, 57430 is the core feature A3494- Smart-Phone Phase 2 - Real Time Periodic Charging.
The change itself is to add three new message type/subtype combinations (8/1, 8/2 and 8/3). These represent three new outbound message formats.

Example 1B – MESSAGETYPEATTRIBUTE SCRs for RB7.0A schema:



This example has two different sets of changes:

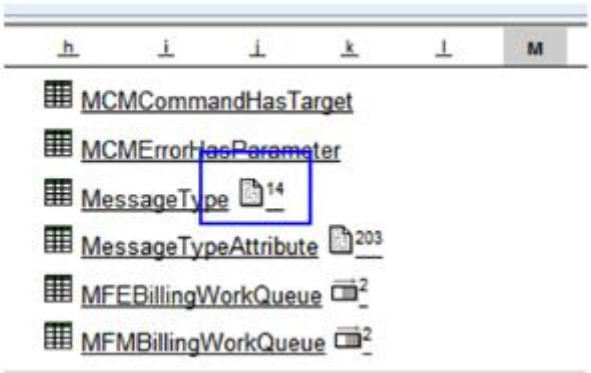
- Enhancement 57430: the attributes for the new message types/subtypes 8/1, 8/2, and 8/3.
- Enhancement 56874 (aka core feature A3411 - Hourly Bucket Management): new and modified attributes for three existing message types/subtypes (1/2, 1/3 and 1/4)

These changes would then be documented in the guide as described in Updating the Guide.

Step 2: Internal Schema

Use the internal interactive schemas to locate all implemented updates to the MESSAGETYPE and MESSAGETTYPE tables:

1. Open the schema page and navigate to the RBx.xA schema you need: http://infdevca.netcracker.com/rb/schema/
2. Within the schema, follow the Tables link and select the MESSAGETYPE table. Click on the static data link next to the table name (the superscript number represents the number of static data rows in this table). For example, the 7.0B schema has 14 rows of static data in this table:



3. Compare the static data with the information you find in the current chapter of the guide (e.g. the first table in the chapter, listing all formats). Make a note of any message type/subtype combinations that are NOT currently documented, including their name/description. These will be newOMformats to add to the guide.
4. Then follow the static data link for the MESSAGETYPEATTRIBUTE table, using the message type ID/subtype ID to locate the relevant rows.

5. For any existingOMformats that you know have changed (based on the SCR log), you should also look up the static data in the MESSAGETYPEATTRIBUTE table. Make a note of the new attributes.
6. Repeat Steps 1 to 5 for the RBx.xB schema, noting all changes you need to document compared to the guide and/or based on the SCR log details.

Once you have this information, you're ready to update the guide.

10.16.1.4.31.4.3. Updating theOMFormats Chapter

There may be two types of updates you need to make:

1. Adding newOMformats to the chapter.
2. Modifying existingOMformats (e.g. new attributes have been added).

Adding NewOMFormats

To add a new format:

1. Update the chapter introduction by adding the new format(s) to the bulleted list with the intro line " Outbound message formats are defined for the following message types:" – use the textual version of the format name, which should match the schema's static data (MESSAGETYPE.MESSAGE_TYPE_NAME). Add the new bullet in the relevant order (matching the table in Step 2).
2. Update the first table in the chapter to list the new format by message type ID, subtype ID, name and description. Use the static data, correcting any obvious grammatical errors.
3. In the relevant location in the chapter (which is ordered in the same way as the first table), add a new H2 section for the newOMformat. The title is the format name.
4. Add high-level descriptive information about thisOMformat (why it's used, which library implements the message, etc – talk to the SME if you need details). Then add the standard table as in existing sections. Document the format by using the MESSAGETTYPEATTRIBUTE static data. For the message type ID and subtype ID, cross-reference to the table at the top of the chapter (as of 7.0, it's Table 23).
   For the attribute description, work out what you can from the static data, but in general, this is the area where you need SME input. The more helpful information you can provide, the better (for example, is there a gparam that affects this data? Can you state exactly where in the schema this information comes from? Are there only certain valid values for this attribute?)
   Note: you must document 36 attributes for allOMformats. In many cases, not all attributes are used. You will often find "blank slots" partway through the format (the static data will skip attribute numbers). You will also typically find that the final "slots" are empty. Do not skip these attributes in the table. Instead, list all the attribute number and state "Not used" in the description. The operator needs to know the unused attributes since the message string will have a null value here.
   You can group unused attributes if they are consecutive; otherwise, use a single row of the table per unused attribute. For example, say attribute 12 is not used. Add a row for attribute_12 and state "Not used" (the data type will be Null). Now suppose attributes 30 through 36 are not used. Add a row for attribute_[30 through 36] and state "Not used".
5. To determine the original data type, look for any existing attributes that are used in other formats, e.g. customer reference, account number, etc. and assume the data type is the same in the new format. For other attributes that are unique to the new format, you need to determine the original data type. You can find this out from the SME or you can look it up in the schema – see Determining the Original Data Type.

Updating ExistingOMFormats

You need to update existingOMformats if any attributes are modified. Typically, new attributes will be added to existingOMformats so that extra data can be sent out on existing message types. (Remember that 36 slots are available and many are not used, so theOMformats have room to expand.)

To update an existing format:

1. Determine the new attributes using the SCR Log and/or internal schema pages.
2. Add the relevant rows to the existing table for the new attributes. Work with the SME for descriptive information. Adjust the remaining number of "blank slots" in the format. For example, suppose that before this release, theOMformat used up to attribute 24, and slots 25-36 were blank. This release adds attributes 25 through 29. You add rows for 25 through 29 and adjust the final row of the table to indicate that attributes 30 through 36 are not used.

For the original data type information, see the next section.

As a general check for all existingOMformats:

1. For each message type ID/subtype ID in the guide, note the number of attributes we currently document (for example, 10 of 36 slots are used for a givenOMformat).
2. Compare this to the static data in the relevant schema. If the numbers match, then the guide is up to date. If they don't, investigate and update the guide to match the static data.

Determining the Original Data Type

All data in OMs is converted to varchar(2), a string format. However, we document the original type so the operator can reconvert the string if they need to.

From 8.0 onwards (and in the 6.1.5 schemas onwards), you can determine the original data type using the internal schema like this:

1. Open the internal schema and navigate to the MESSAGETYPEATTRIBUTE table's static data.
2. Find the attribute you need for the given message type ID/subtype ID.
3. Note the ACTION_PARAM_ID value for this attribute (e.g. -2, -5, etc).
4. Go to the ACTIONPARAMDATA table. For the given ACTION_PARAM_ID value from Step 3, note down the ACTION_PARAM_TYPE value.
5. Still in the ACTIONPARAMDATA table, look up the ACTION_PARAM_TYPE domain values. As of Nov 2013 in the 6.1E schema, these values are:

   1 = Currency - a value from CURRENCY.currency_code.

   2 = Date - a date in YYYYMMDD format.

   3 = Datetime - a date and time in YYYYMMDD HH24MISSTT format.

   4 = Integer - any positive or negative value.

   5 = Money - based on current locale(or any double value).

   6 = String - size is specified in action_param_size.

   We currently document the following data types in the guide (possibly this should change in future, in which case all existingOMformats need to be checked and updated):

   - String
   - Integer
   - Date
   - Boolean
6. Document the relevant action param type as the original data type for the message type attribute. Since there isn't a 1:1 match between the static data and what we document, do the following:
   - For "Datetime" attributes, document "Date" and include the specific format in the description (for example, YYYYMMDDHHMMSS).
   - For "Money" attributes, document "Integer".

As of the time of writing, I haven't found any existingOMattributes that use currency. If this occurs in future, discuss with SME (but the type will probably be String).
If you get information from the SME that the attribute is a Boolean (T or F), then document "Boolean" (rather than String).

Note: You can't use this method in the 7.0 schema since the action param ID was not added to the MESSAGETYPEATTRIBUTE table in that release.

Example:

Let's say the new attribute you need to find the data type for belongs to message type ID 1, subtype 2. The attribute is attribute 25, "Total pro-rated discountable usage".

The ACTION_PARAM_ID value for this attribute is -122.

Using the ACTIONPARAMDATA table, ID -122 has an ACTION_PARAM_TYPE of 5. This value represents "Money". Thus, you document the original data type as "Integer" for attribute 25, " Total pro-rated discountable usage" for message type ID 1, subtype 2.

10.16.1.5 1.5. Updating Other Chapters

In general, the other chapters should not change – this includes the costed event queue and rejected event queue chapters, plus the OM queue chapter. However, if you find anything does change in these chapters, please add some instructions here – e.g. sources of information, SME names, the nature of the updates, etc.

10.16.1.6 1.6. Document History

Version	Author	Date	Notes
0.1	Caroline Harvey	Nov 2013	Initial version, drafted after RBM 7.0 release, for use with RBM 8.0 release and onwards.
0.2	Julie Busken	May 2015	Made minor updates - identified text about CM Synergy text and updated old links

10.17 Online Help Development Processes

- 1. Purpose
  - 1.1. What and Why
  - 1.2. What Do I Need Before I Start
- 2. General Information on Online Helps
  - 2.1. Reference Files for RoboHelp Processes
  - 2.2. Overview of Online Help Processes
  - 2.3. The RoboHelp Source Files
    - 2.3.1. Customer Account Maintenance and Accounts Receivable
    - 2.3.2. Style Sheet and RoboHelp 9
  - 2.4. Online Help File Produced
- 3. Sources of Material for Online Helps
  - 3.1. Documentation Sources
  - 3.2. View the UIs
  - 3.3. Best Practices

10.17.1 1. Purpose

This section provides an overview of the requirement for the process.

10.17.1.1 1.1. What and Why

RoboHelp is used to create the following online help files:

Rating and Billing Manager (RBM)

- Accounts Receivable Help
- Batch Payment Entry Help
- Billing Catalog Maintenance Help
- Configuration Data Transfer Help
- Customer Account Maintenance Help
- Product and Pricing Edits Transfer Help
- Product Configuration Help
- Rating and Billing Configuration Help
- Rating Catalog Maintenance Help
- Rejected Event Maintenance Help
- Reports Help
- System Monitor Help

Smart Suite

- CAAF Help
- System Configuration Help

TAP3

- Configuration Help
- Editor Help
- Management Help

10.17.1.2 1.2. What Do I Need Before I Start

You need to do the following:

- Locate the projects in SVN:
    - RBM: https://svnca.netcracker.com/RBMDOC/branches/RB/ (release folder > online_help_rbm)
    - CAAF and System Configuration: https://svnca.netcracker.com/RBMDOC/branches/RB/ (release folder > online_help_other)
    - TAP3: https://svnca.netcracker.com/RBMDOC/branches/TAP3/ (release folder > online_help)
- RoboHelp 9 (or later) installed on your PC

10.17.2 2. General Information on Online Helps

10.17.2.1 2.1. Reference Files for RoboHelp Processes

You should review the following website before writing online helps:

https://bass.netcracker.com/display/SG/NetCracker+Style+Guide

10.17.2.2 2.2. Overview of Online Help Processes

The following is an overview of the processes involved in producing online help files:

1. Check out the latest versions of the RoboHelp source files from SVN.
2. Make changes for a release based on source materials (see “Sources of Material for Online Helps” for details).
3. Once all materials incorporated, send out the files for technical and editor check.
4. Generate the end product:

- For every release, generate the online help CHM files and incorporate these into the build for the software (someone will need to submit a HOT request to get the RBM and TAP3 files with the software.
- For a documentation release, generate the WebHelp files.

Each product needs to go through the standard checks.

The details of these processes are discussed in the guides described in the “Reference Files for RoboHelp Processes” section.

10.17.2.3 2.3. The RoboHelp Source Files

The RBM, CAAF/System Configuration, and TAP3 RoboHelp files are in the following locations in SVN:

RBM: https://svnca.netcracker.com/RBMDOC/branches/RB/ (release folder > online_help_rbm)

- batch_entry (Batch Payment Entry)
- billing_cat_maint (Billing Catalog Maintenance)
- configuration_data_transfer (Configuration Data Transfer)
- cam_acr_composite (Customer Account Maintenance and Accounts Receivable)
- products_and_pricing_edit_transfer (Product and Pricing Edits Transfer)
- product_config (Product Configuration)
- r_and_b_configuration (Rating and Billing Configuration)
- rating_cat_maint (Rating Catalog Maintenance)
- reject_event_maintenance (Rejected Event Maintenance)
- reports (Reports)
- system_monitor (System Monitor)

CAAF and System Configuration: https://svnca.netcracker.com/RBMDOC/branches/RB/ (release folder > online_help_other)

- convergys_authentication_and_authorization_framework_help (CAAF)
- pf_system_configuration_help (System Configuration)

TAP3: https://svnca.netcracker.com/RBMDOC/TAP3 (release folder > online_help)

- tap3_configuration (Configuration)
- tap3_editor (Editor)
- tap3_management (Management)

Within each of these directories are three directories:

- html_help (contains the CHM file)
- source (contains a zip file of the project)

- webhelp (contains the WebHelp file)

10.17.2.3.12.3.1. Customer Account Maintenance and Accounts Receivable

Customer Account Maintenance and Accounts Receivable have close associations in Development as screens are reused within the UIs. Work on files should be carried out in the following directories:

- cam_acr_composite\source\cam_acr_composite\Accounts_Receivable_OLH\arcont (Accounts Receivable only changes)
- cam_acr_composite\source\cam_acr_composite\Customer_Account_Maintenance_OLH\contain (Customer Account Maintenance only changes)
- cam_acr_composite\source\cam_acr_composite\Common_CAM_ACR_Controls\common (files common to both Customer Account Maintenance and Accounts Receivable)

When the work for the common files is complete, the files need to be copied into both of the following directories (i.e. before generating CHM or WebHelp files):

- cam_acr_composite\source\cam_acr_composite\Accounts_Receivable_OLH\common
- cam_acr_composite\source\cam_acr_composite\Customer_Account_Maintenance_OLH\common

10.17.2.3.22.3.2. Style Sheet and RoboHelp 9

The cascading style sheet, **infinys41_h.css**, was updated in December 2011. With the upgrade of RoboHelp from version X5 to 9 and with the support of IE8, there were a number of style issues that needed to be fixed.

All of the Help files use the same styles; however, the name of the css file may differ:

- The RBM help files are associated with the **infinys41_h.css** file.
- The TAP3 and Smart Suite files are associated with the **infinys_h.css** file; however, this file contains the same styles as **infinys41_h.css**.

Also note that you may need to use the **HTML** view in RoboHelp to adjust the styles. The bullet, list, and list-continue styles in RoboHelp 9 do not always display properly in the **Design** tab, and this must be fixed since this is how the topic will look. Use the eyeglasses icon in RoboHelp to see what the text will look like after it is generated.

As a workaround, you may be able to copy instructions from other topics (that contain the styles that you need), paste it in a new topic, and then modify the text. Otherwise, you will need to have basic HTML knowledge and update the code in the **HTLM** view to make the text to appear properly.

10.17.2.4 2.4. Online Help File Produced

There are two types of online help documents produced:

- CHM files: These are produced for inclusion with the RBM software at each development release.
- WebHelp files: These are produced for inclusion on the Product Documentation website at each documentation release.

These files are produced from the same RoboHelp source files.

10.17.3 3. Sources of Material for Online Helps

There are a number of sources for what material needs to go into online helps.

10.17.3.1 3.1. Documentation Sources

Documentation architecture work provides the primary source for the content changes required within a documentation release. All of the following sources need to be incorporated into the online helps (however, not all are required for all releases):

- Documentation enhancement HLDs and DLDs: At every development release you need to incorporate the changes from the documentation HLD and/or DLD (not the Global Changes though).
  You will need to know the enhancement number under which the documentation changes in a release are made.
  The content of the New Feature and Release Changes can also be a good source of information about UI changes e.g. for restrictions within fields.

- ACPD changes spreadsheet: The ACPD changes are currently only analyzed at each documentation release. Architects provide ACPD documentation changes in a spreadsheet with the same format as the documentation DLD. This document is saved in the relevant documentation release directory on SharePoint. For example:
  https://sps3.netcracker.com/sites/proddoc/RB%20Releases/RBM%208.0/RBM_8.0_CRs-ACPDs.xls

- Documentation PR changes: The documentation PR changes are currently only analyzed at each documentation release. Architects provide a list of documentation PR in a spreadsheet saved in the relevant documentation release directory on SharePoint.
  The content of the PR needs to be read also to provide information on how to write up the PR in documentation.

- Development PR changes: All development PRs that are in the software are analyzed by the documentation architects for documentation impacts. This document is saved in the relevant documentation release directory on SharePoint. Currently, there is no example of this document.
- Global content: The global changes provided in the documentation DLD are only entered into documentation at the documentation release. These changes will be compiled into a separate tab in the release spreadsheet. For example:
  https://sps3.netcracker.com/sites/proddoc/RB%20Releases/RBM%208.0/8.0_RB_Docs_Project.xls

10.17.3.2 3.2. View the UIs

It is always useful to be able to view the latest UIs so you can test how they work. Unfortunately it's quite difficult to get the latest working UIs. If you can't get access, ask the SME to send you screen captures.

10.17.3.3 3.3. Best Practices

When you create or update a topic, it is important to highlight the new/modified text in red and to rename the topic name to include the PR or ACPD #.

To do this, right-click the topic, and on the Topic Properties page, change the **File Name** field to include the PR or ACPD #. For example, change **Adding_Called_Numbers_Analysis.htm** to **5673_Adding_Called_Numbers_Analysis.htm**. (That way, when you send the WebHelp to the SMEs to review, you can tell them to review the topics that contain the PR/ACPD in the name and they can ignore the others.)

Once the SME and editor have approved the text and you have finalized the topics, you change the text back to black and change the topic back to the original name.

10.18 Plug-Ins RLA Tasks

This article describes RLA tasks on the *Plug-Ins and Plug-In Customization* guide starting from release 8.0. If extra RLA tasks are required in future, document them here.

10.18.1 Updating the Abstract Plug-Ins List (in the main Event Enrichment Chapter)

File: **rb_pic_pt2_event_enrichment_plug_point.fm**

Task: Ensure the list of abstract plug-ins in the table in **Available Options** is up-to-date with the static data in the following tables:

- ABSTRACTPLUGIN – use this to check for the supplied abstract plug-ins themselves
- ABSTRACTPLUGININPUT – use this to verify the table lists the correct number of inputs
- ABSTRACTPLUGINOUTPUT – use this to verify the table lists the correct number of outputs

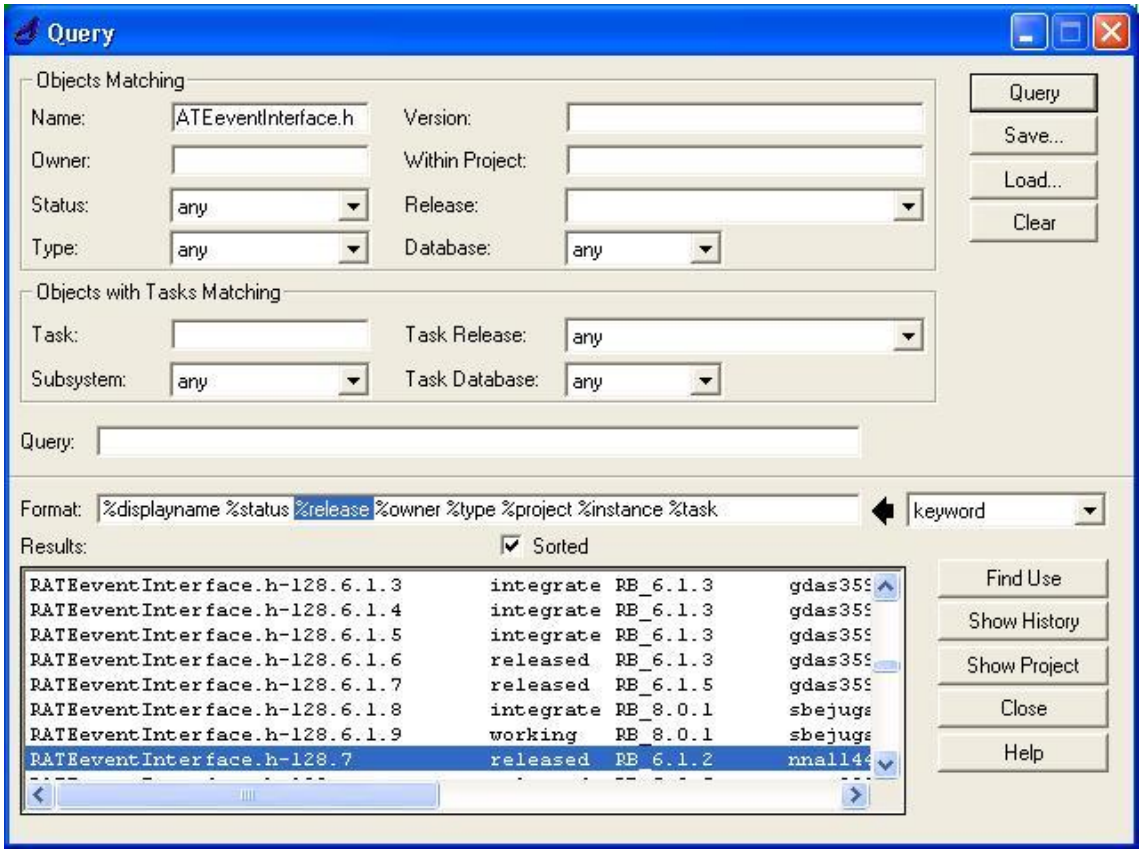
If any abstract plug-ins are missing from the table, that also means there is a missing chapter in the guide. Find out (via the SCR Log, querying on ABSTRACTPLUGIN) what feature/CR added the abstract plug-in and use that to find the relevant SMEs/design docs. If this happens, someone can be assigned to write the new chapter (they can use the template rb_pic_pt2_TEMPLATE_event_enrichment_plugin.fm).

10.18.2 Updating the Rating Input Plug-In Interface

File: **rb_pic_pt2_rating_input_plug_point.fm**

Task: Ensure the rating input plug-in interface details are up-to-date with the header file for this release.

The header file is **RATEeventInterface.h** and is found in the PRD Synergy db by running a query (Actions > Query). Set this up like this (add %release where shown): [5/4/15: This section needs to be updated for SVN.]



Locate the "released" version for the current release (typically x.x.2 but it could be x.x.1). Click on **Show History**. From that view, double-click to open it and save a local copy.

Finding the Diffs:

You can try running a Diff operation (e.g. in Textpad or Notepad++) between this version of the file and the previous released version (for the last head release). However, the results are hard to parse.

You can also look up all the tasks used to updateRATEeventInterface.h for this release. Get the task # from the history view (if it's not visible, update the history layout to include it: View > Layout and add %task to one of the label rows. Click Save). Look up the task details (Tools > Task > Browse, enter the task # and hit Enter). This should tell you e.g. the feature/ACPD/CR or whatever was used to update the file. Make sure you check all tasks used on the file for the current release.

With the information about what drivers are updating the header file, you should be able to locate SMEs and ask them what changed, or find design docs. However, when it comes to updating the guide chapter, rely on the final "released" header file, not a design doc.

What to Update in the Chapter:

If there is a new data structure or function, add a new subsection in the relevant part of the chapter (OR ensure the feature author has done this, they may miss it).

If there is a modification to an existing data structure or function (typically new arguments, but occasionally they might remove args), update the existing subsection (OR get the feature author to do this if they missed it).

Then work with the SME to update the **Data Structures – Summary** section in the chapter. This shows the nested structure of the data structures, including their arguments, many of which are themselves data structures. I would recommend that you do this work as an RLA task, rather than relying on the feature author to figure it out. Spend some time working through the nested structure and it starts to make sense.

10.19 Preparing Deliverables for Localization

- Preparing Deliverables for Localization
  - Preparing Help Files for Localization
  - Preparing FrameMaker Files for Localization

***Note**: This process is old and needs to be reviewed/update*d.

10.19.1 Preparing Deliverables for Localization

This document explains the process of preparing deliverables for localization.

10.19.1.1 Preparing Help Files for Localization

For each of the Help topics that is to be localized, create a suitable directory on your local drive named, for example, **<help_topic>**.

In CM Synergy, locate the directory for required Help file, as follows:

<project>/online_help/<help_topic>

Go to the **source** sub-directory and copy the **.zip** file from this directory to the **<help_topic>** directory on your local drive.

On your local drive, in the **<help_topic>** directory, unzip the **.zip** file you have copied, and locate the sub-directory that contains **.htm** files.

Example:

For Batch Payment Entry Help, create a local directory named **batch_payment_entry**.
The relevant Help file directory is **/online_help/batch_entry**.
In the **source** sub-directory, the **.zip** file is **batch_entry.zip**.
Copy **/online_help/batch_entry/source/batch_entry.zip** to your local **batch_payment_entry** directory.
Unzip **batch_entry.zip**.
The **.htm** files are in the **batchpay** sub-directory.

The sub-directory that contains **.htm** files also contains the following three Perl scripts:

- **RedTextToDefault.pl**
- **RemoveAllGlossaryEntries.pl**
- **SpanToNoSpan.pl**

Double-click **RedTextToDefault.pl** to remove any red text from the **.htm** files.

Double-click **SpanToNoSpan.pl** to remove any "empty" tags that the previous script creates.

Delete all three Perl scripts (**.pl** files) from the sub-directory.

In the **<help_topic>** directory (or a sub-directory of this) on your local drive, locate the **<topic>.xpj** file and double-click it to open it in RoboHelp.

10.19.1.1.1 Check Content of Source Files

Use RoboHelp to check that all **.htm** files that are in the zip file are required. Delete any unwanted **.htm** (and other) files from the **<help_topic>** directory.

Check if any **.htm** files include images. Note these in the read_me file. If any images have text in them and/or include screenshots, Localization will need to capture versions of these from the localized software.

For each **.htm** file that includes images, indicate the appropriate one of the following:

- That the image(s) contain no translatable text.
- That the image(s) contains translatable text – in this case, include the filename of the image that requires translation.
- That the image(s) contain screenshots – in this case, include the filename of the image and full instructions on how to use the UI to obtain the image.

10.19.1.1.2 Save Files

Using RoboHelp, create a new **.chm** file and save it locally, using the same name for this file as the CM Synergy **.chm** file.

Create a **.zip** file of the files on your local drive, using the same name for this file as the CM Synergy **.zip** file, and mimicking the structure of the CM Synergy **.zip** file.

10.19.1.1.3 What Does Localization Require?

For each Help topic, the materials supplied to Localization should be:

<file_name>.zip – The **.zip** file you have created on your local drive.
<file_name>.chm – The **.chm** file you have created on your local drive.
xxx_loc_readme.txt – A readme text file containing instructions to translators.

10.19.1.2 Preparing FrameMaker Files for Localization

For each deliverable that is to be localized, create a suitable directory on your local drive named, for example, **<deliverable_name>**.

In CM Synergy, locate the directory for required FrameMaker deliverable, as follows:

<project>/pdf_manuals/<deliverable_name> (in the RB project)
<project>/concept_guides/<deliverable_name> (in the INF project)

Use CTRL-A to select all subdirectories of the **<deliverable_name>** directory and copy these subdirectories into the **<deliverable_name>** directory on your local drive. These directories will include:

- **corel**
- **eps**
- **frame**
- **html**
- **pdf**

There may also be other directories, such as **visio**.

Example:

For Payment Concepts, create a local directory named **payment**.

The relevant directory for FrameMaker deliverables is **/concept_guides/payments**.

10.19.1.2.1Creating Component Files for Translation

You should take the following steps for the files on your local drive. Do not alter any files in your CM Synergy area.

1. For the files in the **frame** directory, open FrameMaker and use **FrameTech > Process Tags for Frame Conversion** to create component versions of the Frame source files.
2. Check the generated component Frame files for unwanted blank pages, blank lines, and any other “blips” created by the generation process.
3. Regenerate the Frame book file.
4. Save the **source** Frame files in the **frame** directory. These will be translated during localization.
5. Create a PDF based on the saved Frame files. This will be used for reference during localization.

10.19.1.2.2Checking Figures

The localization team need to know if any figures that are included in the component Frame files contain text that will require translation. When we send a deliverable to localization, we include a **read_me** file that details all of the figures in the deliverable. You should use the sample **read_me** file as a model for your deliverable, and list the file names of all of the figures in the deliverable that include any text.

If any figures include screenshots, you must include precise instructions on how a translator could display the screen, as shown, in the user interface. The translator will then capture the screenshot in the localized version of the UI.

10.19.1.2.3Tidying Up

The materials that we send to localization must include **only** those files that they need for the translation process, that is:

- In the **frame** directory, the component Frame files:
  You must delete any unwanted files from this directory (for example, auto-generated backup files).
- In the **pdf** directory, the reference PDF file.
- In the **cdr** and **visio** directories, the files for all referenced CorelDraw images and Visio images, respectively:
  You must delete any files in these directories that are not required for the component deliverable.
- In the **eps** directory, an Enhanced PostScript file corresponding to each file in the **cdr** and **visio** directories:

You must delete any files in this directory that to do not relate to diagrams that appear in the component deliverable.

10.19.1.2.4Final Save

When all of the above work is complete, copy all subdirectories of the **<deliverable_name>** directory to the nominated “final save” area, which will be made available to localization.

Inform the person managing the preparation for localization that the deliverable is now ready for translation.

10.20 Schema Generation and Release Notes Interactive Processes

- 1. Schema
  - 1.1. The File Structure
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10.20.1 1. Schema

> The Schema interactive is not subject to a technical RAT review or a formal Editor Check when it is complete. It does however require an Interactive Check.

Infinys Schemas and ERDs is an interactive HTML document that is generated by running scripts from a schema generation environment on a UNIX server. The environment consists of several Perl modules and libraries as well as HTML, SQL, and configuration scripts.

The database information is either created from running the RB Installation process or by developers providing SQL scripts to the authors who are tasked with creating the schema interactive. The schema generation tool is used to generate the HTML schemas. Entity relationship diagrams (ERDs) are converted from .wmf to .pdf documents and are linked from the front page of the schema interactive.

You generate the schema information pages from two data sources:

- An Oracle schema.
- A pdm file that is generated by the schema developer using Data Architect, a licensed data modeling tool.

The Infinys Rating and Billing and Platform Schemas use both of these sources to generate Schema information. The pdm file contains additional Schema information (object descriptions, domain information, and relationships) that is held within Data Architect. All other components use an Oracle schema only.

The generation scripts use a configuration file (.dsn) to determine the parameters to be used for Schema generation.

10.20.1.1 1.1. The File Structure

The top level Schema generation environment is accessible from the following windows location: \\Hocdl22\working\schema_generation_all\. The comparable UNIX location on the hocdl22 server is: /Disk0/iid/app/schema_generation_all. The following table lists the paths that are accessible from this top level location. A description is provided next to each path name, informing you of what information is kept in each location. Paths that are not of relevance to the generation process are not discussed in this table.

Table 1: Schema Directory and File Structure

Path Name	File Name	Description
generate\bin\		Contains the scripts that run the schema interactive generation process.
generate\bin\	runschemaXXX.sh	Is the shell script that is run to generate the schema interactive generation. Each release has a unique file with

Path Name	File Name	Description
		XXX specifying the release specific name. This file must be modified to point to the relevant base path and .dsn file.
generate\dsn_files\		Contains the configuration files for the schema interactive generation process.
generate\dsn_files\	schemaXXX.dsn	Is the .dsn configuration file that stores the generation parameters for the schema interactive generation process. Each release has a unique file with XXX specifying the release specific name. This file must be modified to point to the relevant source database, .pdm file and version naming.
generate\pdm_files\		Contains the Data Architect files.
generate\pdm_files\	genevaXXX.pdm	Is the Data Architect file that provides relational information on how data in the database is to be structured. Each release has a unique file with XXX specifying the release specific name. This file must be modified to remove comment strings added by the schema team.
schema_output\tool\		Contains output directory into which the schema generation tool writes the schema interactive. The content of this directory should be deleted after the deliverable is complete.
schema_output\tool\rb_XXX\		Contains the output from a specific generation cycle. Each release has a unique path with XXX specifying the release specific name. The files in this directory

Path Name	File Name	Description
		structured should not be modified. This is an intermediate storage location from which the post process picks up the schema interactive files.
schema_output\postprocess\		Contains the configuration files and the Perl scripts that are run to post process the schema interactive output.
schema_output\postprocess\	CSWS_interactive_HSC.pl	Is the Perl script that is run to start the Schema generation post process. This file does not have to be modified
schema_output\postprocess\	CSWS_interactive_param.txt	Is the configuration file for the Schema generation post process. This file contains relevant path and information on where to retrieve Schema files from and where to write the new Schema interactive to. This file must be modified to provide the relevant version specific information.
schema_output\postprocess\	CSWS_interactive_param_XXX.txt	Is a copy of the CSWS_interactive_param.txt configuration file. This provides a backup for of the generation information that was used for the release specified by XXX.
schema_output\postprocess\user_input\		Contains the user input configuration that is used by the schema generation post process.
schema_output\postprocess\output\		Contains output directory into which the schema generation post process writes the schema interactive. The content of this directory should be deleted after the deliverable is complete.

Path Name	File Name	Description
schema_output\postprocess\output\rb_XXX\		Contains the output directory into which the schema is written after the post process. Each release has a unique path with XXX specifying the release specific name. The files in this directory structured should be copied and used as part of the deliverable.

10.20.1.2 1.2. Generating the Schema

10.20.1.2.11.2.1. Setting up the Database Schema

There are two ways of setting up the database:

- Running the RB Installation scripts as documented in the RB Installation guide. See Appendix A for instructions on how to do this.
- Importing Oracle dump files from the development environment. See Appendix B for more details.

It is recommended that the RB database schema is generated using the supported installation scripts.

There are three schema related databases on hocdl22, they are: **SCHEMA** (4.3), **TRG** (4.1) and **SCHEMA42** (4.2). At each release the database containing the oldest release is refreshed so that it can be reloaded with the latest release.

The process for refreshing a database is as follows:

1. As the **Oracle user** (iidora), execute the appropriate database profile script in the **/Disk0/iid/profiles** directory on hocdl22.
2. Log into SQL*Plus as the SYS user and run the **drop_all_users.sql** script in the /Disk0/iid/app/schema_generation_all/generate/bin directory.
3. Check that all roles have been removed (using PL/SQL Developer).

10.20.1.2.21.2.2. Running the Schema Generation Process

The Schema generation process is run from within a UNIX environment on the hocdl22 server. The generation environment is visible on windows file systems through a samba interface. This allows you to map a network drive to the UNIX file system (**\\hocdl22\working**), modify configuration files, and view the output without having to use FTP to transfer files between different file systems.

Setting up the Path Environment

1. Log into hocdl22 as the **Oracle user** (iidora10) using PUTTY or another application that supports the SSH protocol (eg X-Win).

   > You must complete this step as iidora10 and not set up the paths through the samba interface. This is because the generation process is run as iidora10 and the paths need to be set up with the appropriate write privileges.

2. Create a target path for the generated output. This should be in the form of: /Disk0/iid/app/schema_generation_all/schema_output/tool/XXX where XXX indicates the

release for which the schema is to be generated.
For example: **/Disk0/iid/app/schema_generation_all/schema_output/tool/rb_43E**.

Setting up the PDM File (geneva.pdm)

1. Copy the release specific **geneva.pdm** file from SVN (Project: RBAPI\SCHEMA\SRC\) to **/Disk0/iid/app/schema_generation_all/generate/pdm_files**. Speak to Sreekanth Kalathur (Schema Team) if the file is not available.
2. Rename **geneva.pdm** in **/Disk0/iid/app/schema_generation_all/generate/pdm_files** to something that reflects the release it belongs to.
   For example change it to **geneva43E.pdm** for the RB_4.3E release.

   If you prefer to use FTP to transfer the file, then make sure that you transfer the file in binary format.

3. Open the new **geneva.pdm** file in **/Disk0/iid/app/schema_generation_all/generate/pdm_files** and update sections so the generation process does not fall over.

   Ensure that you only use TextPad to complete the following steps. This is because one of the steps uses a TextPad specific macro to update the PDM data.

4. Change instance of ***"<undefined>***" to "NUMBER(9)"
5. Change the following text block to a single empty line:

   -- Removed all columns from pk and hence commented out the statement below.
   -- This stops this index from being picked up when the model is being vetted for
   -- anomalies. Note that budget_centre_seq has now been marked as null.
   -- Date: 27th February 2008.
   ******
   /*alter table CANCELBILLCUSTPC modify (
   BUDGET_CENTRE_SEQ null
)
   /*/

   It is possible that this text no longer exists in the PDM file and was replaced with the one described under the next point. Check for similar text content if the generation process gives you the following error: Can't call method "nullable" on an undefined value at /Disk0/iid/app/schema_generation_all/generate/lib/site_perl/5.8.7/SchemaInfo/ Source/DataArchitect.pm line 407. **<This text was found at 4.3>**

   Be very careful with this change and make sure you do not lose sync by inserting the wrong number of empty lines.

6. Change the following text block to a single empty line:

   -- Removed all columns from pk and hence commented out the statement below.
   -- This stops this index from being picked up when the model is being vetted for
   -- anomalies. Note that the 3 columns below have now been marked as null.
   -- Date: 27th February 2008.
   ******
   ******

/*alter table PROCESSPLANDISTRIBUTION modify (
LOGICAL_HOST_NAME null,
DOMAIN_GROUP_ID null,
SERVICE_NAME null
)
***/*/**

It is possible that this text no longer exist in the PDM file. Check for similar text content if the generation process gives you the following error: Can't call method "nullable" on an undefined value at /Disk0/iid/app/schema_generation_all/generate/lib/site_perl/5.8.7/SchemaInfo/ Source/DataArchitect.pm line 407. **<This text was not found at 4.3>**

Be very carful with this change and make sure you do not lose sync by inserting the wrong number of empty lines.

7. Remove the following text block, but **DO NOT** replace it with a single empty line:

***-- This code code was commented out on Feb 27th 2008, but is now being reinstated ***
***-- because the foreign key relationship between this table and ProcessInstanceLog ***
***-- (i.e. PROCESSINSTANCELOG_FK3) would not reflect due to the unnatural pk ***
***-- (i.e. ukp) of ProcessPlanDistribution. ***
***-- ***
-- It is now necessary to mark the ukp columns as a pk and use this end script to
-- modify the columns below [back] to be nullable.
-- => 2nd September 2008.
\

It is possible that this text no longer exist in the PDM file. Check for similar text content if the generation process gives you the following error: Can't call method "nullable" on an undefined value at /Disk0/iid/app/schema_generation_all/generate/lib/site_perl/5.8.7/SchemaInfo/ Source/DataArchitect.pm line 407. **<This text was NOT found at 4.3>**

Be very carful with this change and make sure you do not lose sync by inserting empty lines.

8. Create a macro that changes the tablespace names from mixed case to upper case:
    a. Press F5 and enter "**tablespace &&g**" into the search dialog string field. Select Wrap Searches and make sure that Conditions is set to Text. The Direction should be set to Down.
    b. Select **Find Next** on in the search dialog.
    c. Close the **search dialog** and move the cursor to the top of the PDM file.
    d. Press **Ctrl+Shift+R** to start recording the macro. If you get a dialog asking you if you want to erase the existing macro, then accept this message and erase the existing macro.
    e. Press **Ctrl+f**.
    f. Press the **right arrow key**.
    g. Press **Shift+End**.

h. Press **Ctrl+u**.

i. Press the **right arrow key**.

j. Press **Ctrl+Shift+R** to save the macro.

9. Apply the macro to the entire document. You can do this by pressing the **Ctrl+r** until you hit the end of the file, or you can use the Multi-play option by pressing **Ctrl+F7**. If you are using the Multi-play option, then you should select "**Repeat to end of file**".
10. Test that the macro worked properly by searching for a random occurrence of "**tablespace &&g**". Any text that appears on the same line after this search string should be in upper case. Ensure that the "g" after the "&&" is in lower case. You should also test that the first and last occurrence of "tablespace &&g" in the document were converted properly.
11. Save the PDM file and close the file in TextPad.

Setting up the DSN File (schema.dsn)

1. As a **UNIX user** create a copy of a recent DSN file in **/Disk0/iid/app/schema_generation_all/generate/dsn_files** and rename the copy to a version that is specific to the release you are generating.
   For example, if you are preparing to generate the schema interactive for RB_4.3E, then create a copy of schema.dsn and rename the copy to **schema43E.dsn**.
2. Open the new DSN file in a text editor, such as TextPad.
3. Inform the schema generation process that we are using a PDM file by including the following line: "**Source=MergeOracleDataArchitect**"
4. Set up the release specific name of the PDM file. This is the path and the name of the file you created under the previous point.
   For example:
   "**PDMFile=/Disk0/iid/app/schema_generation_all/generate/pdm_files/geneva43E.pdm**"
5. Update the database hosting information for the schema. If the schema database is hosted on hocdl22, then the database information should be something like the following where SCHEMA represents the database name:
   "**Database=HOST=hocdl22;SID=SCHEMA;PORT=1521**
6. Set up the user name and password for the database. This is usually:
   "**Username=geneva_admin**"
   and
   "**Password=geneva_admin**"
7. The following fields remain unchanged:
   "FetchData=1"
   "ProjectName=Infinys"
   "ProjectShortName=Inf"
8. Set up the component name:
   "ComponentName=Rating_and_Billing"
   "ComponentShortName=Rating_and_Billing"
9. Set up the component version and schema name. For RB_4.3.2 this would be as follows:
   "ComponentVersion=4.3"
   and
   "SchemaName=4.3E"

Setting up the Shell Script File (runschema.sh)

1. As a **UNIX user** create a copy of a recent **runschema.sh** file in **/Disk0/iid/app/schema_generation_all/generate/bin** and rename the copy to a version that is specific to the release you will be generating.
   For example, if you are preparing to generate the schema interactive for RB_4.3E, then create a copy of runschema.sh and rename the copy to **runschema43E.sh**.

2. Ensure the **runschema43E.sh** script is executable.
3. Open the new SH file in a recommended editor, such as vi.
4. Make sure that "**ORACLE_SID="** is set up correctly. You can get this information from the DSN file you just set up.
   For example if the schema database is SCHEMA, then use: "**export ORACLE_SID=SCHEMA"**.
5. All other export entries should remain unchanged, providing the generation environment is not moved to a different environment.
6. Update "**--basepath**" to point to the output directory into which the schema interactive is to be written.
   In the example of RB_4.3.2, this is: **"--basepath /Disk0/iid/app/schema_generation_all/schema_output/tool/rb_43E"**.
7. Update "**--no-store-schema**" to point to the new DSN file you created in the last section.
   In the example of RB_4.3.2, this is: **"--no-store-schema /Disk0/iid/app/schema_generation_all/generate/dsn_files/schema43E.dsn".**

Generating the HTML Output

1. Log into hocdl22 as the **Oracle user** (iidora10) using PUTTY or another application that supports the SSH protocol (X-Win).
2. Navigate to **/Disk0/iid/profiles**
3. Execute the appropriate profile script. For example for the SCHEMA database use **./schema.ksh.**
4. Change to **/Disk0/iid/app/schema_generation_all/generate/bin**
5. Run the **runschema.sh** script.

For example to generate the output for the RB4.3E schema run **./runschema43E.sh**. The output is created in the **/Disk0/iid/app/schema_generation_all/schema_output/tool/rb_43E** directory.

10.20.1.2.31.2.3. Running the Schema Post-Generation Process

The post-process converts the HTML output of the generation process into a flatter file structure, reducing the risk of not being able to access certain files of the interactive.

Setting up the Path Environment

1. Log into hocdl22 as a **UNIX user** using PUTTY or another application that supports the SSH protocol (X-Win). Alternatively use explorer to update the paths through samba.

   > You must complete this step as yourself or set up the paths through the samba interface. This is because the generation process is run with your own privileges and the paths need to be set up with the appropriate write privileges for yourself.

2. Create a target path for the generated output. This should be in the form of: /Disk0/iid/app/schema_generation_all/schema_output/postprocess/output/rb_XXX, where XXX indicates the release for which the schema is to be generated.
   For example for RB 4.3E this is **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/output/rb_43E**.
3. Open **CSWS_interactive_parm.txt** (/Disk0/iid/app/schema_generation_all/schema_output/postprocess) in an appropriate text editor and update the resource entries according to the project requirement you have:

- "**theindir=**" should contain the source information that is to be processed, for example: **tool/rb_40l/inf/rating_and_billing/4.3/4.3e**.
- "**outdir1="** should point to the output directory you created under the previous point. The first level of this path is the last level of the path generated under the previous point. For example: **rb_43e/rb_interactive_schema/4.3e**.
- "**user_input="** indicates the release and db version for which the Schema is to be processed. For example: **4.3/4.3e**.

4. Save the file, both as **CSWS_interactive_param.txt** and as **CSWS_interactive_param_XXX.txt** (for reference), where XXX indicates the version of the release for which the file is to be used.
5. Create a pdf directory in /Disk0/iid/app/schema_generation_all/postprocess/user_input/XXX/YYY, where XXX/YYY is the user_input from point 3 above.
   For example for RB 4.3E this is **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/user_input/4.3/4.3e/pdf.**
6. Create a dummy pdf file in the **/Disk0/iid/app/schema_generation_all/postprocess/user_input/XXX/YYY/pdf** directory, where XXX/YYY is the user_input from point 3 (use touch xxx.pdf under UNIX).
7. Copy the following files and sub directories (including contents) from the **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/additional_files** directory to the **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/user_input/XXX** directory**: jsfuncs** (directory and contents), **gfx** (directory and contents), **doc.css**, **cookiebar.js**, **ls.htm**, and **schema.htm**.
8. Navigate to **/Disk0/iid/app/schema_generation_all/schema_output/postprocess.**
9. To update the copyright range, open **CSWS_interactive_index_only.pl** in an appropriate text editor and alter the following section for the new copyright range. It may be necessary to add a new range for a new year.
   $htmlln =~ s/1999-2005/1999-2009/g;
   $htmlln =~ s/1999-2006/1999-2009/g;
   $htmlln =~ s/1999-2007/1999-2009/g;
   $htmlln =~ s/1999-2008/1999-2009/g;

> There are two occurrences of these global replacement structures.

Generating the Deliverable HTML Output

1. Log into hocdl22 as the **UNIX user** using PUTTY or another application that supports the SSH protocol.
2. Navigate to **/Disk0/iid/profiles.**
3. Execute the appropriate profile script. For example for the SCHEMA database use **./schema.ksh.**
4. Navigate to **/Disk0/iid/app/schema_generation_all/schema_output/postprocess**
5. Run **perl CSWS_interactive_HSC.pl**
   Output should look like this:
   CSWS_interactive.pl Started at: Thu Oct 18 15:30:50 BST 2009
   Copyright Date= 2009
   basedir= /oradata/schema_files
   user_input= 4.0/4.0i
   indir= schema_output/tool/rb_bootes_beta/inf/rating_and_billing/4.0/4.0i
   outdir1= rb_bootes_beta/rb_interactive_schema/3.1c

Processing Files and gfx directory:
pdf files copied
js files copied
ls.htm file copied
*.css files copied
cookiebar.js file copied
gfx directory copied
infinys_rb_small.gif created
index.yaml copied
schema.htm file created

Processing Metadata Directories:
metadata directory column copied
metadata directory constraint copied
metadata directory data_type copied
metadata directory domain copied
metadata directory index copied
index.html file copied
metadata directory queue copied
metadata directory sequence copied
metadata directory table copied
metadata directory tablegroup copied
metadata directory tablespace copied
metadata directory trigger copied
metadata directory view copied

Cleaning HTML Files:
15342 HTML files cleaned successfully

CSWS_interactive.pl Completed at: Thu Oct 18 15:54:14 BST 2007

6. The output is written to **/Disk0/iid/app/schema_generation_all/output/postprocess/output/rb_XXX**, where XXX indicates the release for which the schema is to be generated, for example rb_43E.
7. There are some additional files that need to be copied into the **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/output/rb_XXX/rb_interactive_schema** directory.
   The following files and directories (and their contents) should be copied from the **/Disk0/iid/app/schema_generation_all/schema_output/postprocess/additional_files** directory**: ls_files** (directory), **schema_files** (directory), **infinys.css, schema.css**, and **index.htm**.
8. Edit the **index.htm** and **schema.htm** files to ensure references to the current release are correct.
9. You can copy the output data through the samba interface to your local PC.

   Tar the file (tar –cvf <target file> <source directory>), then gzip the.tar file before transferring the data. This makes the transfer a lot faster.

10. Unpack the tar.gz file on your PC.
11. You now have to ensure that the style sheets have been placed correctly.
12. You have to add the ERDs to the Schema interactive (see Section ‘Packaging the Deliverable’ below).
13. You have to ensure that the latest legal statement is used.
14. Run Xenu to test links.

Tidying up the Generation Environment

A lot of storage space is used when generating the Schema interactive. It is therefore necessary to tidy up and clean the generation environment after you are finished with it.

> You tidy up the environment by calling the UNIX delete command recursively. Be very careful how you use this command and ensure that you only delete the correct file structures. It is recommended to run the command pwd, before you run any deletion. pwd provides you with the exact path name you are currently in.

You tidy up the generation environment by executing the following commands:

1. Navigate to **/Disk0/iid/app/schema_generation_all/schema_output/tool**
2. Delete all data from this location onwards:
    - $ pwd
    - $ rm -r XXX (where XXX is the release no.)
3. Navigate to **/Disk0/iid/app/schema_generation_all/output/postprocess/output**
4. Delete all data from this location onwards:
    - $ pwd
    - $ rm -r XXX (where XXX is the release no.)

10.20.1.2.41.2.4. Generating the ERDs

The source files for the ERDs are in \RBAPI\DOC\design\schema\models and are stored in .wmf format. These files must be converted into PDF files. You need Corel Draw and Acrobat Distiller to convert the files.

Update the .wmf files with CorelDraw

1. Open each .wmf file with CorelDraw.
2. Make sure that the ERD content is black. You can change all the color in the ERD to black by applying the following steps:
    a. Place the cursor somewhere on the page of the ERD diagram.
    b. Select all objects by pressing **Ctrl-A**.
    c. Set the outline color of all objects to black by selecting black with the right mouse button in the color selection panel on the right hand side of the screen.
    d. Highlight all text by selecting **Edit -> Select All -> Text**.
    e. Set the outline color of all text to white by selecting white with the right mouse button in the color selection panel on the right hand side of the screen.
3. Carefully review the ERD diagram in each file and update errors if necessary. Some of the issues to check for are listed in CR CB1#43364. You should at least ensure that:
    - The title wording is flush with the document border.
    - The copyright statement is flush with the document border.
    - All text, lines, arrows, and boxes in the diagrams are black.
    - If lines go through text, then try to correct this where possible.
    - If lines run behind boxes, then try to rout the lines past boxes. This can sometimes be achieved by moving the boxes slightly.

- If boxes overlap, try moving the boxes apart.
- If boxes are hidden behind others, try moving the boxes apart.
- Remove redundant arrows that link to the same tables twice.
- Some boxes have empty spaces that give the impression that columns have been removed. Change the size of such boxes to address this issue.

4. Change the title wording at the top of each file from: "Public Schema Release …" to "Schema Release …".
5. Insert the version letter of the Schema database after the release version number. The release version number is also located at the top left and side of the page. For example, change: "RB4.0" to "RB4.0E".
6. Open the front page of the Schema Interactive you are generating and make sure that the names on the PDF files match the names on the links in the HTML file. Look out forOxfordcommas in the names and US spelling.

Convert the .wmf files to .pdf files

After you have updated the document content in CorelDraw, you should convert the document content to PDF files. This involves exporting the CorelDraw content to EPS files and then converting these to PDF files.

1. Export all the files to EPS with the following option: EPS - Encapsulated PostScript
2. Set the export options as follows:
   - Tick Include headers
   - Format: TIFF
   - Type: 8 bit Color
   - Resolution: 72 dpi
   - Select Text
   - Tick Include fonts
   - Tick Use printer color profile
   - Select Separations printer profile
   - Send bitmap as: CMYK
   - Foundation steps: 128
3. Open Acrobat Distiller and select Job Options: eBook
4. Convert all EPS files to .pdf by double clicking on the EPS files.

Make sure that the ERDs have the Correct PDF Settings

1. Open the .pdf files one by one with Adobe Acrobat.
2. Under Document Properties -> Open Options…, set Magnification to Fit in Window.
3. Under Document Properties -> Summary…, populate the text fields as follows:
   - Title: XXX (Schema 4.0E) (where XXX is the name of the ERD, for example: Account Data)
   - Subject: (leave this empty)
   - Author: (leave this empty)
   - Keywords: RB, Rating and Billing
4. The ERDs should have an Editor Check.

Packaging the Deliverable

1. Copy the ERD pdf files into the **rb_XXX/rb_interactive_schema/pdf** directory.

2. Test that the pdf files open correctly from within the interactive.
3. Create a zip file called **rb_interactive_schema.zip**.
4. The zip file should be checked into SVN (https://svncn.netcracker.com/RBMDOC/branches/RB/8.0.x/ project: interactive_data/interactive_schema/deliverable/).

10.20.1.3 1.3. Making the User Interfaces Available

Once the schema interactive has been successfully generated for a release the database can be made available to authors.

1. To install the appropriate Infinys client files on your PC. Map to \\pelican.emea.convergys.com\candidate\rc\rb\XXX, where XXX is the number of the release you are installing.
2. If there is an unzipped version of the file, navigate to the exe directory and run the **setup.exe**. For example**, \drop\rc\rb\RB_4.2.3.RC3\full\RB-4.2.3lX10g\RB\RB\exe.**
3. If the required file is in zipped format, then copy the file to your local drive and unzip it. Navigate to the exe directory as in point 2 above, and run the **setup.exe** command.
4. Ensure the **tnsnames.ora** (in **$ORACLE_HOME\network\admin**) file on your PC has the correct database entry. For example, for the SCHEMA database the entry is as follows:

   GENEVA-SCHEMA =

   (DESCRIPTION =

   (ADDRESS_LIST =

   (ADDRESS = (COMMUNITY = TCP.world)(PROTOCOL = TCP)(HOST = hocdl22)(PORT = 1521))

)

   (CONNECT_DATA =

   (SID = SCHEMA)

)

)
5. Log in to the Rating and Billing Configuration UI as the security user (same password). Connect to the database defined in your local **tnsnames.ora** file. Select the **User** tab and the **Add** button in the **Username** section of the window. Add an entry for the **GENEVADOC** user, with the same password. Enter language as **English (US),** Profile as **Default**, Default Tablespace as **USERS**, and TEMP Tablespace as **TEMP**.
   Select the **GENEVADOC** user and move to the **Business Role** section in the lower section of the window. Select the **Add** button and the **Administrator** role from the drop down list. Save the entry.
   You should now be able to log into all of the RB User Interfaces as the GENEVADOC user. The system contains a limited amount of static data. This may cause warning messages when a user logs in, these can be resolved by updating the GPARAMS table.
6. Send out instructions to authors on where to find installation files and required tnsnames.ora file configuration.

10.20.2 2. Release Notes Interactive

The Release Notes System consists of the following components:

- FrameMaker files – the primary data source for the pdf and interactive files.
- An Oracle database – the data repository for the Interactive Release Notes.
- The Release Notes Editor (RNE) – A Visual Basic front end to administer the database.
- Perl and SQL*Plus scripts – these generate the Javascript file required for the interactive.

There are three ways of maintaining the release note data in the database:

- Use the RNE to manually enter all data, including the HTML content.
- Use the RNE to manually enter the metadata and import the HTML content from FrameMaker using the FrameTech interface.
- Tag the FrameMaker source files and import all data into the database using the FrameTech interface. Development work on this process is incomplete.

10.20.2.1 2.1. Configuration

10.20.2.1.12.1.1. Databases

The release notes system uses the hocdl22 server (10.29.9.75). There are two Oracle databases used by the release notes system, RN01 and RN02.

RN01 is the production database and contains the following schemas:

- RBUSER
- INFUSER
- ICIUSER
- VIUSER
- CSMUSER
- PMUSER
- OMUSER
- PHUSER
- PFUSER
- TAPUSER
- IMUSER
- PIUSER
- INSTUSER
- AMIUSER

The Oracle account name and password match the schema name. For example, for the production RB system the login and password is RBUSER.

RN02 is the development database. You should use the RBTEST schema (same account and password) to connect to RN02.

10.20.2.1.22.1.2. Database Backup

The RN01 database is backed up as follows:

- A UNIX cron job executes Monday to Friday at 18:30 GMT and calls the **RN01_backup** script.
- The **RN01_backup** script is located in **/Disk0/iid/backup** directory. This script runs in conjunction with the **db_backup_new** script.
- Backup files in the **/iid/workarea/db_backups/RN01** directory that are more than 5 days old are deleted.
- The database is shutdown.
- New backup files are created in the **iid/workarea/db_backups/RN01** directory. A new subdirectory in the format RN01.<day of week> is created.
- A new log file in the format RN01.<day of week>.log is created.
- The database is restarted.

- To restore the database to the previous days cold backup, you should do the following:
    - Ensure the database is shutdown
    - Remove the old data files in the **/Disk0/iid/app/oracle/oradata/RN01** directory
    - Copy the appropriate backup files to the **/Disk0/iid/app/oracle/oradata/RN01** directory
    - Unzip the backup files
    - Restart the database

10.20.2.1.32.1.3. PC Configuration

The following Third Party software is required to be installed in order to run the Release Notes system:

- Perl version 5.8
- Oracle client version 9 or 10

RNE Client Installation

The RNE installation scripts are located in \\hoccorp\publications\private\Release Notes Editor\Install v 1.0.4. A zip file containing the RNE installation scripts also exists in SVN. See https://svncn.netcracker.com/RBMDOC/branches/APP_TOOLS project: RNE/source_code/ rn_install_rne.zip (version 3).

To install the RNE you should do the following:

1. Run **dotnetfx.exe** – to install the VB runtime program
2. Run **Setup.exe** – to install the RNE application
3. Run **MDAC_TYP.exe** - to install the data access software
4. Install the appropriate Oracle database drivers:
5. Open the **Disk1** subdirectory and run **setup.exe**. Install the Oracle Provider for OLE DB 9.2.0.4.0
6. Configure the **tnsnames.ora** file (normally found at C:$ORACLE_HOME\network\admin) and add the following entry:

   RN01=

   (DESCRIPTION =

   (ADDRESS_LIST =

   (ADDRESS = (PROTOCOL = TCP)(HOST = hocdl22)(PORT = 1521))

)

   (CONNECT_DATA =

   (SID = RN01)

)

)
7. Log in to the system as follows:
   Login: <username>
   Password: <password>
   Database: RN01

10.20.2.2 2.2. Static Data

At each head release it is necessary to set up Function and Sub Function static data. This is achieved by using SQL scripts. The Head and Maintenance records are configured manually. The item data tends to be unique to a release and therefore should not be created as static data.

10.20.2.2.12.2.1. Creating Head and Maintenance Release Records

Update the following tables using the Release Notes Editor or Bunyan:

- Add a new record in the HEADRELEASE table for the new release. Ensure the HEAD_RELEASE_ID is unique (Check value of HEADRELEASESEQ sequence).
- Add a new record in the MAINTRELEASE table for the new release. Ensure the MAINT_RELEASE_ID is unique (Check value of MAINTRELEASESEQ sequence), and the correct HEAD_RELEASE_ID is used.

10.20.2.2.22.2.2. Creating Function and Sub Function Records

Function and Sub Function information rarely changes between releases, therefore it is possible to roll data forward from a previous head release using SQL scripts. The process uses temporary tables to stage the data, once this has been validated the production tables are updated.

The following scripts are run:

1. poptmpfunc.sql - creates tmpfunc data from FUNCTION table
2. poptmpsfunc.sql - creates tmpsubfunc data from SUBFUNCTION table
3. update_tmpsfunc_funcid.sql - updates tmpsubfunc data with old function id values
4. updatetmpsfunc_subfuncid.sql - updates tmpsubfunc data with old subfunction id values
5. popfunc.sql - creates function data from TMPFUNC table
6. popsfunc.sql - creates subfunction data from TMPSFUNC table

The scripts are located in the **/Disk0/iid/archive/releasenotes/migration** directory.

All scripts should be run from SQL*Plus as the schema owner. For example, to connect to the production database: **> sqlplus rbuser/rbuser**. To run a script file:**sql> @ poptmpfunc.sql;**

1. Truncate the TMPFUNC and TMPSUBFUNC tables (**sql> truncate table <table name>;**)
2. Edit the poptmpfunc.sql script. Update the source (current) and target (new) Head Release ID values. Check the value of the FUNCTIONSEQ sequence.
3. Edit the poptmpsfunc.sql script. Update the source (current) Head Release ID values. Check the value of the SUBFUNCTIONSEQ sequence.
4. Execute the poptmpfunc.sql and poptmpsfunc.sql scripts. The TMPFUNC (25 records) and TMPSFUNC (~715 records) tables are populated. Check the ID values are unique.
5. Execute the update_tmpsfunc_funcid.sql script.
6. Edit the updatetmpsfunc_subfuncid.sql script. Update the source (current) Head Release ID value.
7. Check the data in the TMPFUNC and TMPSFUNC tables is valid before populating the main tables.
8. Take an export of the FUNCTION and SUBFUNCTION tables.
9. Execute the popfunc.sql and popsfunc.sql scripts.
10. Check the FUNCTION and SUBFUNCTION tables for the new records.

10.20.2.3 2.3. Release Note Extraction Process

Instructions on running the extraction process are defined in the Release Note Process document in http://intranet.emea.convergys.com/prd/id/work_instructions/processes.htm.

The file structure for supporting the extraction process on a PC is as follows:

- The root directory is **C:\rnextract**
- The **bin** sub directory contains script files
- The **data** sub directory contains the extraction files

- The **output** sub directory contains the **data.js** and extraction log files

The underlying extraction process is as follows:

- The VB extraction process calls the **rnextract.bat** script (C:\rnextract\bin)
- The **rnextract.bat** script carries out the following processing:
    - Calls **createsql.pl** – creates the SQL extraction template scripts.
    - Runs the SQL template scripts using perl.
    - Calls **extract.pl** – populates the extraction tables and files.
    - Calls **generate_data_file.pl** – reads the extraction files and creates the **data.js** file.

Further information on the extraction process can be found in the SVN project: https://svncn.netcracker.com/RBMDOC/branches/APP_TOOLS/RNE/documentation/rnextract.pdf.

10.20.2.4 2.4. Packaging the Interactive

The **data.js** file generated as a result of running the extraction process, must be embedded in the appropriate wrapper scripts, and a zip file produced. The easiest way of creating a new zip file is to copy the previous version either from the Client Support website or from the ID_INFRELNOTES CM SVN project: release_notes_rb/zip/<release no.>. You should unzip the file and replace the old **data.js** file with the new one. Once the interactive has been tested, the file can be zipped up and checked into SVN.

The release notes interactive requires an Interactive Check.

> The wrapper scripts for a head and maintenance release are different. Therefore you should take care to ensure the correct zip file is used.

The interactive for a head release also requires an Upgrade Paths file to be included. This file is maintained by the Release Notes team and is stored in the ID_INFRELNOTES SVN project: release_notes_rb_geneva_upgrade_paths/ rb_geneva_valid_upgrade_paths.pdf.

10.20.2.5 2.5. Using FrameTech to Import HTML Content

This option uses Frametech to convert the contents of the Description and Resolution sections in the FrameMaker file into HTML and then transfer this data into the RNE using a shared memory location. A record identification process in FrameTech matches database metadata to chapters in the FrameMaker source files.

> All the metadata for each release note record must be created manually using the RNE, before the HTML content can be imported.

10.20.2.5.12.5.1. Configuration

Third Party Software

When using FrameTech to import HTML content from a FrameMaker source file into the RNE you must install the following third party software:

- FrameMaker version 10.0
- FrameMaker version 7.0 or greater
- FrameTech version 6.0 or greater
- FrameTech Interface version 9.0
- ImageMagic version 6.3.0

FrameTech requires the following files in the **C:\Program Files\Adobe\FrameTech** directory:

- HTML_FMRN_rules.cfg
- FrameTech_10.0.dll

The C:\FrameTech directory requires the Release and FMRN sub directories.

10.20.2.5.22.5.2. FrameTech Interface

FrameTech Interface is a background process that maintains the version of your FrameTech installation and manages the shared memory location that allows the RNE to communicate with FrameMaker. This application sits in the process tray and should start up as soon as you log into your computer.

To start the FrameTech process manually navigate to the **C:\Program Files\Adobe\FrameTech** directory, and run the **FTInterface.exe** file.

FrameTech Interface does not have an explicit connect mechanism, it sets up and maintains the shared memory location as soon as it starts up.

Starting the Setup Process to Import HTML

In order to set up the shared memory location, you have to follow a three stage connection process. This sets up the shared memory location and allows you to attach the RNE and FrameMaker to it.

The setup order is shown in **Figure** .

To execute the setup:

1. Start FrameTech Interface. This should normally be up and running on your computer as a background application.
2. Start the RNE and connect it to shared memory.
3. Start FrameMaker, convert the Release Notes content to HTML and connect FrameMaker to shared memory.

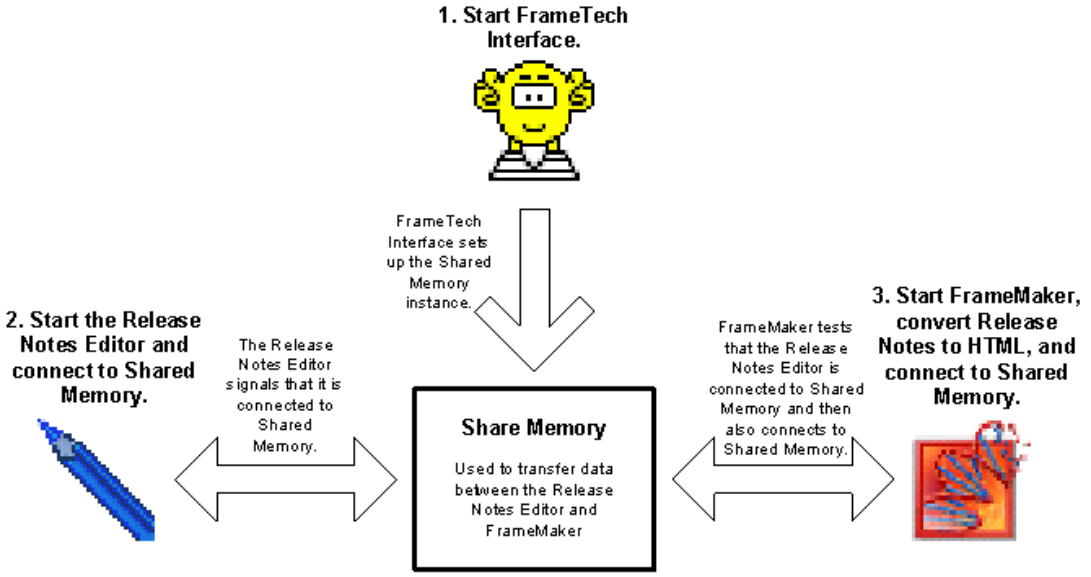


Figure 1 Connecting the Applications to Shared Memory

Instructions on running the Release Notes Shared memory option can be found in the Chapter 7 of the Frame Tech User Manual. This is located in SVN project: https://svncn.netcracker.com/RBMDOC/branches/APP_TOOLS/RNE/documentation/frame_tech_user_manual.doc.

10.20.2.6 2.6. Using FrameTech to Import All FrameMaker Content

This option uses Frametech to capture the metadata and HTML content in the FrameMaker source files. The release notes database is updated directly with complete release note records using scripts.

> Development work on this option has not been completed. Therefore it should **not** be used at the present time.

The automated process of creating the Release Notes Interactive is as follows:

1. Each release note submission in the FrameMaker files is tagged with metadata.
2. A FrameTech process converts the text to HTML format and validates the metadata tags.
3. A PHP process picks up the FrameTech output and inserts the data into the database.

The following software is required:

- PHP version 5.2.9
- PHP_RNDB_interface.php (**C:\Program Files\Adobe\FrameTech)**

10.20.2.6.12.6.1. Loading Records into the Database

In order to ensure the new data can be backed out easily, the process updates a temporary table (RNTEMP). This table contains all the data required to create a valid releasenote record.

This table must be truncated before new records are added.

The process for inserting records into this table is as follows:

1. Copy FrameMaker source files into C:\frameTech\<release no.> directory.
   The following files are required:
   - rnt_rb_<release no>.book
   - rnt_rb_<release no>.release_changes.fm
   - rnt_rb_<release no>.problems_resolved.fm
   - rnt_rb_<release no>.new_features.fm
   - rnt_rb_<release no>.documentation_errata.fm
2. In the FrameMaker application:
   - Open the Book File
   - Select the files to load
   - Select FrameTech from the menu bar, then FrameMaker Release Notes from the drop down list.
3. The following Log files are written to C:\FrameTech\FMRN directory. The files are overwritten when the loading process is run.
   - The rnt_rb_42_x_log.txt file contains error messages.
   - The rnt_rb_4_2_x.html contains all the records to be loaded in HTML format.
4. The RNTEMP table is updated with release note records. This is a denormalised table which is used to populate the RELEASENOTE, RNHASDESCRIPTION, RNHASSUBFUNCTION, ITEM, and RNHASITEM tables.

10.20.2.6.22.6.2. Updating the Database

RNTEMP Table

Once the initial release note data has been loaded into the RNTEMP table, additional scripts are run to further populate this table. The scripts are held as stored procedures in the database as should be run in the following order:

1. UPDATE_RNID – updates the RELEASE_NOTE_ID field using the RELEASENOTESEQ sequence.
2. UPDATE_TYPEID – updates the TYPE_ID field.
3. UPDATE_INTRELID – updates the INTR_REL_ID field.
4. UPDATE_MAINTRELID – updates the MAINT_RELEASE_ID field.
5. UPDATE_FIXEDRELID – updates the FIXED_RELEASE_ID field.
6. UPDATE_FUNCID – updates the FUNCTION_1 to FUNCTION_9 fields. Requires HR_ID.
7. UPDATE_SUBFUNCID – updates the SUBFUNCTION_1 to SUBFUNCTION_9 fields.
8. UPDATE_ITEMSTATUS – updates the ITEMSTATUS_1 to ITEMSTATUS_9 fields.

In order to facilitate running the scripts they have been incorporated into a PHP script, rntemp.php. This file should be updated for the database connection and the Head Release ID. The script file is run from the command line (> php rntemp.php). Messages are written to a log file, RNTEMPlogFile.txt.

10.20.2.6.32.6.3. ITEM Table

Items are created in the ITEM table from data in the RNTEMP table. In order to ensure item data is not duplicated at a release the data is initially loaded into a temporary table, TMPITEM. Once all release note data has been loaded and the items identified, a unique ITEM_ID is generated using the ITEMSEQ table. This value is then used to update the RNTEMP table, and the ITEM table populated.

1. Clear out the TMPITEM and DUPITEM tables.
2. Item data in the RNTEMP table is loaded into the TMPITEM table using the LOAD_TMPITEM stored procedure. Duplicate items are written to the DUPITEM table.
3. Run the UPDATE_TMPITEM_ID stored procedure to update the ITEM IDs in the TMPITEM table.
4. Run the UPDATE_RNTEMP_ITEMID stored procedure to update the ITEM_1 to ITEM_9 fields in the RNTEMP table.
5. Run the LOAD_ITEM stored procedure to populate the ITEM table. Ensure the NEWSUBTRIG is disabled before populating the ITEM table.

These scripts are incorporated into the tmpitem.php wrapper script.

10.20.2.6.42.6.4. RELEASENOTE, RNHASDESCRIPTION, RNHASSUBFUNCTION, and RNHASITEM Tables

Once the RNTEMP table is fully populated then the records can be inserted into the RELEASENOTE, RNHASDESCRIPTION, RNHASSUBFUNCTION, and RNHASITEM tables. The following stored procedures are run:

1. LOAD_RELEASENOTE – populates the RELEASENOTE table from RNTEMP.
2. LOAD_DESCRIPTION – populates the RNHASDESCRIPTION table from RNTEMP.
3. LOAD_SUBFUNC – populates the RNHASSUBFUNCTION table from RNTEMP.
4. LOAD_RNHASITEM – populates RNHASITEM table from RNTEMP.

10.20.2.6.52.6.5. Final Checks

You should ensure that the number of records in the FrameMaker files match the number in the database.

10.20.2.6.62.2.6. Record Formats

The following table indicates the requirements for each release note type:

	Type ID	Title	Maint Rel	Intr Rel	Fixed Rel	Functions	SubFuncs	Item	Item Status

New Feature	10	Yes	Yes	No	Yes – same as MR	No	No	No	No
PR	2	No	Yes	No	Yes	Multiple	Multiple	Yes	Yes
Doc Errata	4	Yes	Yes	Yes	No	Single	Single	Yes	Yes
Release Changes	3	Yes	Yes		Yes	Single	Single	Yes	Yes

10.20.2.6.72.6.7. Known Issues

FrameTech Import:

- Doc Errata – incorrect Type
- New Feature – add Fixed Release
- PR – add Fixed Release
- Release Changes – update IN type to CHANGE
- Validation in FM files

Data Load:

- Check triggers enabled/disabled and sequences
- Check for missing sub functions
- Error logging in php scripts

10.20.2.7 A. Installing the RB Schema

Installing an RB schema using the RB installation scripts is the fastest and most reliable way to create a schema suitable for generating the interactive. Clean up one of the existing databases as outlined in Section 1.2.1.

The database is now ready for the RB installation. You should refer to the latest RB Installation documentation for detailed instructions on the installation process. There is an environment in **/irb/cst/maint_workareas/documentation/v4.0_trg_upg** which has been configured for this purpose. This can be accessed from the Linux server **maytree** (10.29.6.169) using your UNIX login.

Configuration Information:

1. **INFINYS_ROOT** = "**/irb/cst/maint_workareas/documentation/v4.0_trg_upg**". This is where you run the installation from.
2. Clear out **INFINYS_LOGS, TMP, STAGE, PACKAGES, DEPLOYABLE, ARCHIVE,** and **UTILITIES** directories before you start the installation.
3. Identify component dependencies from the following link:
   http://osprey.emea.convergys.com/sql/dependants.php.
   For example for RB 4.3:
   RB = /irb/drop/rc/rb/4.3/RB_4.3.3.RC7/full
   PF = /irb/infinys/release/platform/IPF4.0/IPF4.0.11
   Installer = n/a for RBUIH
   UTILITIES = /irb/infinys/release/utilities/UTL4.0/UTL4.0.7.10
4. On maytree - Check package paths identified in 3) exist and db connection works to hocdl22. For example to check the database connection: type **sqlplus sys/sys@SCHEMA as sysdba**
5. Create the RBIUH directory for the release in the **$INFINYS_ROOT** directory. For example, **/irb/cst/maint_workareas/documentation/v4.0_trg_upg/RBIUH_43**. This is the target directory.
6. Unzip the RBIUH script files as follows:

- The zip file containing these files is held in the Rating and Billing package .zip file (**RB-4.3.3lX10g.zip**).
- Change directory to the directory where this file is located. For example, **cd /irb/drop/rc/rb/4.3/RB_4.3.3.RC7/full**.
- To access the RB Install/Upgrade Handler script without unpacking the Rating and Billing package .zip file, execute the following command:
  unzip -j <RB package.zip file> RB/RB/RBIUH/RB_IU_Handler.ksh -d <target directory>
  For example, **unzip -j RB-4.3.3lX10g.zip RB/RB/RBIUH/RB_IU_Handler.ksh -d /irb/cst/maint_workareas/documentation/v4.0_trg_upg/RBIUH_43**
- A sample configuration file, **rbiuh_config_sample.xml** is also available in the Rating and Billing package .zip file.
  To access this file, execute the following command:
  unzip -j <RB package.zip file> RB/RB/RBIUH/rbiuh_config_sample.xml -d <target directory>
  For example, **unzip -j RB-4.3.3lX10g.zip RB/RB/RBIUH/rbiuh_config_sample.xml -d /irb/cst/maint_workareas/documentation/v4.0_trg_upg/RBIUH_43**
  The sample configuration file is installed in the target directory.

7. Make a copy of this file, for example named **rbiuh_config.xml**, in the target directory.
8. Edit the **rbiuh_config.xml** file. See the "RB Install and Upgrade Handler Configuration File" section in the RB Installation guide for more information on modifying this file.
9. This is an example **rbiuh_config.xm**l file for RB 4.3.3.

   **** NB lower case 'yes' and 'no'

   <package

   PKG_ROOT="/irb/cst/maint_workareas/documentation/v4.0_trg_upg/PACKAGES"

   <full>

   Utilities file="UTILITIES_v4.0.7.10.zip" dir=" /irb/infinys/release/utilities/UTL4.0/UTL4.0.7.10"

   PF file="PF-4.0.11lX10g.64.GenericJ2EE.zip"
   dir="/irb/infinys/release/platform/IPF4.0/IPF4.0.11/PF-4.0.11.lX10g"

   RB file="RB-4.3.3lX10g.zip" dir="/irb/drop/rc/rb/4.3/RB_4.3.3.RC7/full"

   </full>

   </packages

   <rbiuh INFINYS_ROOT="/irb/cst/maint_workareas/documentation/v4.0_trg_upg"
   INFINYS_ENV="infinys.env"

   <database rac="no" host="hocdl22" globalName="SCHEMA" sid="SCHEMA"
   listenerPort="1521"

   CVG_INFINYS_PF="/irb/cst/maint_workareas/documentation/v4.0_trg_upg/PFTemp"

   jobQueueProcesses="20"

   oracleUnixUser="iidora10">

   </database>

   <servers os="lX">

   <server name="hocdl22"/>

   </servers>

   <webServer container="wls" port="9999" domainName="Infinys"

home="/Disk0/weblogic_10.1/wlserver_10.0"/>

<oracle_home dir="/opt/oracle/10.2.0.4.SE"/>

<java_home dir="/tools/java/java1.5"/>

<tmp_root dir="$INFINYS_ROOT/TMP"/>

<stage_root dir="$INFINYS_ROOT/STAGE"/>

<infinys_logs dir="$INFINYS_ROOT/LOGS"/>

<deployable_root dir="$INFINYS_ROOT/DEPLOYABLE"/>

<archive_root dir="$INFINYS_ROOT/ARCHIVE"/>

10. Check and update if necessary the variables in the infinys.env file in the $INFINYS_ROOT directory
11. Run the RB_IU_Handler.ksh script in the RBIUH directory as follows: ./RB_IU_Handler.ksh -configFile rbiuh_config.xml -installOrUpgrade -deploy –bypass
12. During the installation process you should monitor the screen messages. After the process has completed check the log files for ‘success’ messages. You can now generate the interactive, see section 7.2.2.

10.20.2.8 B. Installing the RB Schema from Dump Files

This process can take a long time to complete successfully, and is therefore not recommended. Get the Schema dump files from the PRD database in SVN. The relevant files are located in RBAPI\SCHEMA\SRC and are called (XXX refers to the particular release version):

- schemaRBXXX.dmp
- schemaRBXXX_ocs.dmp
- schemaRBXXX_olc.dmp
- queue.sql
- queue_event.sql
- queue_geneva.sql
- queue_index_event.sql

1. Log on to HOCDL22, using PUTTY

2. Run the prerequisites

- Navigate to: /Disk0/iid/profiles/
- Execute: ksh
- Execute: ./schema.ksh

3. Backup the existing database

- Navigate to: /Disk0/iid/app/schema_generation_all/generate/exports/
- Execute: exp GENEVA_ADMIN/GENEVA_ADMIN (case sensitive name) to start the interactive export client (XXX refers to the particular release version):

- Enter array fetch buffer size: 4096 > "RETURN"
- Export file: expdat.dmp > "exp_ga_XXX.dmp" "RETURN"
- (1)E(ntire database), (2)U(sers), or (3)T(ables): (2)U > "RETURN"
- export grants (yes/no): yes > "RETURN"
- Export table data (yes/no): yes "RETURN"

- Compress extents (yes/no): yes > "RETURN"
- User to be exported: (RETURN to quit) > "GENEVA_ADMIN" "RETURN" (case sensitive name)
- User to be exported: (RETURN to quit) > "RETURN"

4. Drop the queues

- Navigate to /Disk0/iid/app/schema_generation_all/generate/
- Execute: sqlplus GENEVA_ADMIN/GENEVA_ADMIN
- Execute: show user (this makes sure we are running as GENEVA_ADMIN)
- Execute: select * from v$instance; (this makes sure we are only working on SCHEMA)
- Execute: @drop_q.sql
- Execute: exit;

5. Drop the database

- Execute: sqlplus "sys/sys as sysdba"
- Execute: show user (this makes sure we are running as sys)
- Execute: select * from v$instance; (this makes sure we are only working on SCHEMA)
- Execute: drop user RBM_ADMIN cascade;

6. Create user RBM_ADMIN

- Execute: create user RBM_ADMIN identified by RBM_ADMIN default tablespace data temporary tablespace temp;
- Execute: grant dba to RBM_ADMIN;

7. Load the database from dump files.

Make sure that the RB, OCS and OLC are all loaded into the one database instance.

- Using binary format, FTP the dump files schemaRBXXX.dmp, schemaRBXXX_ocs.dmp, and schemaRBXXX_olc.dmp to /Disk0/iid/app/schema_generation_all/generate/dmp_files/ (XXX refers to the particular release version)
- Edit the pf file (XXX refers to the particular release version)
    - Update: file= /Disk0/iid/app/schema_generation_all/generate/dmp_files/schemaXXX.dmp
    - Update: log=gaXXXexport.log
    - Update: touser=rbm_admin
    - Update fromuser=rbm_admin
- Import the dump files (this should happen from the KSH shell, not from within sql)
    - Execute: imp RBM_ADMIN/RBM_ADMIN parfile=pf
- Edit the pf file (XXX refers to the particular release version)
    - Update: file= /Disk0/iid/app/schema_generation_all/generate/dmp_files/schemaXXX_ocs.dmp
    - Update: log=ocsXXXexport.log
    - Update touser=ocs
- Import the dump files (this should happen from the KSH shell, not from within sql)

    - Execute :imp OCS/OCS parfile=pf
- Edit the pf file (XXX refers to the particular release version)
    - Update: file= /Disk0/iid/app/chema_generation_all/generate/dmp_files/schemaXXX_olc.dmp
    - Update: log=olcXXXexport.log
    - Update touser=olc
- Import the dump files (this should happen from the KSH shell, not from within sql)
    - Execute :imp OLC/OLC parfile=pf

8. Enable the queues

- Navigate to /Disk0/iid/app/schema_generation_all/generate/bin/
- Using binary format, FTP the sql files queue.sql, queue_event.sql, and queue_geneva.sql to /Disk0/iid/app/schema_generation_all/generate/bin/.
- Connect to the schema database as GENEVA_ADMIN
    - Execute: sqlplus GENEVA_ADMIN/GENEVA_ADMIN
    - Execute: show user (this makes sure we are running as GENEVA_ADMIN)
    - Execute: select * from v$instance; (this makes sure we are only working on SCHEMA)
- Set up the queues
    - Execute: @queue.sql

9. Compile the packages

- Navigate to /Disk0/iid/app/schema_generation_all/generate/bin/
- Connect to the schema database as GENEVA_ADMIN
    - Execute: sqlplus GENEVA_ADMIN/GENEVA_ADMIN
    - Execute: show user (this makes sure we are running as GENEVA_ADMIN)
    - Execute: select * from v$instance; (this makes sure we are only working on SCHEMA)
- Identify the invalid packages
    - Execute: @idpackages.sql
- Try automated package compilation
    - Execute: EXEC DBMS_UTILITY.compile_schema (schema => 'GENEVA_ADMIN');
- Compile the views
    - Execute: @vi.sql (this creates view.sql)
    - Execute: @view.sql (this compiles the packages that were identified with vi.sql)
- Compile the triggers
    - Execute: @trig.sql (this creates triggers.sql)
    - Execute: @trigger.sql (this compiles the packages that were identified with trig.sql)
- Compile the packages
    - Execute: @pkg.sql (this creates package.sql)
    - Execute: @package.sql (this compiles the packages that were identified with pkg.sql)
- Compile the package bodies

- Execute: @pkg_body.sql (this creates packagebody.sql)
- Execute: @packagebody.sql (this compiles the packages that were identified with pkg_body.sql)

Addressing Compilation Errors

Setting up the database may give us a number of errors that need to be addressed. We only need to worry about compiling views, triggers, indexs, and tables. Nothing else needs to be compiled. We may get uncompiled SYS VIEWS, but again, that is nothing to worry about. The following steps should help debug and compile the remaining information.

10. Go through the compilation scripts again.

11. Show the errors that have to be addressed and try to fix them

- Execute: show errors;
- Execute: select text from user_errors where name = <object name>; (object name such as GNVGEN or GNVREPUTILS)
    - GNVGEN - references CURGETDBAROLE - Missing roles (not in export file)
    - Navigate to: /irb/release/rb/X.X-FULL/RB-X.X.XsS10g/RB/RB/schema/roles/
      (where X.X-FULL should be the latest)
      (also note that RB-X.X.XsS10g may change from one release to the next)
      (ask build/schema team if in doubt)
    - Change to SYS if necessary
    - Execute @sysprivs.sql GENEVA_ADMIN (this script takes GENEVA_ADMIN as an argument and calls rolesprivs.sql)
      (this creates the roles and allows GNVTRIG, GNVINTOAQL and GNVOAQL to compile)
- Triggers failing on 'GETTRANSACTIONID' Must be declared means missing.
  (Load stored procedures - probably missing in dump file!)
    - grep for 'GETTRANSACTIONID' in procedures directory to identify script to run.
      Navigate to /irb/bce/build/rb/X.X/RB-sqaX.X.X.solaris.oracle10g/RB
      (where X.X should be the latest version)
      (also note that RBsqa-X.X.X.solaris.oracle10g may change from one release to the next)
    - Execute: find . -exec grep -il "GETTRANSACTIONID" {} \;
      (this finds all the scripts that contain GETTRASACTIONID)
      (in this example, the appropriate scripts are stored in: /irb/bce/build/rb/X.X/RB-sqaX.X.X.solaris.oracle10g/RB/APICORE/general/SRC/)
      (these are gnvgen.spc and gnvgen.bdy)
      (where X.X should be the latest version)
      (also note that RBsqa-X.X.X.solaris.oracle10g may change from one release to the next)
    - Navigate to the appropriate directory (eg /irb/bce/build/rb/X.X/RB-sqaX.X.X.solaris.oracle10g/RB/APICORE/general/SRC/)
      (where X.X should be the latest version)
      (also note that RBsqa-X.X.X.solaris.oracle10g may change from one release to the next)
    - Log in as GENEVA_ADMIN if necessary
    - Run specific create or replace script to prevent having to recompile all objects.
      Execute: @gnvgen.spc
      Execute: @gnvgen.bdy
    - Run as GENEVA_ADMIN user -> EXEC DBMS_UTILITY.compile_schema(schema => 'GENEVA_ADMIN'); (or use the build button in PlSQLDeveloper)

10.20.2.9 C. Bibliography

Table 2: Bibliography

Ref.	Title	Filename	Document Ref.
[1] Information Development Style Guide		information_development_style_guide_infinys.doc	QMS-ST-0436
[2] Infinys Product Information Web site		**http://infinys.convergys.com/**	N/A

10.20.2.10 D. Revision History

Table 3: Revision History

Review Ref.	Author	Ver.	Status	Approver	Date
	Steve Ellis	0.1	DRAFT	David Wang	11 Nov 2009
	Sridhar Davuluru	0.2	DRAFT		13 Jun 2016

[2]

10.21 SCR Checking Processes

- 1. Purpose
  - 1.1. What and Why
  - 1.2. What Do I Need Before I Start
- 2. Process
  - 2.1. Examples

10.21.1 1. Purpose

This section provides an overview of the requirement for the process.

10.21.1.1 1.1. What and Why

Schema change requests (SCRs) are produced within Development for any change to the schema (via enhancement, bug fix etc). The schema data is used by the Documentation team to extract the Rating and Billing Manager schema interactive. As such, the content should adhere to the documentation standards. As changes to the schema (even to descriptions) cannot be made without an SCR, it is far more efficient for us to check the Development SCRs instead of entering our own at a later date.

This process involves checking the SCRs for content within the Development RAT review process. Generally this is editorial content checking.

10.21.1.2 1.2. What Do I Need Before I Start

You need to do the following:

- Be familiar with the schema and the various content e.g. indexes, triggers, public views. For example:
  http://infdevca.netcracker.com/rb/schema/RB8.0E/default.htm
- Get buy-in from Development, especially the Schema team. Contact the Schema team and ask that they add you to any SCR RAT reviews.
  Also, communicate to the Development teams that SCR RAT reviews for Documentation should be sent to you. Maybe sending an email to Development managers would help here.

10.21.2 2. Process

Once the Development representatives are made aware, RAT reviews for SCRs should start arriving via email. You should review all SCRs in a RAT review and comment on any items you think need to be changed. The number of SCRs to review can vary from 1 to 40.

SCRs affect different parts of the schema. You should read/scan all SCRs for content that will be seen by customers. Note that some SCRs contain information on more than one entity e.g. an SCR for a table may also include new domains.

Any SCR generally affects the following entities:

- Tables (and columns): You should check the table descriptions as well as column descriptions.
- Domains: You should check each domain and transition description.
- System parameters (entries in the GPARAMS table): These descriptions do not go directly into the schema, so there is no need to change the descriptions (which are often badly written). Check these to ensure there is enough information to go into the system parameters interactive and documentation (e.g. that there is a default value shown for non-mandatory system parameters).
- Static data: Static data is table record data loaded by RB as it is installed or upgraded. You only need to check any data columns that contain descriptions or data that approximates a description.
- Public views: Generally they only contain SQL code for content in the view. However, sometimes descriptions are modified/added.
- Triggers: No documentation impact in trigger changes as we don't document these.
- Indexes: No documentation impact in index changes as there are no descriptions.
- Queues: Generally no documentation impact as there are no descriptions.
- Sequences: No documentation impact in sequences changes as there are no descriptions.

If you are unsure of the format required for documentation content within an SCR, check the online schema for precedence.

10.21.2.1 2.1. Examples

You can look at examples of SCRs in the following link:
http://infdevca.netcracker.com/scr/scr

10.22 Stored Procedures Processes

- 1. Purpose
  - 1.1. What and Why
  - 1.2. What Are Stored Procedures

    - 1.3. The Stored Procedures Interactive
    - 1.4. What Do I Need Before I Start
- 2. SPC File Format
    - 2.1.1. Making Changes to Files
- 3. XML File Generation
    - 3.1. Generating Stored Procedures
        - 3.1.1. Setting up the Stored Procedures Generation Environment
        - 3.1.2. Running the Stored Procedures Generation Process
        - 3.1.3. Analyzing the Log Files
        - 3.1.4. Troubleshooting the Generation Process
        - 3.1.5. Completing the Build
        - 3.1.6. Cleaning Up the Database
    - 3.2. Updating Stored Procedures Source Files
        - 3.2.1. Updates by PR
        - 3.2.2. General Issues to Check for in Stored Procedures
        - 3.2.3. Adding the Manual Changes
        - 3.2.4. Troubleshooting the Stored Procedures Interactive
    - 3.3. Checking the Deliverable
    - 3.4. Stored Procedures Differences
- 4. Stored Procedures DLDs
    - 4.1. Examples

10.22.1 1. Purpose

This section provides an overview of the requirement for the process.

10.22.1.1 1.1. What and Why

This process describes the modification of stored procedures source documents and the generation of the stored procedures interactive.

> The Stored Procedures interactive is not subject to a technical RAT review or a formal Editor Check when it is complete.

This process applies to specific Infinys components such as Infinys Rating and Billing, and Infinys Vertex Integration.

10.22.1.2 1.2. What Are Stored Procedures

Stored Procedures (aka APIs) provide an easy-to-use mechanism for creating, storing, modifying, retrieving, and deleting data within Infinys. They validate all data changes that are attempted in order to guarantee the integrity of the Infinys Rating and Billing database and to ensure the consistency of validation across all client platforms.

The procedures are grouped by functional area into packages. In addition, an extra package contains the general-purpose Stored Procedures used across all functional areas.

10.22.1.3 1.3. The Stored Procedures Interactive

The stored procedures interactive is available as a zip file in the following location in SVN Repository

example :
https://svncn.netcracker.com/RBMDOC/branches/RB/8.0.x/interactive_data/stored_procedures/

For other releases please check it in 8.0.x to <Major_release_number.x>

This file unpacks into the directory following structure:

- stored_procedures – this directory contains **.htm** files (with generally static information about stored procedures) with a graphics file and a cascading style sheet and the following directory:
    - stored_procedure_definitions – this directory contains **.xsl** files (XML templates for displaying the XML files) and **.html** files (the front page to the APIs as well as static HTML within the XSL display e.g. the header) and the following directory:
        - xmldata – the files containing the data about the stored procedures. These are generated by tools. The main body of work for this interactive involves generating these files.

10.22.1.4 1.4. What Do I Need Before I Start

You need to do the following:

- Be familiar with the stored procedures interactive and terminology e.g. packages, procedures (aka methods), and parameters. The following is an example of the interactive: http://hocdl22.netcracker.com:8080/PDFDoc/Inf_rb_4_2/changes/stored_procedures/stored_procedures.htm
- You will need to check out the following repository from SVN, if you have not already done so:
    - https://svncn.netcracker.com/RBMDOC/branches/RB/8.0.x/ (For other releases please check it in 8.0.x to <Major_release_number.x>)
- You will need to check out the following projects from SVN Repostiory, if you have not already done so:
    - Repository Name: https://svncn.netcracker.com/RB/branches/MR/9.0.x/RB (For other releases please check it in 8.0.x to <Major_release_number.x>), if you are working for Head Release please use (https://svncn.netcracker.com/RB/trunk/RB/),
    - APICAT
    - APICORE
    - APICUSTACC
    - APISYSCONFIG
    - REPORTS

Note: When you create these projects, you must check the Work Area Properties of each project to ensure that the **Translate ASCII Files** option is unckecked.

10.22.2 2. SPC File Format

The stored procedures interactive is created by running tools over development files in the APICAT, APICORE, APICUSTACC, APISYSCONFIG, and REPORTS SVN projects. The files containing the documentation information have an extension ***.spc** (specification file), for example:

APICUSTACC\acc\SRC\gnvacc.spc

Note on .spc files:

- Generally you can ignore all internal .spc file. Files starting as follows are internal:
    - gnvint*
    - gnvprd*

- gnvsqa*
- gnvTE*

Generally, you should only modify these files if they break the generation process – causing errors is OK.

- Some files are internal and therefore not published in the stored procedures interactive. If a *.spc does not contain $Published, then it is internal.
- *.spc files are text but can be created on UNIX or PC systems. When editing these files, you should use a text editor that can handle both types e.g. textpad.

10.22.2.1 2.1.1. Making Changes to Files

There are two circumstances under which files need to be modified:

- During XML generation when the log files specify that file parsing has failed. The files you have saved locally must be changed. You should also change the files in change SVN if (AND ONLY IF) you are sure that the change is to the documentation sections of the code and will not affect the Development code.
- During checking of the interactive when descriptions are incorrect (from a style guide viewpoint, grammatical errors or just wrong). You must make changes to the source files in change SVN (to make sure the modifications go into subsequent releases). You can make the changes in change SVN without interaction with the SME if (AND ONLY IF) you are sure that the change is to documentation sections of the code. If you think the description is incorrect (that is, the change is not for style guide or grammatical reasons) then you should contact the SME before making the changes. If time is short, then make the changes, email the SME and put them on the RAT review.

  You may not want to regenerate the stored procedures, for example, if the change is a small grammar change from a technical review. In this case, you need to modify the source files in Change SVN but, rather than regenerate the whole XML again, you can modify XML files themselves.

The source files in Change SVN are owned by Development. If you “break” the files (that is, make them non-functioning from a Development viewpoint), you are likely to “break” the daily regression tests. This will lead to very irate Developers contacting you.

Editing the Source Files in Change SVN

In SVN, you must ensure that you use the correct release tags. You must use a Development tag such as RB_3.0.4 and not an Information Development tag such as RB_3.0_A2 when changing an SPC file.

If changes need to be made to files in Change SVN, you should use TextPad. The main reason for this is that it will leave the file in the same state it found it. Other editors tend to save in UNIX or PC formats – for Change SVN compare reasons, it is good to save the file as you found it.

The format of the documentation parts of the SPC files is:

```
/*$DOC
$PACKAGE name [$TITLE title] [$DESC description]
$METHOD ($PUBLISHED | $INTERNAL) name [$INTRODUCEDAT version]
[$TITLE title]
[$DESC description]
```

```
[$DeprecatedVersion version]
[$DeprecatedBy method]
$PARAM [$MANDATORY|$INTEGRITY] name
$DESC description
[$RETURN description]
$ENDDOC*/
```

Where:

- [] - denotes optionality. All parts without [] are mandatory.
- (x | y) denotes either x or y must be provided.
- $ - sign denotes keyword
- /*$DOC denotes the begin of the documentation information.
- $ENDDOC*/ denotes the end of the documentation information.

This formula looks complex – you should view existing *.spc files as examples of good formatting. Points to note:

- At the top of each file is the package information. For example:

```
/*
$DOC
$Package GNVACC
$Title Accounts
$Desc <p>The gnvacc package provides stored procedures for creating
and
updating customer accounts information.</p>
$ENDDOC
*/
```

- For each method/procedure, there is a description for the method plus one description for each parameter. For example:

```
/*
$DOC
$Method $Published deleteBilledCDRs
$Title Deleting a billed event
$Desc <p>This procedure is used to delete billed events manually if
the
Invoicing company of the account allows early deletion. The procedure
creates
an entry in the EVENTDELETIONREQUEST table.</p>

$Param $Mandatory P_ACCOUNTNUM
$Desc Unique ID for the account. The value passed is verified against
the
database.

$Param $Mandatory P_BILLSEQUENCE
```

```
$Desc This is the unique ID of the contact for this customer.


$Param $Mandatory P_BILLVERSION
$Desc The bill version.
$ENDDOC
*/
```

- Methods not flagged with $Published (e.g. flagged as $Internal) are not published in the documentation. Therefore these are of no interest to us unless you have good reason to think that they need to be included – you should then consult with the SME about changing this to $Published.
- [$INTRODUCEDAT version] is used by Development and is of no interest to us.
- [$DeprecatedVersion version] and [$DeprecatedBy method] are only used for methods that are deprecated. Deprecated means that the procedure is still supported but there is a more recent procedure that should be used. It is unusual to delete procedures and system integrators only move to the latest version if they have to (the cost of testing a new procedure is prohibitive).

For example, gnvacc package has the following methods:

CREATETERMINATEDACCOUNT1NC Deprecated at Geneva release 5.3. Current procedure CREATETERMINATEDACCOUNT5NC.

CREATETERMINATEDACCOUNT2NC Deprecated at Infinys Rating and Billing release 2.2. Current procedure CREATETERMINATEDACCOUNT5NC.

CREATETERMINATEDACCOUNT3NC Deprecated at Infinys Rating and Billing release 3.0. Current procedure CREATETERMINATEDACCOUNT5NC.

CREATETERMINATEDACCOUNT4NC Deprecated at Infinys Rating and Billing release 3.1. Current procedure CREATETERMINATEDACCOUNT5NC.

CREATETERMINATEDACCOUNT5NC

- [$MANDATORY|$INTEGRITY] are explained best in the RB stored procedures document but, in short, mandatory means you must supply this value which cannot be null and integrity means you must supply this value which can be null (but only if the value of the parameter passed is actually null e.g. last bill sequence of a new account).

10.22.3 3. XML File Generation

The process details are covered in the following three sections. Section 3.1 covers the generation process, including setting up the generation environment and running the generation tool. Section 3.1.5 covers the mechanisms that are in place to modify new and existing Stored Procedures source and body files. Section 3.2.3 provides information on how to create differences between two Stored Procedures versions.

10.22.3.1 3.1. Generating Stored Procedures

Stored Procedures are generated in an incremental process that uses a number of executable applications. These applications are run in a Windows environment, under control of a batch file. It is necessary to set up the generation environment before a Stored Procedures interactive can be generated. If you are generating Stored Procedures for the first time, then it is also necessary to request access permissions to the machine that is used to generate the Stored Procedures interactive.

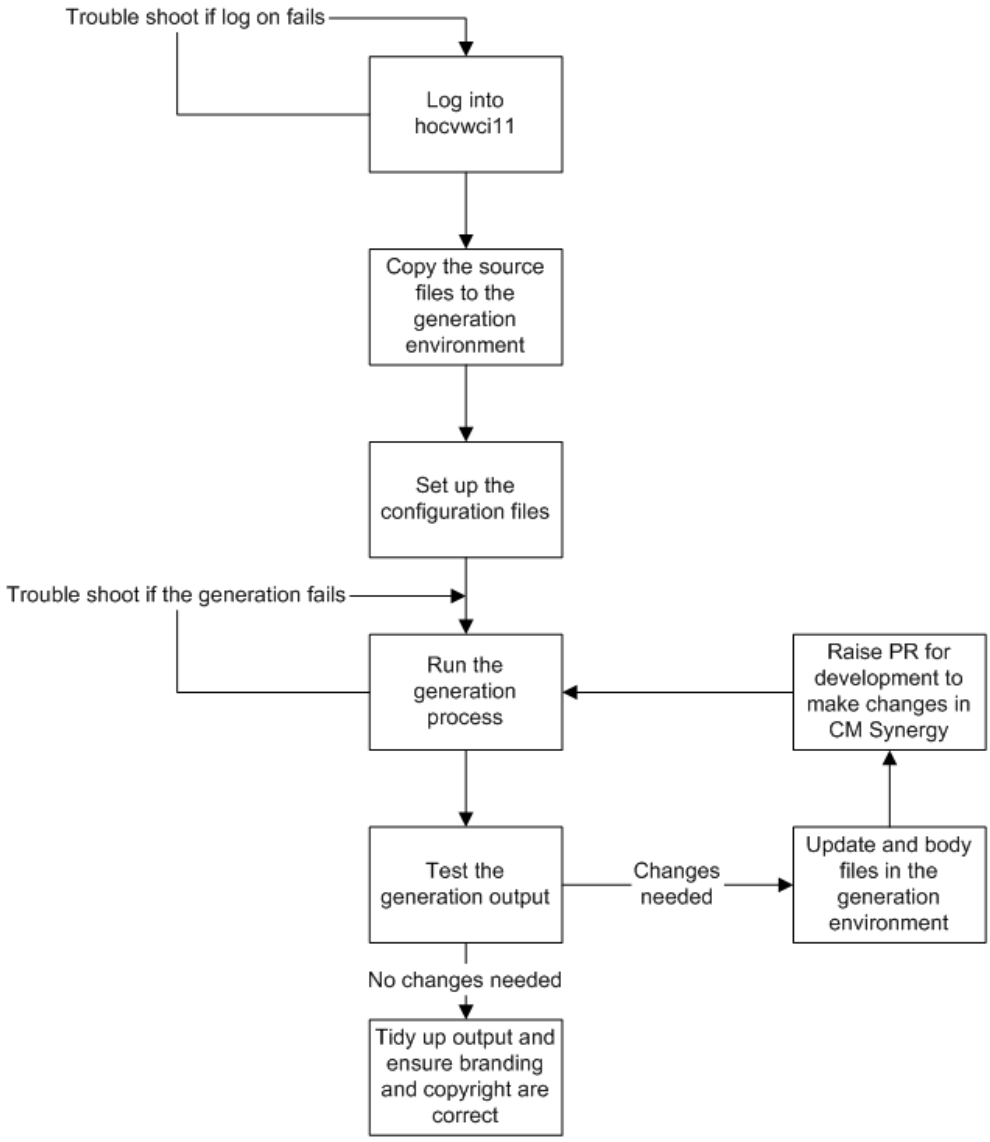


Figure 1: Flow Diagram for the Stored Procedures Generation Process

Stored Procedures and the Stored Procedures interactive generation tool are maintained by development. It is therefore important to ensure that adequate support can be provided during the release cycle. This should include the provision of post decut codes, if necessary.

10.22.3.1.13.1.1. Setting up the Stored Procedures Generation Environment

The generation environment is set up on hocvwci11 and requires you to modify and copy files to that system.

If this is the first time you are generating the Stored Procedures interactive, then you must request access to hocvwci11. All users of this system are created as administrator users and can set up other users in the system using the Control Panel > User Accounts application.

1. Apply the required release tag to the following SVN projects and reconfigure to pick up the latest files:
    - APICAT
    - APICORE
    - APICUSTACC
    - APISYSCONFIG
    - REPORTS
2. Connect to hocvwci11 (on emea), using a Remote Desktop Connection.
   If you have not already done so, you should map a drive to your local work area. This will make it easier to copy files between machines.
3. Ensure that the source material is up to date:
    - Delete the contents of c:\workspace. Do not delete the path c:\workspace itself.
    - Create a directory in c:\workspace that is relevant to the release (for example: RB_API4.3.3).
    - Copy new material from the APICAT, APICORE, APICUSTACC, APISYSCONFIG and REPORTS directories of your work area into the c:\workspace\<release name> directory.

> If, for whatever reason, you decide to keep copies of old source material, ensure that you do not duplicate it in the second level of the c:\workspace directory. If you do that, then the crud analysis may process the data twice and raise violations in form of dialog boxes. These appear during CI API.

4. Check that gnvcep.spc has no overload methods
    - Open c:\workspace\<release path>\APICORE\APICORE\costedevent\SRC\gnvcep.spc (for example C:\workspace\RB_API4.0.2\APICORE\APICORE\costedevent\SRC\gnvcep.spc)
    - If it exists, remove the second version of addPartition from the file. The method to be removed should have four arguments. (This overloaded function should have been removed by development, see PR#42087).
    - Even though you removed one version of addPartition, you may still get the following error messages in PLSQLEX_API.log:
      INFO : DOC : An INTERNAL Method is overloaded, documentation parsing skipped : GNVCEP | addPartition
      ERROR : DOC : APICORE : COSTEDEVENT : Method is overloaded, method is published... VERY BAD : GNVCEP | addPartition
      If you get these messages, then check that GNVCEP.ADDPARTITION only has the method you would expect it to have.
5. Edit the c:\docit\settings.ini file and set up project specific information:
    - "version" must be a dot delimited number, such as: 4.0.2 or 4.0.2.C3

> Ensure that any letters in the version number are in upper case.

- "apipath" must point to the source file directories. This is a semicolon delimited list of path names (for example: c:\workspace\RB_API4.0.2\APICAT; c:\workspace\RB_API4.0.2\APICORE;…).
- "schemaName" must be the correct schema name (for example: RB4.0E). This relates to the CORE schema name. The schema name associated with a particular release can be found on the RB Development Internet page under View schema by release.
- "file" must point to the genevamessages.txt file. This is usually in APICORE (for example: c:\workspace\RB_API4.3.3\APICORE\genevamessages.txt).
- All other entries in the file should remain unchanged.

> Information can also be copied and updated remotely to hocvwci11, using the mount point "\\hocvwci11\". Make sure that file privileges are set appropriately, otherwise access may be denied.

10.22.3.1.23.1.2. Running the Stored Procedures Generation Process

1. Open a command prompt on hocvwci11 and navigate to c:\docit.
2. Run the Stored Procedures generation tool by executing "run All.bat" (include the quotes when entering in the DOS window).

> You should run the batch file from the command prompt, rather than from explorer. This catches any messages that are written to the prompt. If executing "run All.bat" from within explorer, the DOS prompt is closed, once the batch file has reached the end of its execution. The DOS prompt shows the executables that have run and are running. Other dialogs show the progress of the individual executables.

3. It can take over one hour to run the generation tool.
4. Check the log files to ensure that there have been no catastrophic failures, especially the extraction log PLSQLEX_API.log.
5. If the generation has run without catastrophic failure, the XML output will be in the c:\docit\output directory.
6. You now need to analyze the logs to see what fixes are required (see next section).

10.22.3.1.33.1.3. Analyzing the Log Files

After the Stored Procedures generation process has run to completion, open the log files in the \\hocvwci11\docit directory to check for any errors, in the following sequence:

- PA_API.log
- PLSQLCL_ALL.log
- CE_API.log
- PLSQLCL_API.log
- PLSQLEX_API.log
- CA_API.log
- DBT_API.log
- CI_API.log

- docit_.log
- docit_API.log. This file is useful as it can contain information on incorrect DeprecatedBy settings. It also contains a lot of information concerning missing error messages which need to be fixed by development (if you can find a contact, it would be good to email them your results). You can use the following grep statement to remove the error message errors and leave just the material you can fix:
  grep -iv "message not found" docit_API.log > docit_API_minus_err.log

A lot of errors in these logs affect internal files (see SPC File Format for details). Internal files errors generally don't need to be fixed, though for future generation, it is a good idea to clean these up.

padd.exe

In the docit directory is the padd.exe tool. This tool parses a file and determines if the API tools would find any documentation errors in the file and where these errors are. To use this tool for determining API documentation errors:

1. Double click on the padd.exe to start the process.
2. Click on the **Load File** button and select the *.spc file to check.
3. In the Parse Type area, click on the **DOC** radio button. The documentation parts of the file only are displayed.
4. If the documentation sections of the selected file will not parse, the location of the problem is shown.

Most files with errors will parse and you will have to determine the error location by reviewing the content of the file or padd.exe.

Note: Many of the files causing errors will be internal and can be ignored (i.e. no fix required).

PLSQLEX_API.log

The \\hocvwci11\docit\PLSQLEX_API.log will probably have the majority of errors that require fixes in the source files. Many of the errors are internal and you could exclude these by running the following command in a UNIX-like environment (e.g. cygwin):

grep -v INTERNAL PLSQLEX_API.log | grep -vi gnvprd | grep -vi gnvsql | grep -vi gnvint | grep -vi "node=" | grep -vi gnvrep | grep -vi rbrepint > PLSQLEX_API_no_internal.log

The following list provides a summary of the errors you may find, what they mean, and what you can do to address them:

1. **INFO : DOC : Document title missing for : C:\workspace\XXX\YYY\ZZZ.spc**
   INFO : DOC : Document description missing for : C:\workspace\XXX\YYY\ZZZ.spc
   This indicates that the SPC file, referred to by XXX\YYY\ZZZ.spc does not have a title or a description for the package or a method in the package. The top of the file may contain the following:
   /*
   $DOC
   $Package ZZZ
   $ENDDOC
   */
   but should have something like:
   /*
   $DOC
   $Package ZZZ
   $Title … bla …
   $Desc This package provides stored procedures to …
   $ENDDOC
   */
   This error message applies to both, internal and external Stored Procedures. Error

messages that apply to internal Stored Procedures should ideally be updated, but are not required for the generation of the Stored Procedures interactive. Internal Stored Procedures start with one of the following prefixes: gnvsql, gnvint, or gnvprd.

2. ERROR : XXX : YYY : ZZZ : Method is overloaded, method is published... VERY BAD : class | method
   This indicates that a method within the published class is overloaded. This applies to functions, procedures, or a combination of both.
   There are many reasons for overloading methods, so it may be legitimate (e.g. for the gnvGen package). If unexpected, raise a PR to remove overloading in favor of creating a new method name.
3. ERROR : DOC : No param description found or multiple found: XXX | YYY | ZZZ
   This kind of error needs to be investigated in detail, as it indicates one of possible two problems.
   If there are multiple descriptions, then you may have to remove some, leaving you with only one.

   > Parameters are not case sensitive, so for example if you found: P_CSRUSER, p_csrUser, p_CSRUSer, p_CSRUser, and P_CSRUser, then that is one parameter.

4. ERROR : DOC : XXX : YYY : PUBLISHED : Param Not found : ZZZ | YYY
   This kind of error indicates that a parameter used within the argument list of the method call does not match the parameter found in the /*DOC … ENDDOC*/ section. Update the /*DOC … ENDDOC*/ section so that the names match up with the names in the argument list.
   There must be one parameter description per argument in the argument list.
   The following are example of reasons for failure:
   - Param Not found : GNVRTDBACTIONTHRESHOLD | modifyRTDBActionThresholdNC2 | **Mandatory** P_CUSTOMERREF
     Reason: The Mandatory part of this statement shows that **$** is missing from the front of Mandatory.
     Fix: add $ to give **$Mandatory**
   - Param Not found : GNVREVENUEFEED | deleteRevenuefeed2NC | P_DISCSINHERITDATESBOO**.**
     Reason: A full stop/period has been mistakenly added to the end of the parameter in the documentation.
     Fix: Remove .
   - Param Not found : GNVSERVPOLICYCONTROL | createServpolicycontrol1NC | P_ SETPRIORITYBOO
     Reason: There is space after P_
     Remove the space
   - Param Not found : GNVPAY | createAccPaymentRecharge1 | p_accountNumber
     Reason: The parameter in the code is p_accountNum (that is, without the ber)
     Fix: Remove the ber from the documentation.
5. ERROR : DOC : XXX : YYY : Method could not be found : ZZZ | ???
   This kind of error indicates that the method name of the method definition does not match with the method name that is defined in the /*DOC … ENDDOC*/ section. Make sure that the method names match up. The information in the /*DOC … ENDDOC*/ should be updated to match the name of the method definition.
6. INFO : DOC : Not a valid release (must be a float) : XXX | YYY | Z.Z.Z
   This information message indicates that the wrong release was specified in the /*DOC … ENDDOC*/ section ($DeprecatedAt). You should change it to an integer value, for example change 4.0.2 to 4.0.
7. INFO : DOC : Not one single description tag for element (either multiple or zero specified) : XXX | YYY

Check the output by going through the interactive and looking at these procedures (for example empty table cells). You can use padd.exe to verify that the methods parse.

8. ERROR : DOC Parse Error : 1006 : End-of-file expected : XXX.spc : YYY.bdy
   This may indicate an issue with the HTML format. Check this error visually. You should use padd.exe to verify that the methods parse. You can also open the file in TextPad to test if any control characters were included in the source. Check the output by going through the interactive and looking at these procedures (for example empty table cells).
   Typical errors are:
   a. /* $DOC
      should be:
      /*
      $DOC
   b. No $ENDDOC associated with a $DOC
   c. An n-dash is used instead of a hyphen (use TextPad to verify this)
9. ERROR : DOC Parse Error : 1005 : Parse failed : XXX.spc : YYY.bdy
   This error message has no impact on the Stored Procedures interactive and can be ignored.
10. ERROR : DOC : Error Message Not Found : C:\workspace\XXX\YYY\ZZZ.bdy : Node=????
    This error message has no impact on the Stored Procedures interactive and can be ignored.
11. INFO : DOC : An INTERNAL Method is overloaded, documentation parsing skipped : XXX | YYY
    This information message has no impact on the Stored Procedures interactive and can be ignored.
12. ERROR : DOC : ??? : ACC : INTERNAL : Param Not found : XXX | YYY | ZZZ
    This error message has no impact on the Stored Procedures interactive and can be ignored.
13. ERROR : EXCEPTION : XXX.bdy : Cannot open file "YYY.spc". The system cannot find the file specified
    This error message has no impact on the Stored Procedures interactive and can be ignored.
14. ERROR : Method Name is Empty : ??? : XXX.bdy
    This error message has no impact on the Stored Procedures interactive and can be ignored.

10.22.3.1.43.1.4. Troubleshooting the Generation Process

1. I get the following dialog message when trying to log into hocvwci11, using the Remote Desktop Connection:

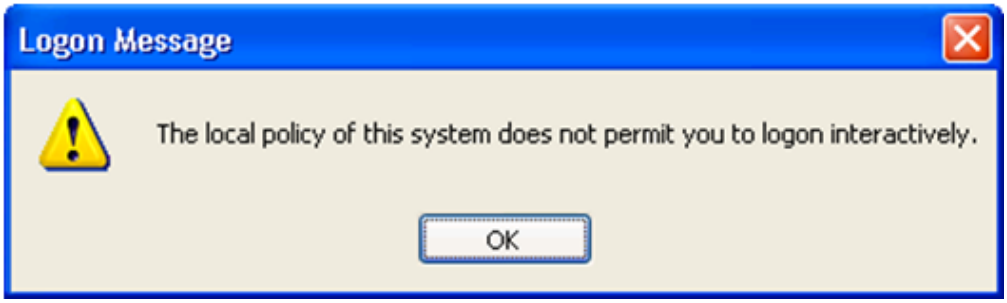


Figure 2: The local policy of this system does not permit you to logon interactively.

This message indicates that you do not have log on privileges to hocvwci11. Please contact the person previously responsible for generating the interactive, and ask them to provide you with a log on profile for the hocvwci11 VmWare machine. Alternatively, ask the developers responsible

for the stored procedures tools. The log on profile should always be given administrator privileges.

2. I get the following dialog message when trying to log into hocvwci11, using the Remote Desktop Connection:

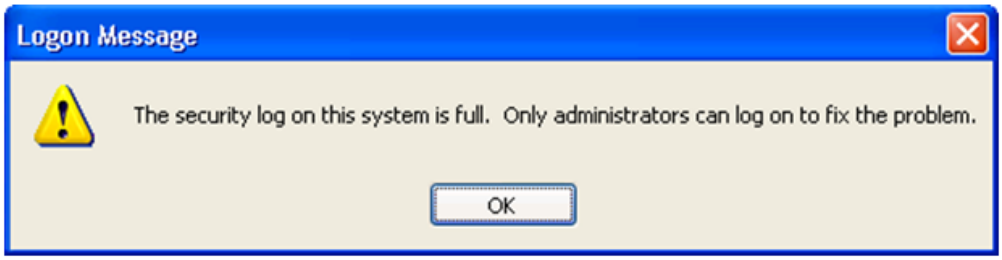


Figure 3: The security log on this system is full. Only administrators can log on to fix the problem.

If you do not have administrative privilages, then you cannot log onto hocvwci11 until this log has been cleared. Contact the person previously responsible for generating the interactive, or the developers responsible for the stored procedures tools, to clear the log for you or provide you with administrative privileges.

3. I get access denied dialog boxes for log files and paths, when running the generation tool, similar to the following one:

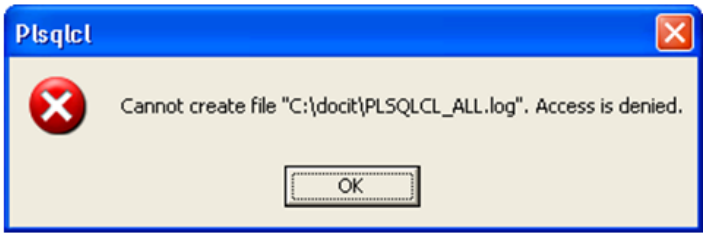


Figure 4: Cannot create file "C:\docit\PLSQLCL_ALL.log". Access is denied.

Your user profile has not been set up with the necessary privileges on hocvwci11. Contact the person previously responsible for generating the interactive, or the developers responsible for the stored procedures tools, to address this issue. Your profile needs to be set up with administrator privileges.

4. I get Oracle related insufficient privilege dialogue boxes like the following one:

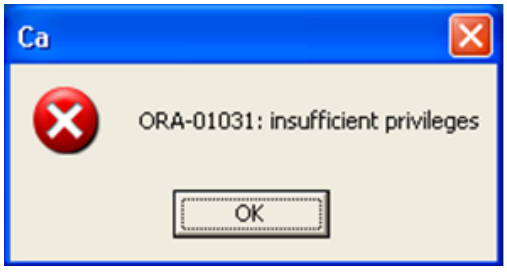


Figure 5: ORA-01031: insufficient privileges.

Contact the developers responsible for the stored procedures tools to solve this issue.

5. I get an "ORA-12514: TNS:listener does not currently know of service requested in connector descriptor" error message.

This indicates that the database may be down. In this case you should look at the database operation using the following application available from the start menu on hocvwci11:
All Programs -> Oracle - OraDblog_home1 -> Database Control - doccrud2
Log in information: User Name: crud Password: crud

If the database is down, then you should execute c:\docit\database scripts\startup_doccrud.bat on hocvwci11.
If you need to take down the database first, then execute: c:\docit\database scripts\shutdown_doccrud.bat on hocvwci11. When that is complete, try to start the database again, using the previous command.

6. Each executable does a job and saves all data from this job. If the run fails midway through, after you fix the problem, you can start the program where it left off by copying out the relevant lines (i.e. those that have not run to completion) from the run All.bat file into the run single.bat file (after you have deleted its current content). This can then be run to complete the run without having to start the whole run again.

10.22.3.1.53.1.5. Completing the Build

Once you have generated the XML files, using the generation tool, you must build the Stored Procedures interactive:

1. Check out the last Stored Procedures interactive zip file. This is located in SVN under: https://svncn.netcracker.com/RBMDOC/branches/RB/8.0.x/interactive_data/stored_procedures/stored_procedures.zip
2. Extract the content from the zip file to a work location.
3. Modify the release number and document version in the **stored_procedures.htm** file.
4. Check the copyright year (multiple locations in) in all **.htm** and **.xsl** files, and some of the **.html** files. Change this as required.
5. Delete the content of the **stored_procedures\stored_procedure_definitions\xmldata** directory.
6. Copy the latest versions of the XML files from \\hocvwci11\docit\output to the **stored_procedures\stored_procedure_definitions\xmldata** directory.
7. Test the content of the Stored Procedures interactive, update the source files by the process described in the next section and generate the interactive again. The update and regeneration cycle should be repeated until no more changes need to be made to the source files.

10.22.3.1.63.1.6. Cleaning Up the Database

After you have checking in the documentation deliverable, you should clear up the CRUD database on hocvwci11 by running the following command from the command line of a DOS window, in the C:\docit directory:

run_DBT.bat

Cleaning Up Previous Versions

Other users of the CRUD database may have left other releases in this database, so it is a good thing at the end of every release to check which schemas have been left in the CRUD. To find out which schemas are in the CRUD and delete the schemas, do the following:

1. Log onto hocvwci11.
2. Start up Bunyan using the following:
   Username: crud
   Password: crud
   Database: xe
3. In the left-hand column, click on the COMPONENT table.
   The schemas in the database are shown in this view.
4. To remove schemas:
   a. In Bunyan, examine the VERSION column in the COMPONENT table.
   b. For those versions to be removed from the CRUD database, edit the settings.ini file. Modify the **version,** in the [settings] area, to be the same as the VERSION column in the COMPONENT table.

c. In a DOS window, run the following command from the command line, in the C:\docit directory:
run_DBT.bat

10.22.3.2 3.2. Updating Stored Procedures Source Files

The Stored Procedures .spc and .bdy source files must only be updated by people in development.

> Authors are not permitted to update .spc and .bdy source files directly.

You have two means by which the Stored Procedures source files can be updated. By submitting a PR for existing issues that need to be addressed, or by providing feedback through a RAT review that addresses enhancements or new features.

Both of these processes are formal and provide developers with the means to update .spc and .bdy files or allows developers to test the changes requested by documentation.

10.22.3.2.13.2.1. Updates by PR

A PR is used to request a change to the documentation content of the Stored Procedures .spc or .bdy files. This allows any documentation change to be made to the Stored Procedures interactive, without the risk of documentation impacting on the integrity of the functional code of the .spc or .bdy files.

The PR content should be structured in such a way that a developer can easily find the location that is to be updated. This can be achieved by listing the filename and the name of the method that is impacted. The developer also has to understand exactly what is to be changed in the relevant files. This information can be provided by copying and pasting the old code segment into the PR. This should be followed by a copy of the updated code segment. Descriptive text should indicate to the developer what the old code and what the new code is.

The PR can also provide developers with more high level information, for example regarding missing content or a change for which it is not possible to provide a code example. In this case, it is again necessary to provide the file or method names.

To see an example of the PR format used for Stored Procedures, please refer to: PR 42869

*Change in R4.4 by Julie Busken: The writer will submit edits in a PR. This must be submitted about a week and half before the Development team needs to complete related activities for the SA build. In the PR, the writer should put a note to the developers to contact him/her for hours for incorporating the edits and checking the files in and out, etc. The writer will send a note to Ramesh Sangaran, who will delegate the edits to the appropriate developers. When the edits have been incorporated, the development team will raise a RAT review to the writer, and the writer will review and confirm the changes/edits by viewing the source files and/or interactive.

10.22.3.2.23.2.2. General Issues to Check for in Stored Procedures

The following are some of the issues that need to be reviewed and updated when testing the documentation content of Stored Procedures. This list is not exhaustive and you should still refer to the Information Development Style Guide.

Also refer to the following PRs and RAT review for more details on issues that were identified: PR: 37841, PR: 37912, INFDEV-12688-2/SYOUNG1/45, and INFDEV-12688-2/SYOUNG1/56. These PRs and reviews contains issues not adhering to style guidelines.

- Table names, columns, and fields need to be capitalized.
- Most cases where T or F is mentioned, should be written as T (true) and F (false).
- Oxford commas must be used for enumerations, for example: "The possible values are 1, 2 and null." should be written as: "The possible values are 1, 2, and null."
- Expand out grammatical contractions, for example: "it’s" should be "it is".

- Use present tense instead of future tense, for example: "This will only be populated if it is a Customer CDS otherwise it will be null." should be written as "This is only populated if it is a Customer CDS, otherwise it is null."
- The term "API" is not used, instead it should be: "stored procedure".
- Changes are to be made for some of the descriptions, for example:
    - "Defines the CDS whose status we are trying to change." should be: "Defines the CDS whose status is to be changed."
    - "Defines the status that the CDS should be transitioned to." should be: "Defines the status that the CDS is going to be transitioned to."
    - "Defines the domain group that the CDS belongs to. This will only be populated if it is a Customer CDS otherwise it will be null." should be: "Defines the domain group that the CDS belongs to. This is only populated if it is a Customer CDS, otherwise it is null."
    - "The cache_data_set_id is returned for the just created CacheDataSet record." should be: "The CACHE_DATA_SET_ID value is returned for the new CACHEDATASET record."
- Whenever you use "If ... . Then ..." there should be a comma before "then" that is, "If ... , then ..."
- Check the statements about deprecation for all procedures which are being modified at this release.
- Ensure "id" is written as: "ID"
- "bool" on its own is incorrect and should be: "Boolean variable"
- "This procedure is used to partition the DELETEDINITIALINDEX1 and DELETEDINITIALINDEX2." should be: "This procedure is used to partition the DELETEDINITIALINDEX1 and DELETEDINITIALINDEX2 tables."
- Replace occurrences of "re-rate" with "rerate".
- All long sentences should be provided in a bulleted list (refer to the Style Guide for conventions).
- "The account number for which the event source has to be update" should be: "The account number for which the event source has to be updated."
- Use American spelling, example: "behaviour" to "behavior"
- Remove line returns in the middle of sentences.
- Check for parameters with empty descriptions.
- Check that the Current Procedure version is correct for any newly added ones.

10.22.3.2.33.2.3. Adding the Manual Changes

Uring the technical review process some manual additions have been required to the stored procedures, due to inconsistencies in the generation process. You will need to manually make the changes in the following files to the XML files:

https://svncn.netcracker.com/RBMDOC/branches/RB/8.0.x/interactive_data/stored_procedures/manual_additions_to_api_interactive.txt

Notes:

- An HTML editor is a good application to use for this process. Care must be taken to only make the exact changes required as any mistakes are likely to lead to pages not being shown.
- The procedures/methods described in the above file could be deprecated – make changes to all versions of the procedure above the mentioned version.

- After making the changes, check each of the affected methods to ensure that the page displays.

10.22.3.2.43.2.4. Troubleshooting the Stored Procedures Interactive

When the XML files for a release have success generated for the first time, you will need to go through all new methods identified in Checking the Deliverable.

- **Errors when trying to access a page**. A blank page is displayed, or the link does not work and an error is displayed in the status bar of the Web browser. The formatting in the SPC file is in error, and the Information Development team can fix the problem. If in doubt about what is displayed, consult the person who checked the changes into SVN.
  If you get this the first time you access the Stored Procedures, read the bold text on the "Infinys Rating and Billing Stored Procedure Definitions" page.
- **Blanks in the parameter descriptions**. For example (gnveventdiscountstate.changeeventdiscountstate1nc):

Declaration

```
PROCEDURE GNVEVENTDISCOUNTSTATE.CHANGEEVENTDISCOUNTSTATE1NC
(
  P_DISCOUNTCONTROLSTATE
  P_EVENTDISCOUNTID IN INTEGER
  P_CURRENCYCODE IN VARCHAR2
  P_INVOICINGCOID IN INTEGER
  P_DISCOUNTCONTROLSTATUS IN INTEGER
) ;
```

Parameters

Parameter	Description	Integrity	Mandatory
P_DISCOUNTCONTROLSTATE	Maps to EVENTDISCOUNTSTATE.DISCOUNT_CONTROL_STATUS.	F	T
P_EVENTDISCOUNTID	Maps to EVENTDISCOUNTSTATE.EVENT_DISCOUNT_ID.	F	T
P_CURRENCYCODE	Maps to EVENTDISCOUNTSTATE.CURRENCY_CODE.	F	T
P_INVOICINGCOID	Maps to EVENTDISCOUNTSTATE.INVOICING_CO_ID.	F	T
P_DISCOUNTCONTROLSTATUS			

This is usually caused by a mismatch between the names of the parameters in the documentation section and the name in the Development section. In the code you have;

```
/*
$DOC
$Method $Published CHANGEEVENTDISCOUNTSTATE1NC
$IntroducedAt 5.4
$Title Emergency Rating Discount Control
$Desc Create and modify Emergency Rating Discount Control records
(EVENTDISCOUNTSTATE)

$Param $Mandatory P_EVENTDISCOUNTID
$Desc Maps to EVENTDISCOUNTSTATE.EVENT_DISCOUNT_ID.

$Param $Mandatory P_CURRENCYCODE
$Desc Maps to EVENTDISCOUNTSTATE.CURRENCY_CODE.
```

```
$Param $Mandatory P_INVOICINGCOID
$Desc Maps to EVENTDISCOUNTSTATE.INVOICING_CO_ID.

$Param $Mandatory P_DISCOUNTCONTROLSTATE
$Desc Maps to EVENTDISCOUNTSTATE.DISCOUNT_CONTROL_STATUS.

$ENDDOC
*/
procedure changeEventDiscountState1NC(
p_EventDiscountId IN INTEGER,
p_CurrencyCode IN VARCHAR2,
p_InvoicingCoId IN INTEGER,
p_DiscountControlStatus IN INTEGER);
end gnvEventdiscountstate;
```

Here you can see that the name in the documentation section (in blue) is different from that in the developer code (in pink). The value in pink should replace the blue value in the documentation section.

- **Blanks in the error message descriptions**. Development should be made aware of these, since Information Development cannot fix this. This message may be due to coding issues or the content in the **genevamessages.txt** file.
- Missing title and/or description for package. For example (gnvreraterequest) the following shows both to be missing:



The code for this shows the package tags to be:

```
/*
$DOC
$Package gnvreraterequest
$ENDDOC
*/
```

You must add the $title and $Desc keywords into here and add appropriate text.

- **HTML formatting errors**. For example (gnvreraterequest.createreraterequest1nc):

Parameter	Description
P_RERATEDRIVERTYPE	This is parameter which decides the level of reraterequest. Valid values are 'A' (account), 'C' (customer), and 'E' (eventsource).
P_RERATEDRIVER	This contains Customer reference, account number or event source based on level of reraterequest.
P_RERATEDATETYPE	Type of the date for given start/end dates. Valid values: 'EVENT', 'CREATED'. It is mandatory if any of p_startDtm, p_endDtm is not null.
P_STARTDTM	Start date for the reraterequest. It is mandatory for eventsource level reraterequest

This shows additional blank lines in the table. The source shows the reason:

```
$Param $Mandatory p_rerateDriverType

$Desc <p> This is parameter which decides the level of reraterequest.

Valid values are 'A' (account), 'C' (customer), and 'E'
(eventsource).<p>
```

The last should be .

- Text that doesn't follow our style guide (gnvcdsreplication):

Description

The gnvprdcdsreplication package provides stored procedures for managing Capture, Propagate and Apply Rules and Supplemental Logging. It assumes a database version of 10g2 Enterprise Edition.

Here a lot of words have a lead upper case which isn't required. Also, I'd question "Capture, Propagate and Apply Rules and Supplemental Logging" – doesn't this package cover cache data set replication? You should ask these questions of the developer who entered the changes to this *.spc file.

- Inappropriate description. For example (gnvcdsreplication.changecdsstate1):

Description

This method will do the following:

- If cacheDataSetStatus is 'Empty' then it calls the internal API changeCDSesToEmpty.
- If cacheDataSetStatus is 'Deleted' then it calls the internal API changeCDSToDeleted.
- If cacheDataSetStatus is 'StandBy' then it calls the internal API changeCDSToStandBy.
- If cacheDataSetStatus is 'Offline' then it calls the internal API changeCDSToOffline.
- If cacheDataSetStatus is 'Online' then it calls the internal API changeCDSToOnline.

Here, the author has referenced internal APIs to which the customer has no access. In this case, I would suggest removing the bullets from the method description, change the description to " and changing the description of the P_CACHEDATASETSTATUS parameter from:

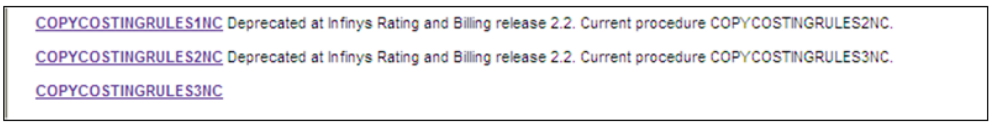
Defines the status that the CDS should be transitioned to.

To:

Defines the status that the CDS should be transitioned to; empty, deleted, standby, offline, or online.

But you need to check that with the SME responsible.

- Incorrect deprecation numbers. Can take several forms:
    - The number has not be updated (on procedures we know have been deprecated this release). For example (gnvcostingrules):



    - The current version has not been updated. Example above – both should point to *3NC.
    - Adding of RB to deprecated number. For example (gnvcustpackage) where RB3.1 should be 3.1:



10.22.3.3 3.3. Checking the Deliverable

You should perform the following checks on the interactive after it is complete:

1. Check that the release and document versions on the front page are correct. Also check here to make sure that the BETA is showing (for non-GA release) or not showing (GA release).
2. Check that the dates of the copyright are correct in the HTML files and XSL files.
3. Check that the legal page is the most recent – you will have been told during a release if the legal statement has changed.
4. Go for a quick tour of the pages in the interactive, drilling down as far as you can. Check that the look and feel of the document is as expected (e.g. the style sheet has been applied appropriately) and that no blank pages are produced.
5. Check all the links in the interactive using Xenu (http://home.snafu.de/tilman/xenulink.html#Download).

10.22.3.4 3.4. Stored Procedures Differences

The Stored Procedures differences can be generated by executing docdiff.exe. This is an application developed by David Windsheffel. The application is available in the APP_DEPLOY project (CB5) and can be run on your local machine. Execute the comparison as follows:

1. Download the XML files of the deliverables you want to compare to your local machine. You have to do this for both of the releases you want to compare.
2. Start docdiff.exe and point the tool at the XMLDATA directories of both Stored Procedures interactives.
3. Fill in version names. These are labels that go into XML output file.
4. Select Go.
5. An XML file is generated called diff.xml that should find all of the following:
    - New / Deleted Packages
    - New / Deleted Methods
    - New / Deleted Parameters
    - Parameter Datatype changes

- Parameter Index changes (some of our customers rely on the order of the parameters rather than naming parameters).
- Parameter Direction changes (IN becomes IN/OUT etc).
- Parameter Mandatory changes (nullable parameter becomes not null).

The XML file is logically tagged and cab be read, If time permits, it would be good to have some XSL to display pages of change.

10.22.4 4. Stored Procedures DLDs

The most efficient way of ensuring correct documentation tags is become a reviewer for any stored procedure DLDs entered for the enhancements associated with a release. Reviews are done through the RAT as usual with the review being raised by development. You must ensure that you are part of the review team for any stored procedures documentation. You may have to email development manager to make them aware that you need to become part of the review process.

Usually, the development DLD contains an appendix with all the documentation tags included. You should:

- Checking the tags within the appendix to ensure that the format of the tags is correct.
- Perform an editor check on the tag descriptions.
- Check the names, number and order of tags against the development text in the main body of the DLD i.e. in the design structure sections.
- Ensure that any deprecated methods are updated to highlight by which method they have been deprecated. For example if a new method called createRatingElement5NC was introduced, then you need to ensure that deprecation text is modified in methods createRatingElement1NC to createRatingElement3NC (which would have pointed to createRatingElement4NC as the latest method) and added to createRatingElement4NC.
- Check the development content for any restrictions e.g. a parameter that can only have values of 1, 2, or 3. Usually this information is in the internal procedure content e.g. any restrictions to new content for procedure createproductprice3NC would be in createproductpriceIntNC.

10.22.4.1 4.1. Examples

For past RAT reviews, refer to:

- INFDEV-28051-1
- INFDEV-27933-2
- INFDEV-38694-4

10.23 SVN Instructions

- Important Note
- SVN Links and Locations
- Installing SVN on your VM
- Checking out Projects on your VM
- Updating Existing Documents
- Adding New Files or Folders
- Other Useful Options

- RAT Review Changes due to SVN
- Frequently Asked Questions

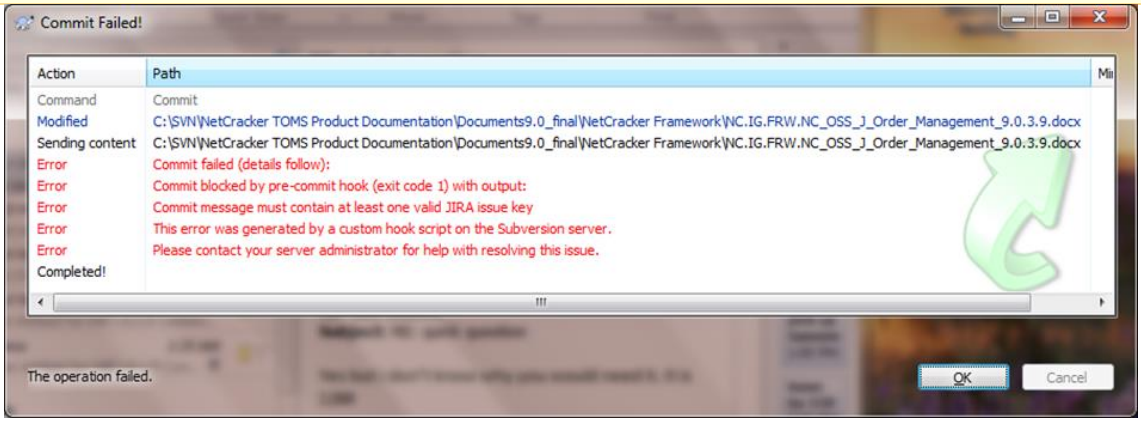
10.23.1 Important Note

**Note from Andrey on 4/16/15 (impacts the https://svn.netcracker.com/ProductDocuments/Documents90 directory only)*

The comments feature has been enabled in the TOMS SVN repository. Every commit is now linked to a ticket in PSUPTW. This works as follows:

- If the change you commit is supported by a PSUPTW ticket, then specify its number in the KEY-### format or its full URL in the commit message (the latter is better as it allows to then open the ticket by the link from the history of commits). Also please provide a meaningful message describing the change/s.
- If the change is not supported by any PSUP ticket, and is it just a typo or corrupt formatting, then use PSUPTW-1530.

If you don't specify the full JIRA number (PSUPTW-[enter number here]), you will get the following error:



10.23.2 SVN Links and Locations

It is recommended that you use the link(s) that correspond to your location so that your speed is quick and reliable.

RB

Hyderabad: https://svnhd.netcracker.com/RB

UK: https://svnca.netcracker.com/RB

US: https://svncn.netcracker.com/RB

VI

Hyderabad: https://svnhd.netcracker.com/VI

UK: https://svnca.netcracker.com/VI

US: https://svncn.netcracker.com/VI

TAP3

Hyderabad: https://svnhd.netcracker.com/TAP3

UK: https://svnca.netcracker.com/TAP3

US: https://svncn.netcracker.com/TAP3

AMI

Hyderabad: https://svnhd.netcracker.com/AMI

UK: https://svnca.netcracker.com/AMI

US: https://svncn.netcracker.com/AMI

RBMDOC

Hyderabad: https://svnhd.netcracker.com/RBMDOC

UK: https://svnca.netcracker.com/RBMDOC

US: https://svncn.netcracker.com/RBMDOC

10.23.3 Installing SVN on your VM

To install SVN on your VM:

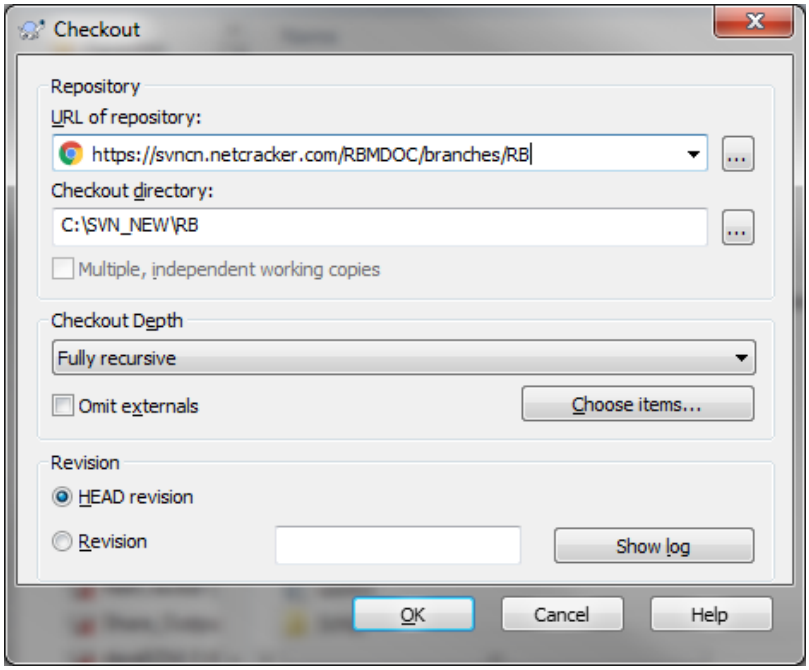
1. Install SVN from here: \\ftp\public\distribs\Development\SVN

Note: As of Sept. 2015, the supported version is 1.7.8. (1.8.x is a later version of SVN and is known to have errors in NetCracker SVN repositories.)

10.23.4 Checking out Projects on your VM

To check out the RB project on your VM from the svn server:

1. On your VM, create a folder called **SVN_NEW** (or whatever you wish) and create a subfolder called **RB** -> **C:\SVN_NEW\RB**
2. Right-click the **RB** subfolder and select **SVN Checkout** (you will be prompted to enter your login credentials at this point). You will need to use your network user ID and password.
3. The Checkout dialog box will open. Do the following on this window:
    a. In the **URL of repository** field, copy and paste the following link: https://svncn.netcracker.com/RBMDOC/branches/RB/
    b. In the **Checkout directory** field, make sure it reflects: **C:\SVN_NEW\RB** (or whatever directory you used)
    c. Click **OK**.



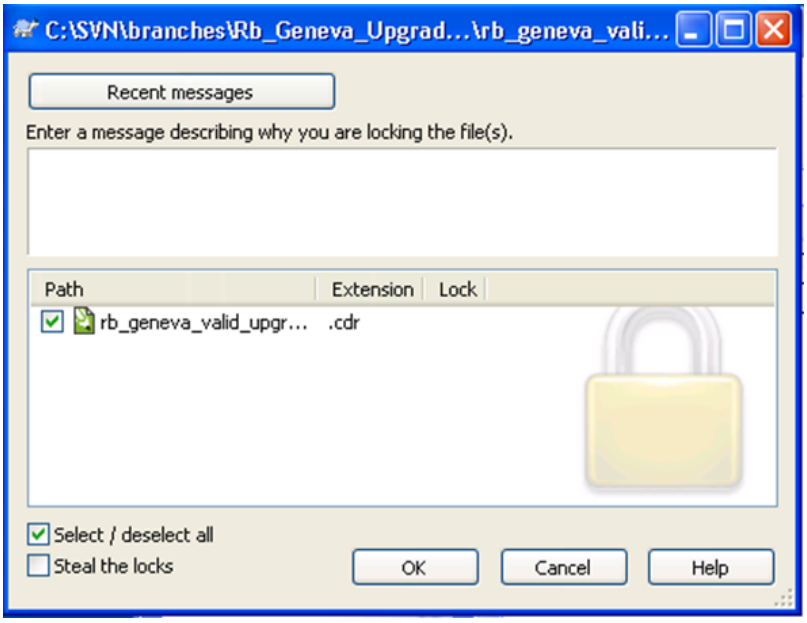
4. At this point you will see another window showing all the files being copied over. (This will probably take an hour or possibly more. The RB/ project is big.) You will get a notification message once done. Click **OK**.

If you are going to be working on any other projects besides RB, you will need to check out those folders as well. The previous instructions are for RB but can be used for the other projects too. (For example, if you need to check out a different project in the branches directory (https://svncn.netcracker.com/RBMDOC/branches/), replace “RB” with the name of the project folder (VI, TAP3, etc.).

10.23.5 Updating Existing Documents

To update existing documents in SVN:

1. After you have checked out the project, right-click the folder you will be working in (for example, 8.0.x) and select **SVN Update**. (**SVN Update** is similar to reconfigure.)
2. Locate the file you need to update and select **TortoiseSVN > Repo-browser** to see if there is a lock on the file.
   The last column (Lock) shows if the file is locked. If the file is not locked, you can lock the file. (Click **OK** to close the Repo browser window.) If the file is locked, the Repo browser will tell you who is working on the file. You can email that person and find out when he/she may be done with the file. Two people cannot work on the same file simultaneously.
3. To lock the file, right-click the file you will be making updates to and select **TortoiseSVN > Get lock**. The following window is displayed:



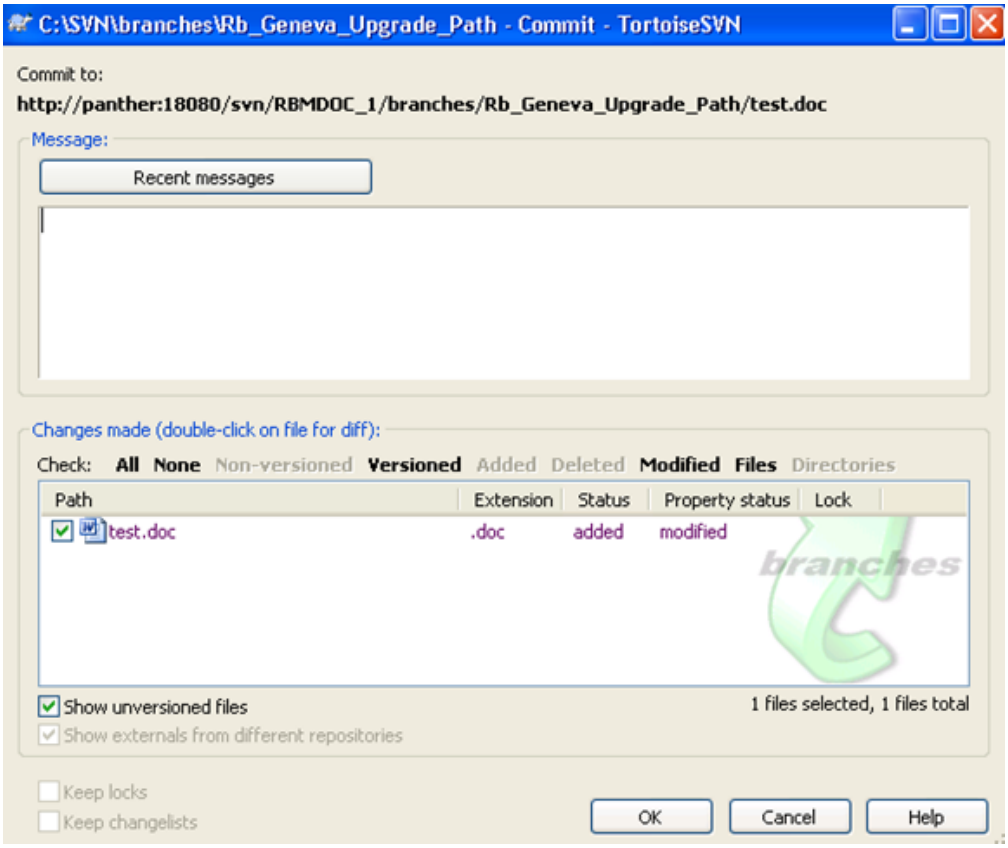
4. Enter a comment that explains why you are locking the file (for example, if you are updating it for a specific ACPD, feature, etc. or if you are editing the entire file or a specific feature or ACPD) in the top field on this page.
5. Click **OK** on this window after you have entered a comment.
6. You can now work on the file and save your changes (**Get lock** is similar to check out in CM Synergy).
7. When you are done making changes, right-click the file and click **SVN Commit** (**SVN Commit** is similar to check in in CM Synergy).
8. Right-click the folder in which the file is located and select **TortoiseSVN > Update** (to update the icons).

**You can check out/check in more than one file at a time, just like in CM Synergy, by selecting multiple files with the ctrl button.

10.23.6 Adding New Files or Folders

To add a new file or folder in SVN:

1. Right-click the folder you will be working in and select **SVN Update**. (**SVN Update** is similar to reconfigure.)
2. Paste the new file (or folder) in the appropriate directory.
3. Right click the new file/folder and select **TortoiseSVN > Add**.
4. Right-click the file/folder) and click **TortoiseSVN > Commit.** The following window is displayed:



5. Enter a comment that explains why you are adding the file/folder (for example, if you are creating it for a specific ACPD, feature, etc.) in the top field on this page.
6. Click **OK** on this window after you have entered a comment.
7. Right-click the folder in which the file/folder is located and select **TortoiseSVN > Update** (to update the icons).

**You can add multiple files at a time, just like in CM Synergy, by selecting multiple files with the ctrl button.

10.23.7 Other Useful Options

Here are some other useful options:

TortoiseSVN > Delete – Enables you to delete a file or folder from SVN.

Notes:

- If you removed a file or folder via **TortoiseSVN > Delete**, the file/folder will not be removed from the repository until you've committed the changes via **SVN Commit**.
    - Even if you wrongly committed the changes for the deleted document, the document can still be restore using **TortoiseSVN >Update to revision**.
- Be very careful when deleting files/folders from SVN. Only delete files that you know can be deleted (or were created by mistake). If you are deleting a file from a guide because the content is no longer valid, consider creating a **retired_files** folder and moving the file there.

If you check out a project by mistake (or want to clean up some space on your computer or VM), you can delete it from your computer/VM, but NOT with the **TortoiseSVN > Delete** function. Instead, you would use the normal Windows **Delete** function (right-click and **Delete**). The normal Windows **Delete** function deletes the file/folder from your computer/VM but not from SVN.

TortoiseSVN > Release lock – Enables you to release a lock on a file if you checked it out by mistake. You would select the file that is locked and then select this option from the right-click menu.

TortoiseSVN > Rename – Enables you to rename the selected file or folder.

- Renaming in SVN consists of two operations – renaming the file/folder with the new name and deleting the file/folder with the old name. Both operation need to be committed.
    - You cannot delete the old file/folder if someone has a file locked. You will get an error. You will need to email that person and have them release the lock or commit their changes.
- If you rename the folder and then run SVN Commit on that folder, only add operation will be committed. You should run SVN Commit for the root folder and make sure that the folder with the old name is selected (it will be displayed in dark red indicating that it will be deleted).

Instructions on how to rename a file:

1. Right-click the file that you want to rename, select **TortoiseSVN > Rename**, and enter a new name for the file.
2. On the folder level (one up from the file level), select **TortoiseSVN > Update** (to pull in any changes) before you commit the folder.
3. On the folder level, select **TortoiseSVN > Commit**.
   A pop-up window will appear. Add a comment, check the files displayed on the window, and then click **OK**.

Note: For some reason, I usually have to do a cleanup on the file to see the icons properly after a rename.

TortoiseSVN > Repo-browser – Enables you to do the following:

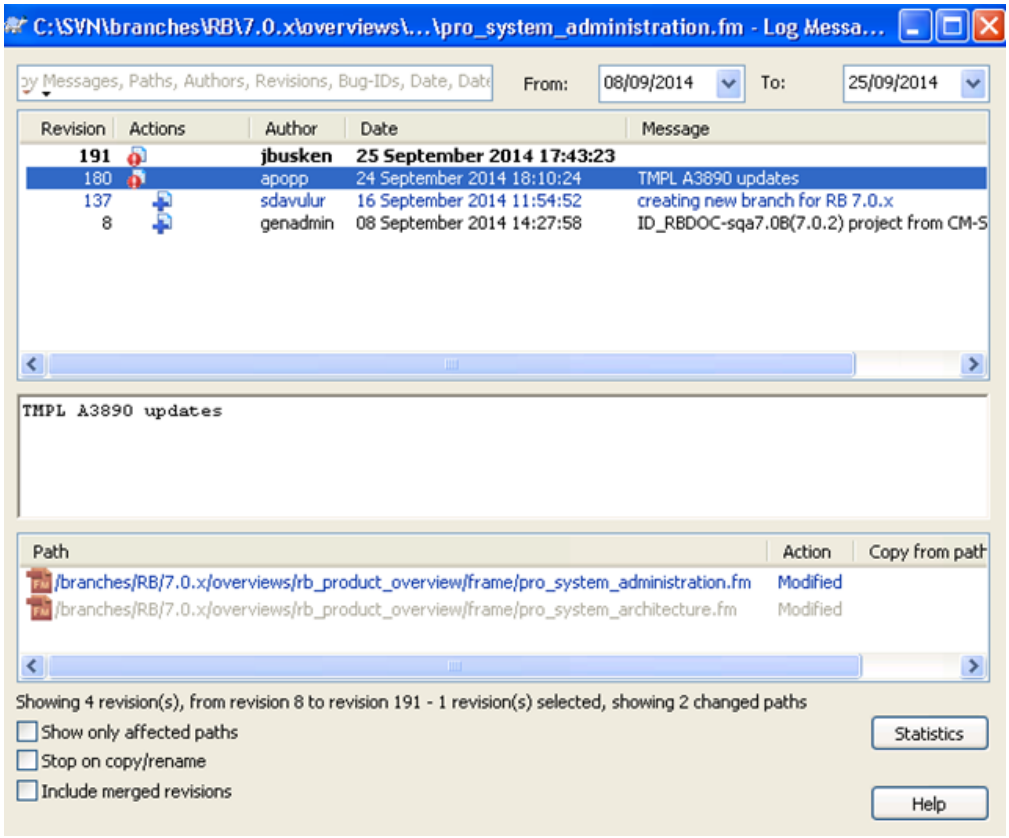
- Obtain the URL for the file (URL field) to be put in the RAT review.
- See if the file is locked and who has it locked (Lock column).

TortoiseSVN > Branch/tag – Enables you to create a copy of folders/files while retaining the history. (****Note:** You will probably not need to use this function. This will most likely be used when we are done with a release and want to store a copy of the entire directory).

TortoiseSVN > Show log – Enables you to view previous versions of the file that were checked out/in. See the screen on the next page for an example.

- To view a previous version of a file, right-click the row and select **Open**.
- To revert back to a previous version, right-click the row and select **Revert to this revision**. (NOTE: I do not think we will need to do this very often.) You would then select the version to revert back to and then click **OK**. You will be prompted with another window asking you if you really want to do this.

Note: There are other right-click options that do not apply to us (for example, **Merge** since two people can't update a file at the same time).



10.23.8 RAT Review Changes due to SVN

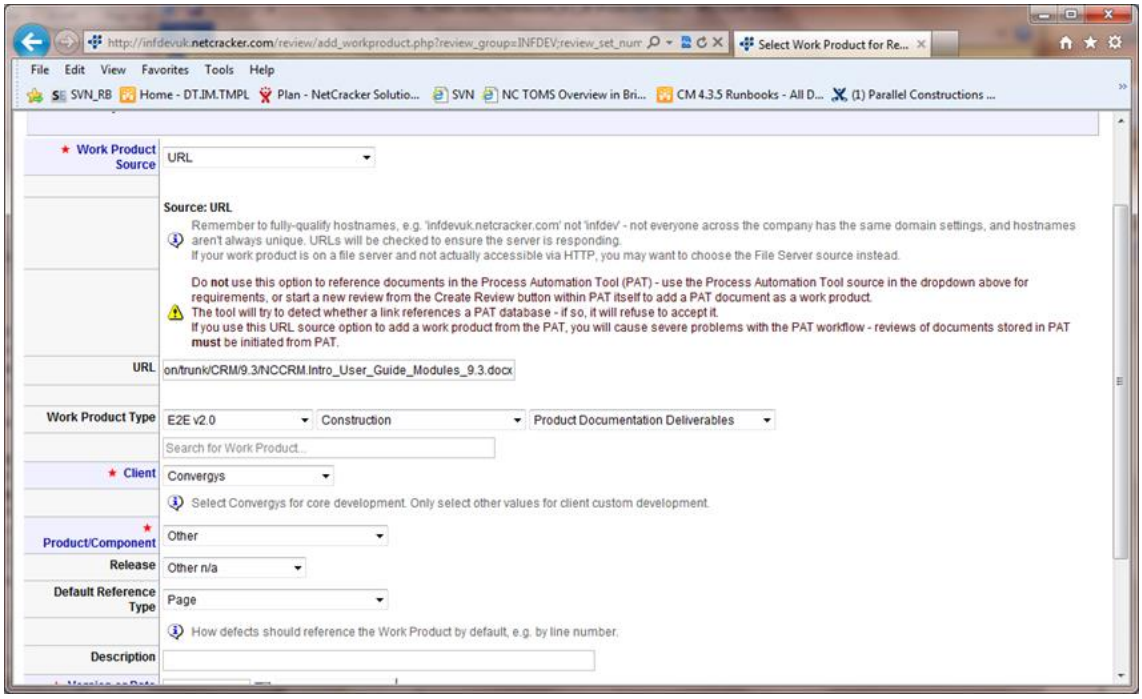
When creating a RAT review using the RAT tool (http://infdevca.netcracker.com/review/), you must do the following now that we are using SVN:

- Select **URL** for the **Work Product Source** drop-down list (instead of CM Synergy).
- Enter the URL for the file in review (using **TortoiseSVN > Repo browser**) in the **URL** field.

See below for the screen.

> Keep in mind that if the file changes on SVN, the changes will be picked up in the document. (This is different from CM Synergy, which captured the version.) I suggest you add your initials to the pdf or zip file name (for ex: _JB) to ensure that the SME reviews the correct file and not a different version that someone else uploaded to the same folder with the same name.

As of 9/26/14, the files are stored on panther and SMEs do not have access. You will need to send them the file to review (in addition to setting up the RAT review) since they may not have access to the panter server.



If you attempt to run the **Cleanup** command and get an error message, make sure all your Word files are closed before executing the command (even if it's not in SVN).

10.23.9 Frequently Asked Questions

When and why is it necessary to run a cleanup?

Clean up is required whenever an SVN operation fails. For example if your Update has failed for some reason.

Whenever you perform an operation that modifies your working copy, Tortoise SVN first locks your working copy (it is not the same as file lock). This is done because Tortoise SVN is just one of many SVN clients and multiple clients may work with the same working copy (e.g. developers often have SVN clients embedded in their IDEs). Establishing a lock prevents other clients from trying to access the working copy during an operation.

When operation is completed successfully, the working copy lock is release. If operation fails, however, the lock is not lifted. The reason for this is that your working copy may be in inconsistent state, some files may be updated or others not. Cleanup completes the unfinished operations and releases the lock.

If you need to perform a cleanup, Tortoise SVN will inform you when you try to perform an operation. ***Always run the cleanup from the root directory in your working copy*.**

What about time/server lapses? It seems like the status is not updated quickly in the file icons.

Unfortunately, the server response time may be an issue.

Why do we have to back up to parent level and do a commit when we do certain operations to files within that folder?

Yes, you do not to apply commit from the parent folder. However you should do so when you delete or rename a file. Delete – because the file is no longer in your working copy. Rename – because rename is basically two operations: add the file with the new name and delete the file with the old name. If you don't apply the commit from the parent folder, delete operation will not be committed.

If you want, you can always commit the folder and not the individual files. It is a perfectly viable approach. You can even commit from the root directory of your working copy. It's the matter of personal preference. You should keep in mind however, that every commit is treated as a single operation.

When and how often should I run an Update operation?

The best approach is always ran update before you start working, that way you can make sure that your working copy is up-to-date.

What would happen if I had created the folder, added it, and committed it, without running an update on the parent folder? Would that cause “parallel” folders as used to happen in Synergy? Or would my child folder commit, but others couldn’t see it after running their own Update operation? Or would they actually see it and I don’t need to run an Update on the parent folder before committing my new child folder?

No, it would not create any parallel folders. In SVN the central repository cannot contain any discrepancies. On your case, you can safely commit even if you did not ran the update. Your changes would be applied to repository and others would be able to see them once they ran Update. The problem would arise only if changes you have made are in conflict with current state of repository. Usually it happens if somebody had already made changes in a file that you try commit. To avoid such conflicts we use locking.

In SVN you need to commit each file only once, you do not need to confirm a commit at a higher level.

Can you explain the locking functionality?

Using lock is often discouraged, but only for developers. The reason is, developers work with code (many small text files) and apply changes to many files at once. Locking would preclude other developers from contributing; they would have to wait until the other developer has finished his work. In addition, conflicts in simple text files could be resolved very easily.

Writers on the other hand work with Word or FM files which are not so easy to handle. To resolve a conflict in Word file you would need to use **Word Merge & Compare** and SVN treats FrameMaker files as binary, so you cannot resolve conflicts in them, only overwrite the changes. To prevent the potential troubles when resolving conflicts in files, we use locking.

While locking is not recommended for storing simple text files, it is strongly recommended when storing Word files in SVN.

Indeed, shell overlay icons are not 100%reliable. You can use **TortoiseSVN > Check** for modifications command. It will display the following information for the directory: all files that were modified but not committed, files that are modified in the repository by others and unversioned files.

The reason why these icons sometimes do not work properly is how Windows treats shell overlays. I believe there is a limit on how many of these icons are loaded and it may be taken by the other apps that provide shell extensions.

10.24 System Parameters Interactive Generation

- 1. System Parameters Interactive
  - 1.1. Configuration
    - 1.1.1. Client
    - 1.1.2. Databases
    - 1.1.3. Development Environment
  - 1.2. Maintaining System Parameter Data

- 1.3. Accessing Other Components
- 1.4. Creating the Interactive
- 1.5 Preparing Interactive for Release Delivery

10.24.1 1. System Parameters Interactive

The system parameters interactive consists of static HTML files created by running a PHP script against data held in an Oracle database. The database is maintained either using Bunyan or an application written in Application Express.

10.24.1.1 1.1. Configuration

10.24.1.1.11.1.1. Client

The following third party software is required to be installed on your PC:

- * PHP v4.3.1 (later versions may work, although never tested)
- * Smarty v2.6.9
- Oracle client v10g
- Bunyan

* Required for data extraction only

The extraction software is stored in SVN:
https://svnca.netcracker.com/RBMDOC/branches/APP_TOOLS under SYSPARAMS.

10.24.1.1.21.1.2. Databases

The SP database on server hocdl22 is used for storing all system parameter data.
The following schemas exist in the SP database:

- RBPARAMS - RB production system
- TAP3PARAMS - TAP3 production system
- AVPARAMS - AV production system
- PHPARAMS - PH production system
- OMPARAMS -OMproduction system
- SYSPARAMS - test schema only
- VIPARAMS - VI production system
- PIPARAMS - PI production system
- CSMPARAMS - CSM production system

The Oracle account name and password match the schema name. For example, for the production RB system the login and password is RBPARAMS.

TNSNAMES Configuration

Configure the **tnsnames.ora** file (normally found at C:$ORACLE_HOME\network\admin) and add the following entry:

SP =

(DESCRIPTION =

(ADDRESS_LIST =

(ADDRESS = (PROTOCOL = TCP)(HOST = hocdl22)(PORT = 1521))

)

(CONNECT_DATA =

(SID = SP)

)

)

Database Backup

The SP database back up process is identical to that for the schema databases. The database is backed up on a daily basis to **/iid/workarea/db_backups/SP** on hocdl22.

10.24.1.1.31.1.3. Development Environment

The application for maintaining system parameter data is written in Application Express. The development environment exists on the hocdl22 server at /Disk0/iid/app/oracle/product/10.2_oas.
Access this environment from your PC using http://hocdl22:7780/pls/htmldb2/htmldb_login URL. At the Login screen enter workspace as SP WORKSPACE, username as ADMIN and password as htmldb.
To start the Web Server, navigate to **/Disk0/iid/app/oracle/product/10.2_oas/opmn/bin** and run opmnctl startall.

10.24.1.2 1.2. Maintaining System Parameter Data

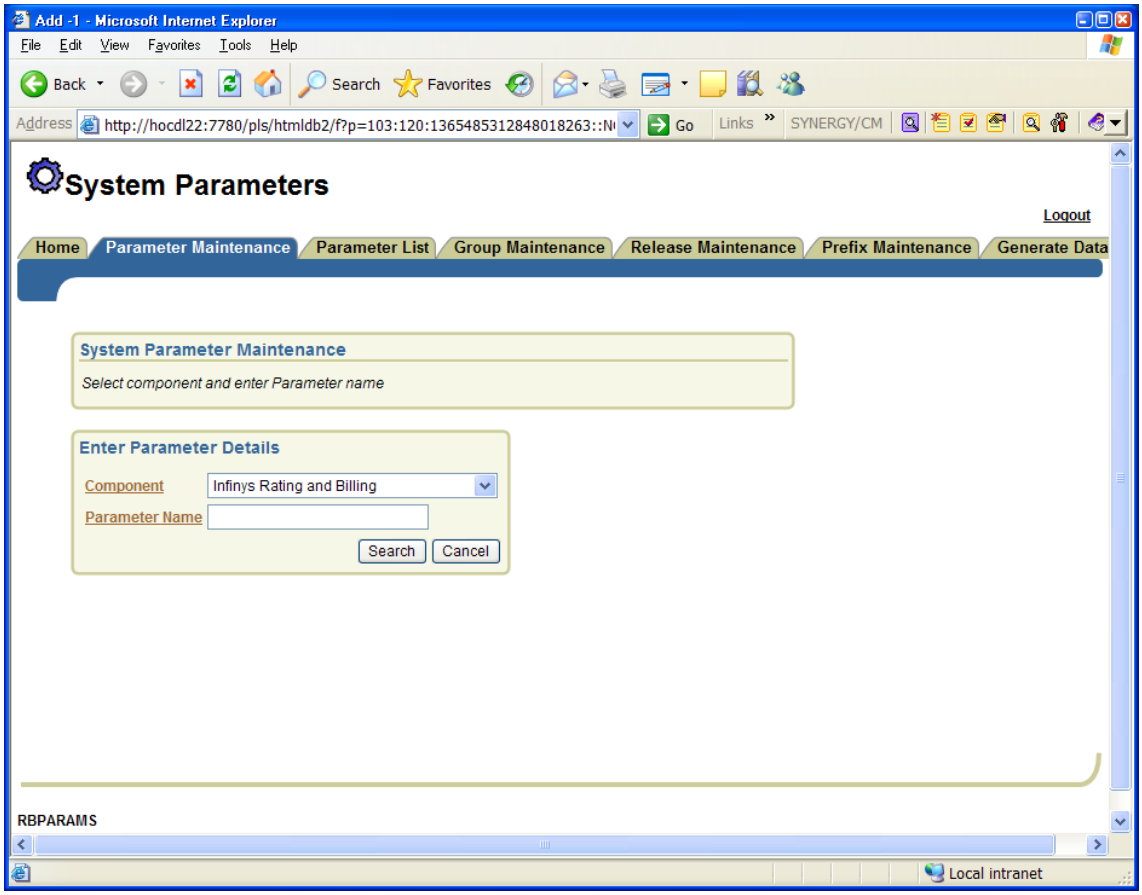
The application for maintaining system parameter data in the RB system is accessed using the following URL:
http://hocdl22:7780/pls/htmldb2/f?p=103:110:326199516562746477::NO
Username: RBPARAMS
Password: RBPARAMS

Home Page:

1. System Parameter Maintenance
2. Parameter Listing
3. Release Maintenance
4. Prefix Maintenance
5. Group Maintenance
6. Generate Interactive

1. System Parameter Maintenance

Enter the component name and parameter name in the Enter Parameter Details dialog box, then select Search.
If the parameter does not exist the Add New Parameter dialog box is displayed.
If the parameter already exists then the Update Parameter Details dialog box is displayed. The fields in both dialog boxes are identical.

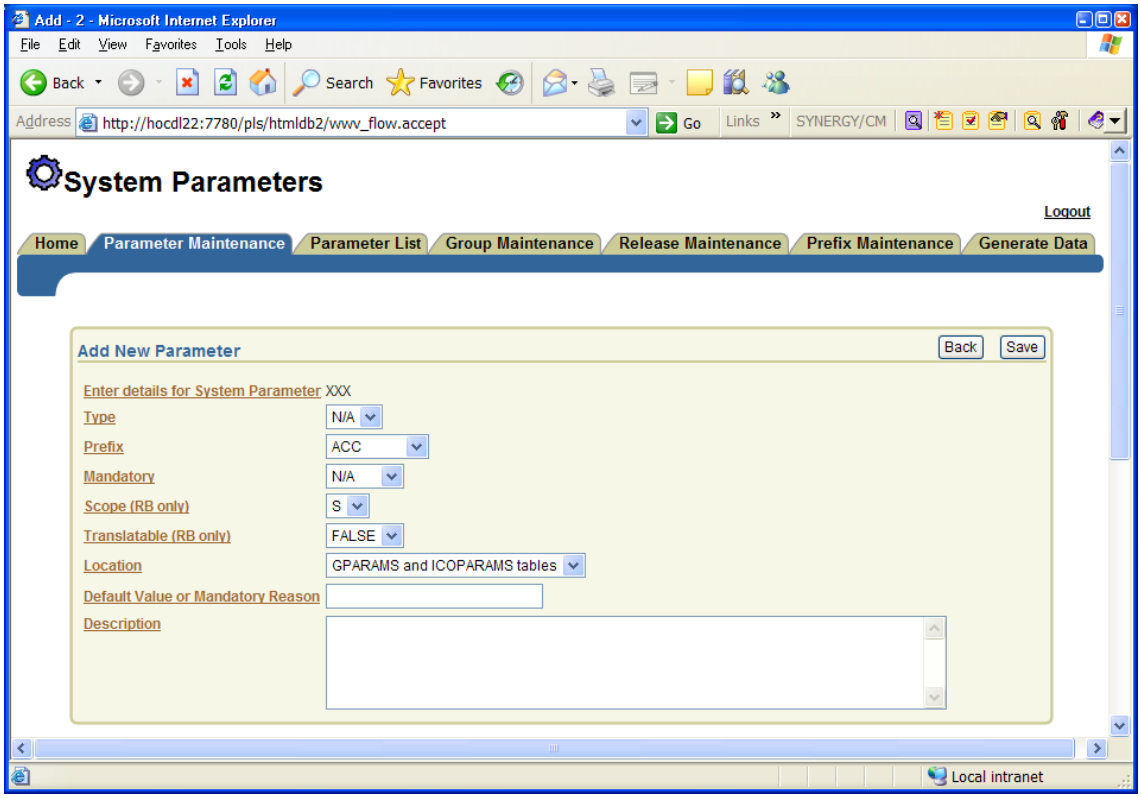


Enter Parameter Details

In the Add New Parameter dialog box, enter information in the following fields:

- **Type** - Select Integer or String from the drop down list.
- **Prefix** - Select Prefix code from the drop down list. These codes must be pre-created.
- **Mandatory** - Defines if the parameter must be specified, select TRUE or FALSE only.
- *** Scope** - Defines if the parameter is System Wide (S), Invoice Company Only (I) or both (B).
- *** Translatable** - Defines if the parameter can be localized, enter TRUE or FALSE.
- **Location** - Defines location of the parameter.
- **Default Value or Mandatory Reason** – Depends on setting of Mandatory field.
    - For optional system parameters (Mandatory Boo=FALSE), this is the value used if the system parameter is not configured or is set to null.
    - For required system parameters (Mandatory Boo=TRUE), then specify the circumstances e.g. if the system parameter is only required when the Billing Engine is used or if there is an initial value.
    - **Description** – Description of the system parameter.

* RB only



Add New Parameter

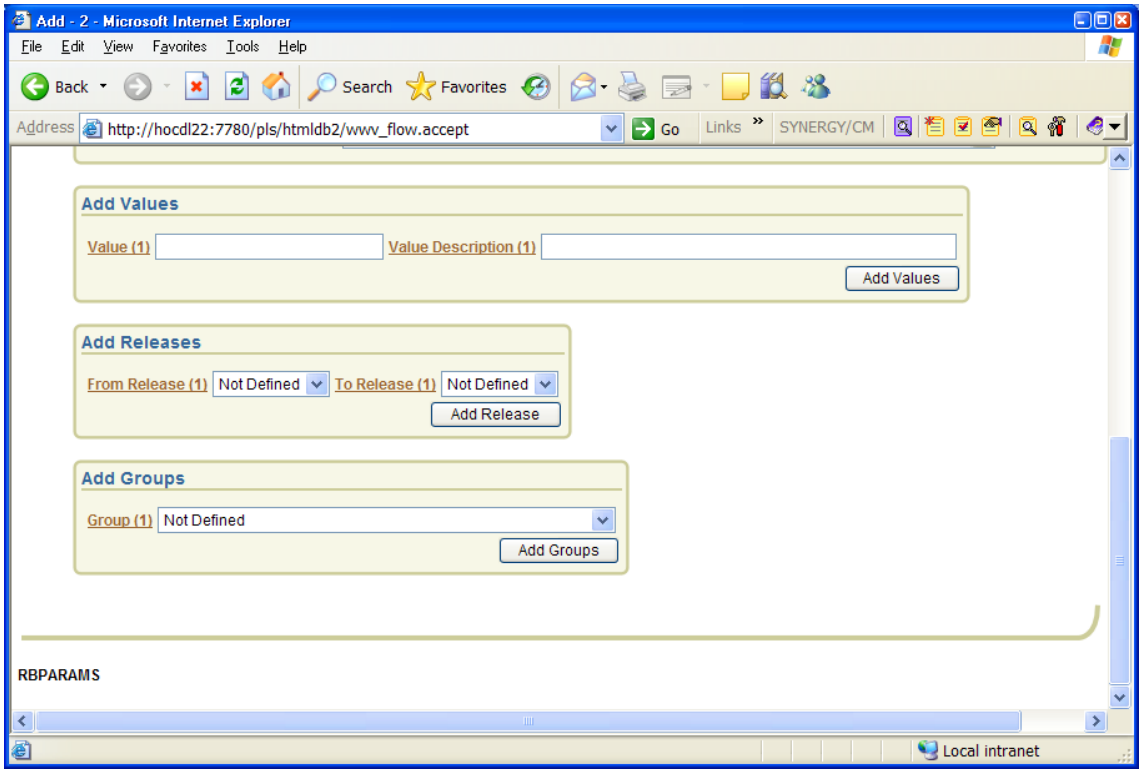
Note: All fields have Help files attached.

In the lower half of the Add New Parameter dialog box, enter Value, Release and Group information as follows:

- **Add Values**
    - Enter Value and Description. Additional Values and Description (10 maximum) can be added by selecting Add Values. These values must be pre-created.
- **Add Releases**
    - Select From Release from drop down list. These values must be pre-created.
    - Select To Release from drop down list. These values must be pre-created.

Additional release records can be added by selecting Add Release.

- **Add Groups**
    - Enter group name from drop down list. Additional groups can be added by selecting Add Groups. These values must be pre-created.



Add Values, Releases and Groups

Remember to save the data before leaving the page.

2. Parameter Listing

This option lists all parameters for a component in name order.

3. Release Maintenance

Enter release information in the Enter Release Name dialog box and select Search.
If the release name does not exist then the Add Release dialog box is displayed. Enter the release information and save the page.
If the release name already exists the Update Release dialog box is displayed. Update the release information and save the page.

4. Prefix Maintenance

Enter prefix name in the Enter Prefix Name dialog box and select Search.
If the prefix name does not exist then the Add Prefix dialog box is displayed. Enter the prefix description and save the page.
If the prefix name already exists the Update Prefix Details dialog box is displayed. Update the prefix description information and save the page.

5. Group Maintenance

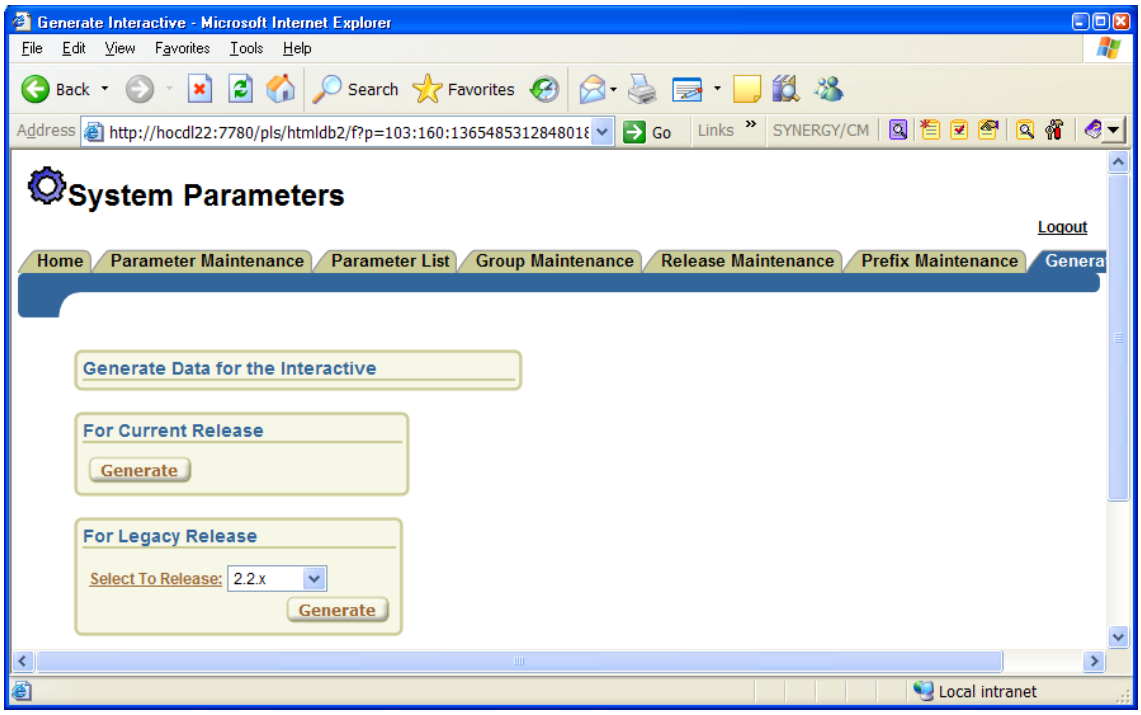
Enter the group name in the Enter Group Name dialog box and select Search.
If the group name does not exist then the Add Group Name dialog box is displayed. Enter the group name description and select Add Child or Add Parent as appropriate.

- **Add Child** – This denotes that the new group is a parent group. Select up to 5 child groups to associate with the new group.
- **Add Parent** – This denotes that the new group is a child group. Select a parent group from the drop down list to associate with the new group.

Remember to save the form on exit.
If the group name already exists the Update Group Details dialog box is displayed. Update the group description and parent name information and save the page.

6. Generate Interactive

This option generates the data required to create the interactive.
If you are generating data for the latest release then select Generate from the For Current Release box.
If you are generating data for a legacy release then select the release number from the drop down list in the For Legacy Release box and then select Generate.
The interactive can now be generated from a suitably configured PC.



Generate Data for Interactive

10.24.1.3 1.3. Accessing Other Components

The maintenance screens for the other components are identical to those outlined in Section 3.2.
The URLs for each component are as follows:

- http://hocdl22:7780/pls/htmldb2/f?p=100:101:12789400328628620169 for VI
- http://hocdl22:7780/pls/htmldb2/f?p=102:101:6890315366421382734 for PH
- http://hocdl22:7780/pls/htmldb2/f?p=108:101:413799054842693762 for PI
- http://hocdl22:7780/pls/htmldb2/f?p=109:101:15662634343294312482 for AV
- http://hocdl22:7780/pls/htmldb2/f?p=106:101:15581251145187836891 for CSM
- http://hocdl22:7780/pls/htmldb2/f?p=111:101:16366868452784355819 for TAP3
- http://hocdl22:7780/pls/htmldb2/f?p=107:101:2045007132212883989 forOM

The username and password for each system is: <short component name>PARAMS (e.g for VI, VIPARAMS).

10.24.1.4 1.4. Creating the Interactive

The interactive (generated by Sridhar Davuluru) is generated from a PC configured with the third party software identified in Section 3.1.1.
The params directory contains the following sub directories:

- bin
- html

- include
- output
- template

1. Check the **database.inc** file in the include directory. If necessary edit the connect string: $database_connection = OCIPLogon("rbparams", "rbparams", "SP") to point to the correct schema and database.
2. From the command line, navigate to the bin directory and execute the command **@c:\php_4.3.11_win32\php.exe -f generatePages.php c:\params\params\<output directory>**
3. The output directory contains the interactive HTML pages. Copy the files from the output directory into the interactive output directory.
4. Test the contents of the interactive, zip up the files and check into SVN: https://svnca.netcracker.com/RBMDOC/branches/RB (release folder > /system_admin_guides/system_parameters/zip).

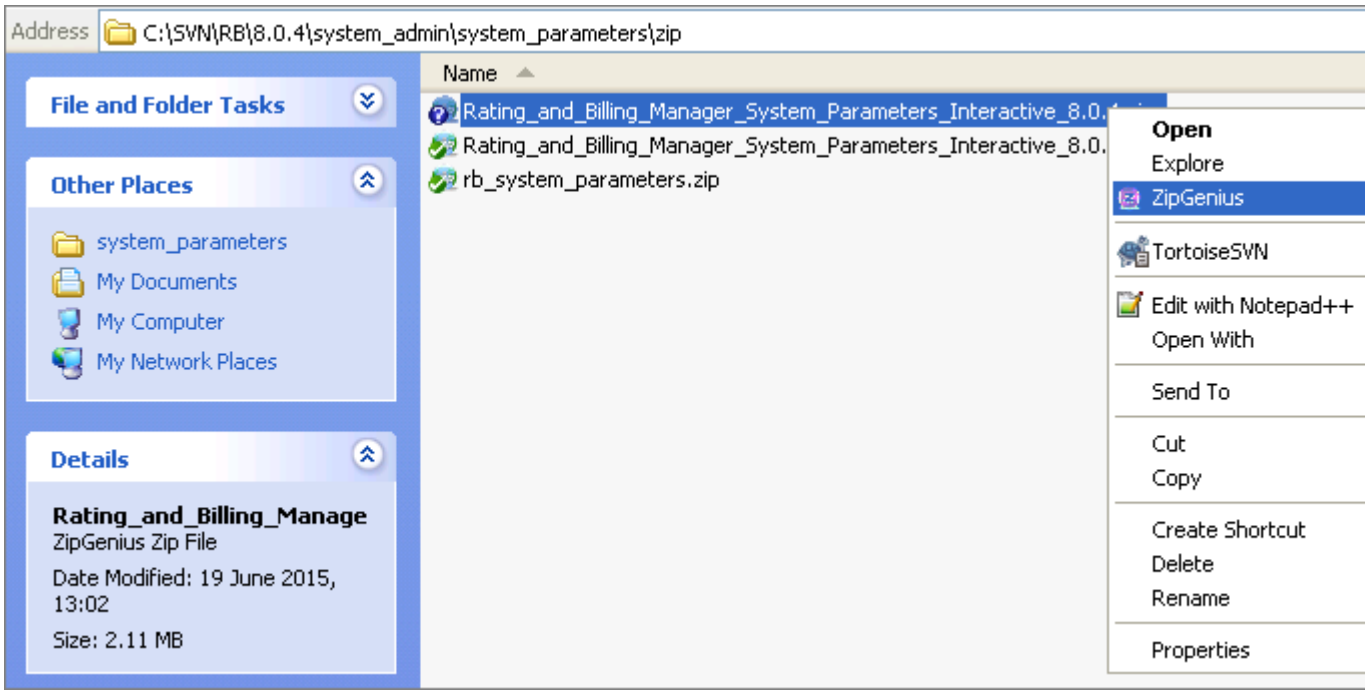
10.24.1.5 1.5 Preparing Interactive for Release Delivery

This final stage of maintenance (as well as section 1.2 – Maintaining System Parameter Data), is performed by a technical writer.

Once the system parameter interactive is generated (section 1.4, which is usually performed by Weiton (David) Wang), a zip file is created. The preparer (technical writer) then takes the zip file and applies the stylesheets, images, and other templates, updates the release and copyright information and re-zips the files for edit review and delivery to the release deliverable folder in SVN.

Perform the following steps to complete and prepare the deliverable:

1. Unzip the file in your work area/local C: drive



Unzip to Local Work Area

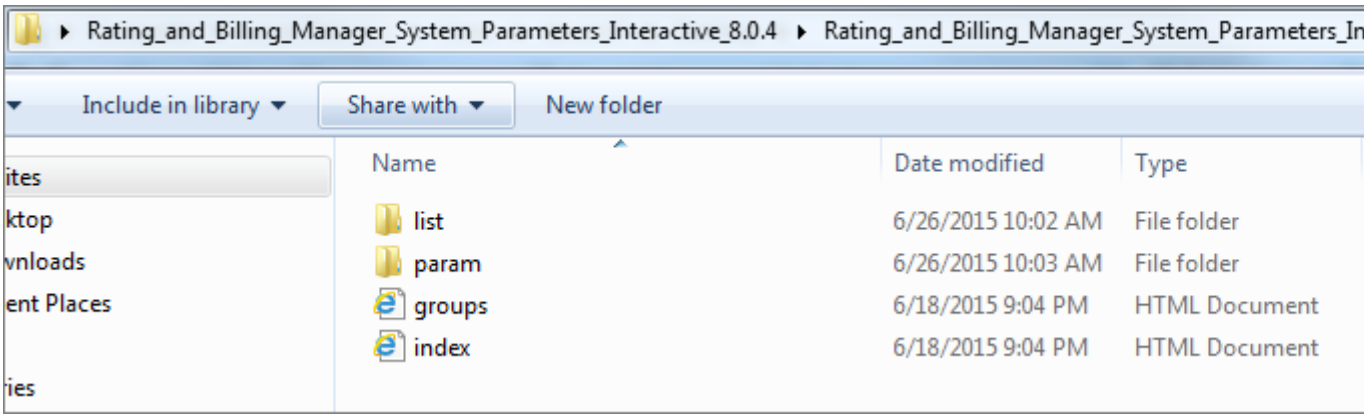
Once unzipped, open the folder. The folder contains the following folders and files :

◦ List folder

◦ Param folder

◦ Groups html file

◦ Index html file



System Parameter Folder after Initial Unzip

2. In addition, you will need to add the stylesheets, images, and other template files.

To do this, copy the following folders and files from the previous release folder:

◦ Gfx folder

◦ Images folder

◦ Styles folder

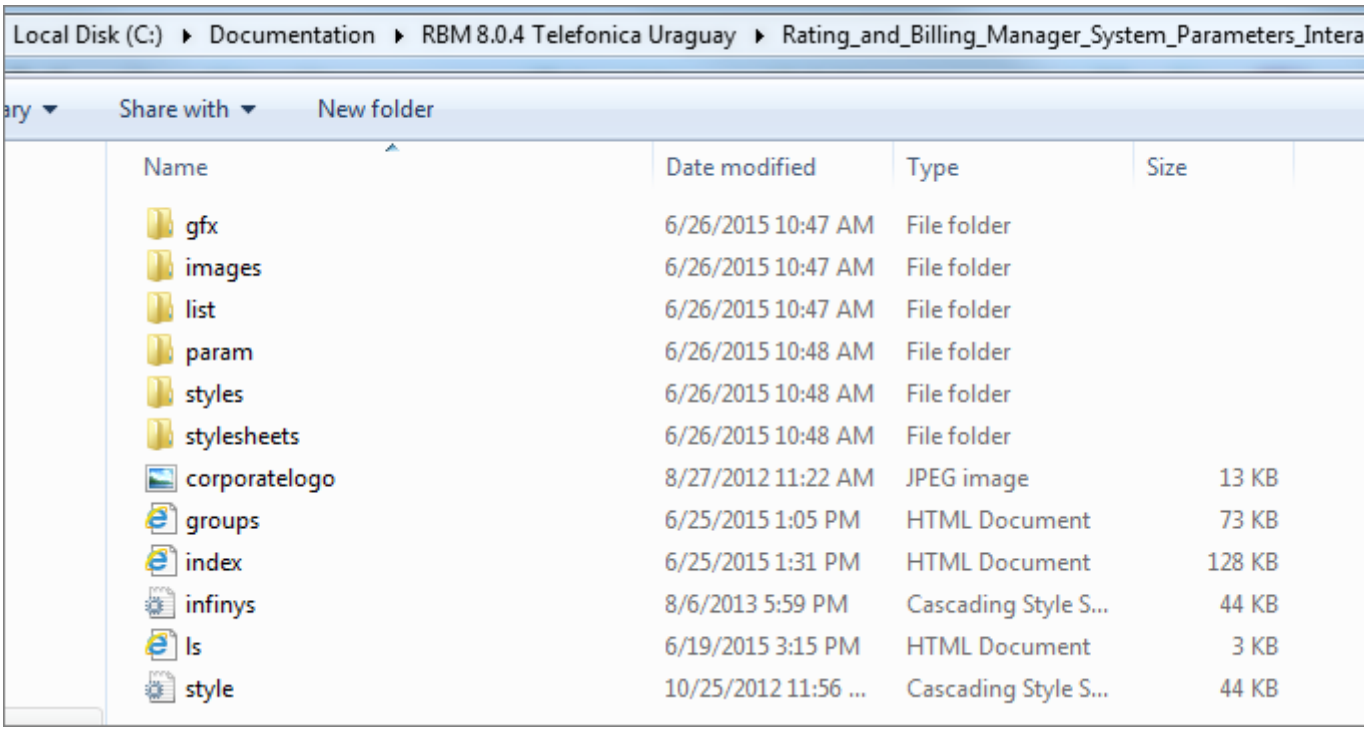
◦ Stylesheets folder

◦ Corporate logo Jpeg

◦ Infinys cascading style sheet

◦ Ls html file

◦ Style cascading style sheet



System Parameter Folder after Folders and Files are Added

Once all the folders and files are copied over from the prior release, you are ready to update the copyright date in the following files:

◦ List folder

◦ Param folder

◦ Groups html file

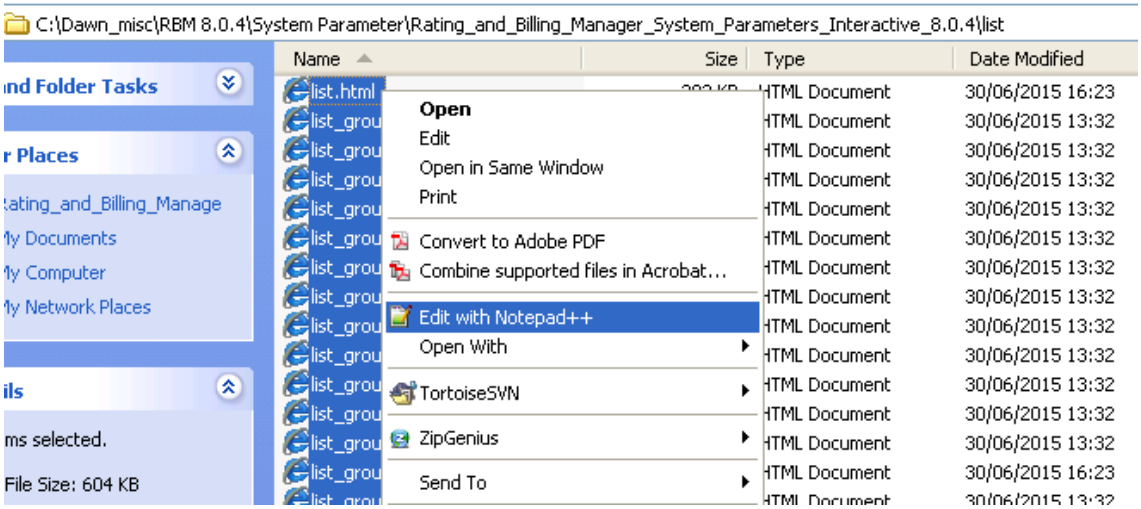
◦ Index html file

◦ Ls html file

3. To edit multiple HTML files at once, perform the following steps:

-Select all the files in the folder (use the Shift key to highlight all the files)

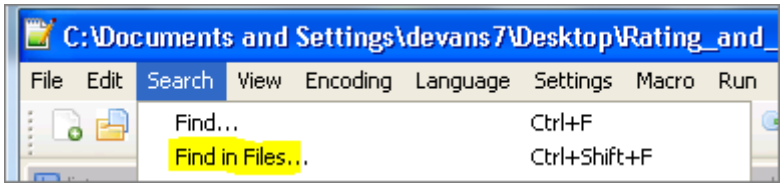
-Right click and select **Edit with Notepad++**



Highlight Files and Select Edit with Notepad++

-Notepad++ opens with all files displayed

-**Select Search** -> **Find in Files…**



Notepad++ > Search > Find in Files…

In the Find in Files dialog:

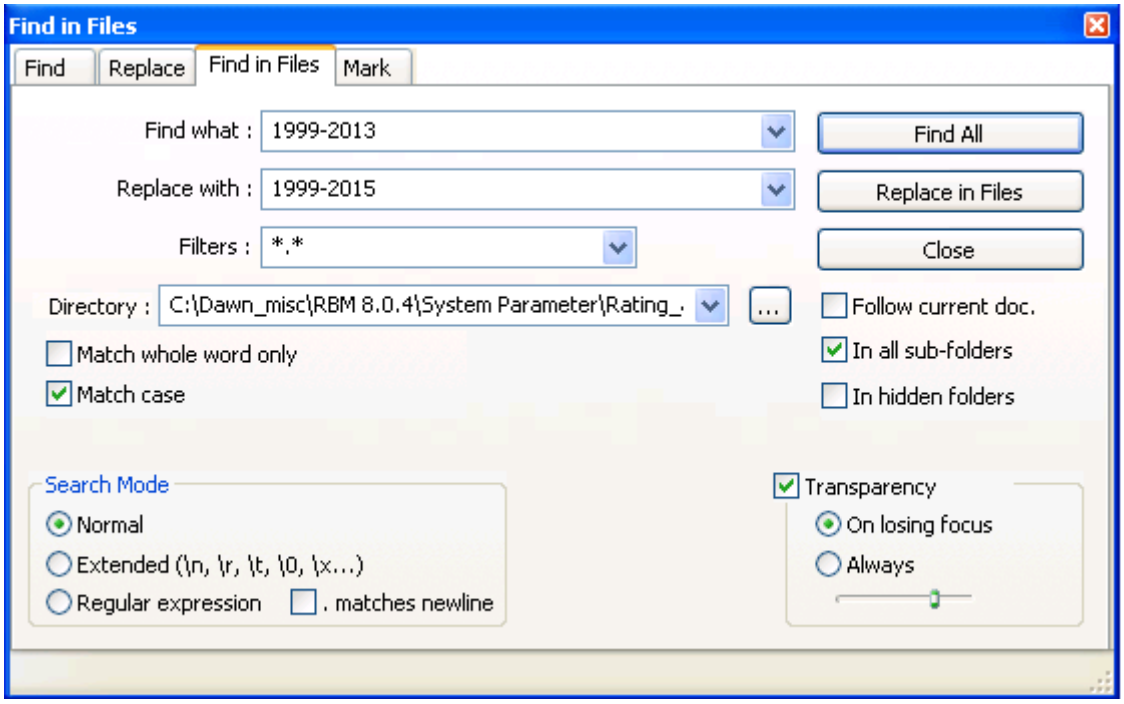
-Populate the **Find what** field with the current copyright date and the Replace with field with the new copyright date (use a hyphen for the date in case it occurs in something other than a copyright date range).

-In the **Filters** field leave the default value of *.*

-In the **Directory** field, browse and select the correct directory of the folder location

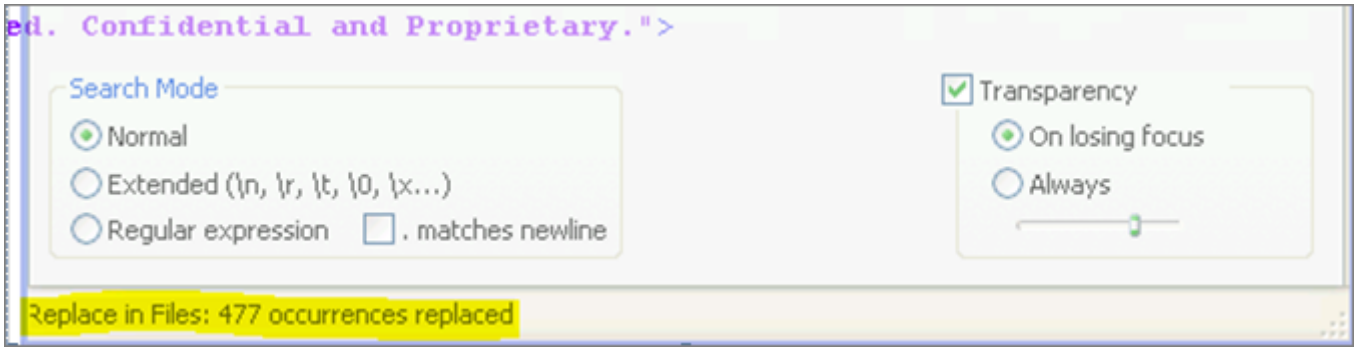
-Select the **In all sub-folders** checkbox

-Click **Replace in Files**



Populate Data in Find in Files Dialog

Once completed, a message displays in the dialog indicating the number of occurrences replaced.



Replaced in Files Message

Select File -> **Save all**

Select File -> **Close all**

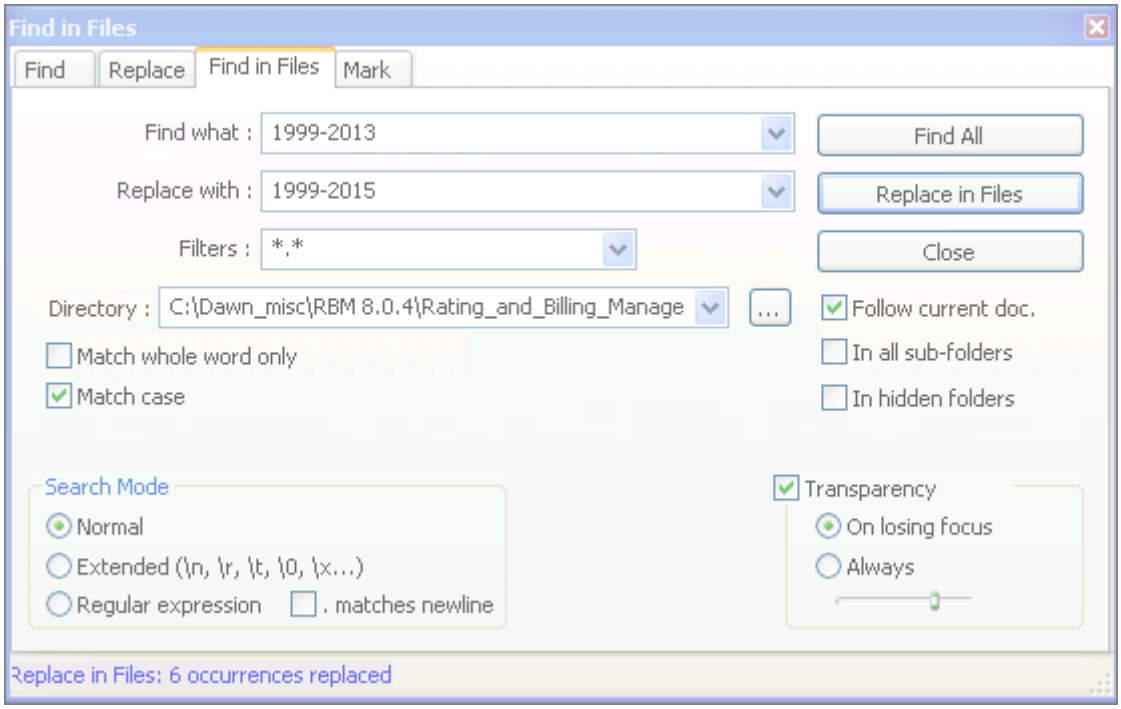
Perform a Refresh on the System Parameter folder. Once done, confirm the other impacted folders are updated with the replaced data.

4. Update Copyright Date in Groups.html, Index.html, and Ls.htm Files

Highlight the groups.html, right click and select Edit with Notepad++

-**Select Search** -> **Find in Files…**

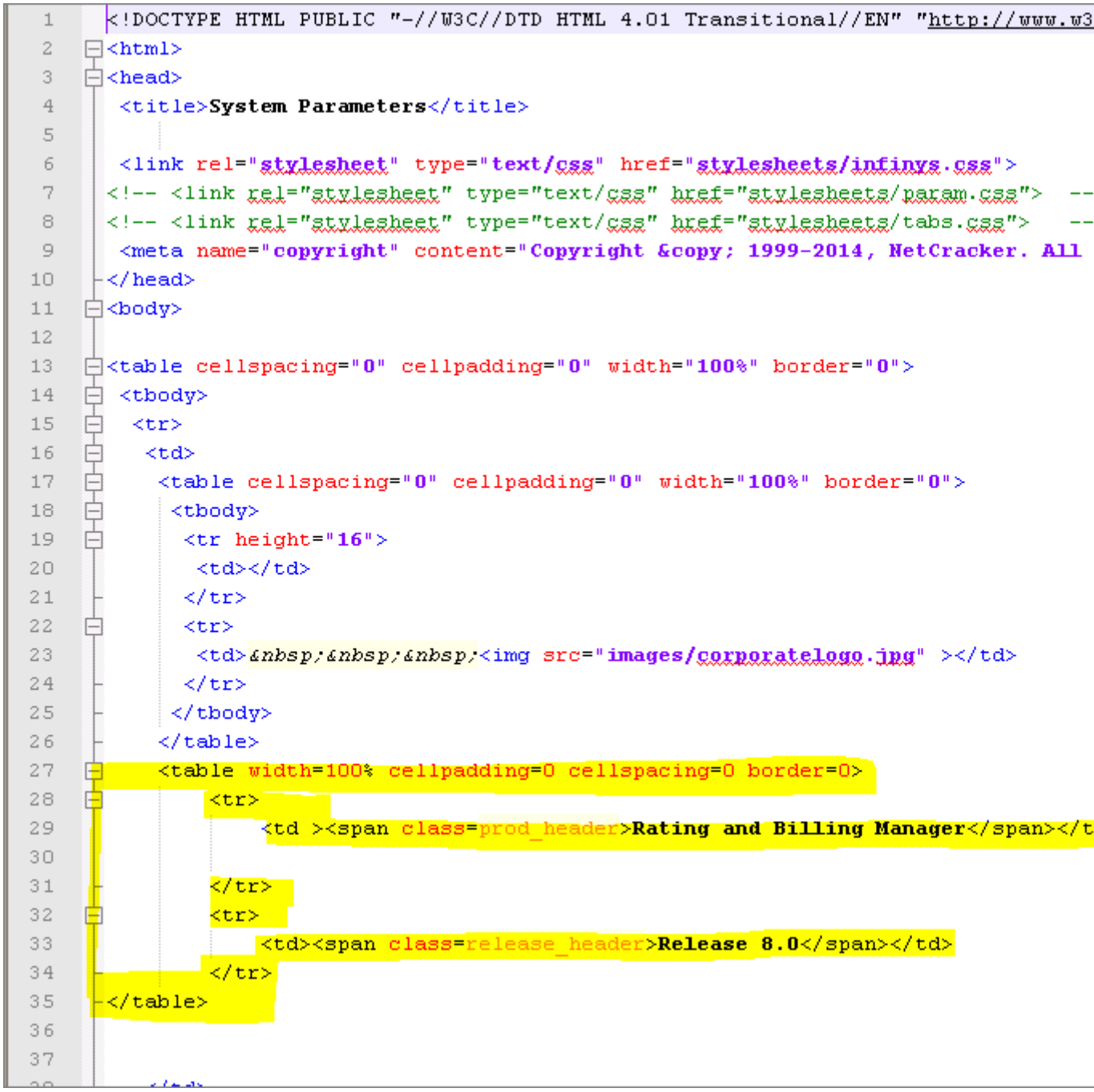
-Perform the same find and replace steps but in this case check the **Follow current doc.** checkbox



-If needed, repeat steps for the index.html and ls.htm files.

5. Add and update the Release number in the index.htm file

The prod_header and release_header information, as seen in the following figure, needs to be copied from the prior release index.html file and placed in the current release index.html file.



```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3
<html>
<head>
 <title>System Parameters</title>

 <link rel="stylesheet" type="text/css" href="stylesheets/infinys.css">
<!-- <link rel="stylesheet" type="text/css" href="stylesheets/param.css">  --
<!-- <link rel="stylesheet" type="text/css" href="stylesheets/tabs.css">   --
 <meta name="copyright" content="Copyright &copy; 1999-2014, NetCracker. All
</head>
<body>

<table cellspacing="0" cellpadding="0" width="100%" border="0">
 <tbody>
  <tr>
   <td>
    <table cellspacing="0" cellpadding="0" width="100%" border="0">
     <tbody>
      <tr height="16">
       <td></td>
      </tr>
      <tr>
       <td>   <img src="images/corporatelogo.jpg" ></td>
      </tr>
     </tbody>
    </table>
    <table width=100% cellpadding=0 cellspacing=0 border=0>
        <tr>
            <td ><span class=prod_header>Rating and Billing Manager</span></t

        </tr>
        <tr>
            <td><span class=release_header>Release 8.0</span></td>
        </tr>
</table>
```

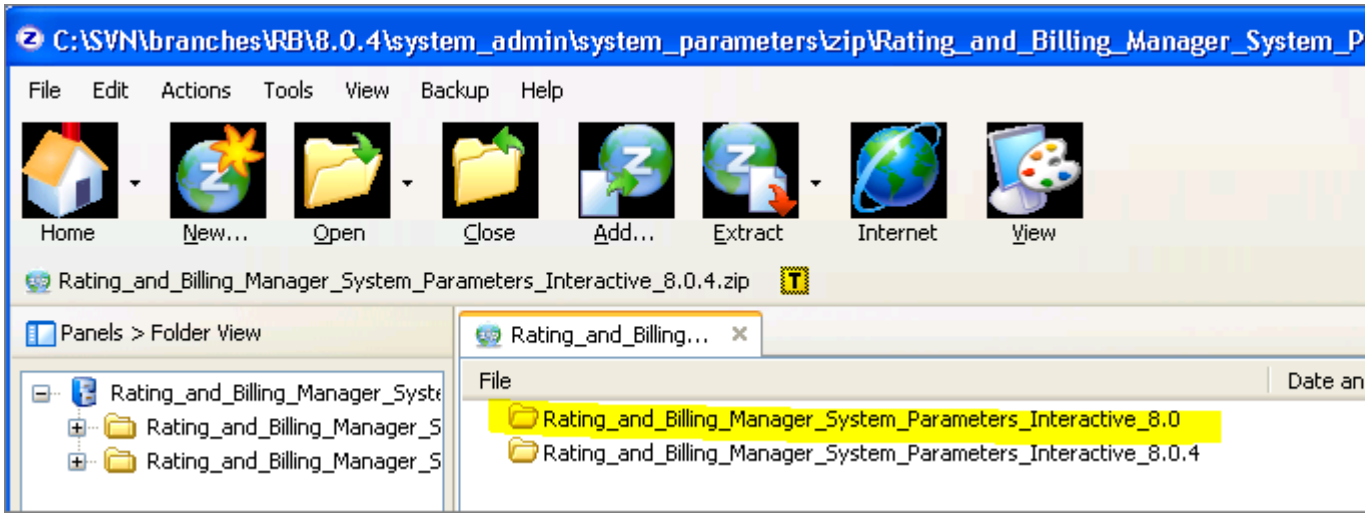
Copy Rating and Billing Manager and Release Number from Prior Release Index.html File

6. Re-zip the Files and Post the Final Zip File to the System Parameter Release Folder.

Once all the updates are done, re-zip the folder.

Note: Make sure the correct release number is appended to the zip file name. For example, if you zip the **Rating_and_Billing_Manager_System_Parameters_Interactive_8.0.4** folder it automatically generates a zip folder with a naming convention of **Rating_and_Billing_Manager_System_Parameters_Interactive_8.0.zip**. You will need to rename the zip file to include the correct release extension of 8.0.4 so that the final zip file name is **Rating_and_Billing_Manager_System_Parameters_Interactive_8.0.4.zip**.

Before posting the zip file to the release folder, make sure only one folder is in the zip file. If another folder does exists, remove it.



Zip File with Two Folders

10.25 1. TAP3 Interactives

10.25.1 1.1. RUI Field Details

This interactive is a collection of static HTML and image files, stored in SVN in the TAP3 folder (https://svnca.netcracker.com/RBMDOC/branches/TAP3) under interactives/interactive_rui_field_details as interactive_rui_file_details.zip. Maintenance of this interactive is achieved by editing the existing HTML files or adding new ones.

10.25.2 1.2. TAP3 Field Identifiers

Note that a less detailed version of this process document, called **faq.txt**, is also available in the TAP3 Field Identifiers area in SVN (see ...\branches_TAP3\8.XX.x\interactives\interactive_tap3_fields\TAP3_fields_html_src).

The *TAP3 Field Identifiers* interactive documents the unique field identifiers for TAP fields. The field identifiers are used when defining TAP import mappings and TADIG error overrides for a PMN (Private Mobile Network, that is, a mobile operator). The interactive documents these fields IDs for multiple TAP3 standards (specifications), from TAP3.2 up to the latest standard. As of May 2012, the latest standard is TAP3.12 (also known as a "GSM version" of TAP3). The TAP standard is an international specification that roaming partners are obliged to conform to for interchanging roaming data (except the US, which uses its own standard). The TAP3 standard is detailed in a document called TD.57 and is available from the GSM Association: http://www.gsma.com. Therefore, it is critical to keep our interactive up to date with the current specification.

This interactive is generated from an Excel spreadsheet, **TAP3 unique field IDs.xls**, provided by TAP development. For TAP3 16.1 to 18.1, the file was provided by Devyani Durga (manager: Seshu Babu Kandala) in February 2016 when corrected versions of the interactive were published (due to a client-raised doc PR). Additionally, corrections to this file were provided by the ICE team in February 2016 (contact David McHugh or Damian Saunders).

- The scripts and other files required to generate the interactive are stored in SVN in our TAP3 project under **interactives/interactive_tap3_fields**. The **TAP3_fields_html_src**

directory contains the script files, as well as the **faq.txt** file that contains high-level steps for generation. (You can refer to it when running the process, as well as to this document.)

- The finished interactive is then stored in the **zip** directory. The zip is what is posted on the CSS, as usual for interactive guides.

NOTE: When building the interactive, it is recommended that you create a separate generation area, rather than working in your SVN work area. This is described below.

To determine the nature of the updates to TAP3 Field Identifiers at a given release:

1. Determine whether there are changes to the **TAP3 unique field IDs.xls** file. There will be changes if there is a new TAP3 specification (normally there is a feature for this update). It is also possible there could be changes to TAP3 field IDs without a major change of TAP3 specification (for example, due to a minor TAP3 specification change). Contact the current TAP3 SME to confirm.
2. If there are changes to the TAP3 fields IDs, contact Devyani or another current TAP3 SME to request the updated **TAP3 unique field IDs.xls** file from SVN. It is stored in the TAP3 project (not the RB project). The partial path is **TAP3/TGM/DOC**. An example of a full path is https://svnca.netcracker.com/TAP3/trunk/TAP3/TGM/DOC/. You should always check with the TAP3 SME that you have the correct version of this spreadsheet. Additionally, you should verify that TAP Development has updated it for the new standard. Once you know the correct location in the development SVN area, copy the spreadsheet into your local generation area.
3. If there are no changes, skip the generation procedure below. Instead, just roll forward from the previous interactive (update release number and copyright date).

To generate the interactive:

1. Create a local generation area. To do this, copy the **TAP3_fields_html_src** directory from SVN to a local area and run the scripts in that location.
   NOTE: Perl typically needs to run in a location that does not have spaces in the name. If you create a new folder for the generation area, ensure you use underscores between words.
2. In your local generation area, open the **TAP3 unique field IDs.xls** spreadsheet. You should be on the **IDs** tab.
3. Select all empty columns to the right of column G and delete the contents (i.e. column H and after).
4. Sort the data on the **Description** column (this is what the Perl scripts expect, so don't skip this step).
5. Save the spreadsheet (File > Save As) as **Text (tab delimited)** format, to a file called **tap.txt**. (Use lowercase as shown.)
6. Edit the **tap.txt** file (using a suitable text editor like Notepad++) and remove any line not preceded by a number at the end of the text (e.g. column header) including blank lines. These lines occur at the top and bottom of the text.
   NOTE: You can also remove some of these lines in Excel. However, you will still need to remove the heading line and the blank line at the bottom of the **tap.txt** file.
7. Check for data inconsistencies in the tap.txt file by running the following Perl scripts:
   - **duplicate_nodes.pl**
   - **missing_nodes.pl**

   To run these scripts, go to Start menu > `cmd` (i.e. open command prompt) and navigate to your local generation area. Once inside that folder, enter the script name on the command prompt and hit Enter. Give the script a minute or two to run and build the output. (It is done once you see the command prompt again.)
   If the script does not run with just the script name, then try this command prompt:
   `> perl <script name>.pl`

** The structure of the data is critical. The data in **tap.txt** should be validated before the generation script is run.
Run the **missing_nodes.pl** script from the command line to identify breaks in the hierarchy. View the **missing_nodes.txt** file and correct the spreadsheet data.

NOTE: It is not clear that these scripts still find anything useful. In future, investigate this. For example, missing_nodes.pl finds apparent missing nodes but they are most likely not missing; rather, the script logic is probably based on out-of-date handling of TAP3 fields. Check with the ICE team.

IMPORTANT NOTE: The duplicates script will throw up results that are not real duplicates. So what is a real duplicate and what is not? Here is an example of a "fake" duplicate found by the script:
Script output:

**** DUPLICATE OF 2006 -
transferBatch.callEventDetails.contentTransaction.contentServiceUsed FOUND ****

Relevant rows in the spreadsheet:

1006	4,9,10	N			Content Service Used	transferBatch.callEventDetails.contentTransaction.contentServiceUsed
2006	10,11,12	N			Content Service Used	transferBatch.callEventDetails.contentTransaction.contentServiceUsed

As you can see, the Description value (transferBatch.callEventDetails.contentTransaction.contentServiceUsed) is identical. But the field IDs are not (1006 versus 2006). Therefore, these rows are NOT duplicates and the spreadsheet should not be changed.
A real duplicate will have fully identical values across the row. That is, it will be an error in the spreadsheet.
Note that during the regeneration of the interactive in Feb 2016 to add the missing TAP3.12 standard, Caroline did not find a single true duplicate. But you should run this step in case errors get introduced in future. (Also, no missing nodes were found as far as Caroline could determine, even through the script returned some output.)

8. Edit the **generate_tap** shell script and amend the **do_these_releases** line to specify which releases should be generated, and which should be grouped together. If there is a new TAP standard, it must be added here and it should NOT be grouped with older releases (i.e. standards).
IMPORTANT NOTE: If you do make changes to **generate_tap**, commit them to SVN because they will be needed at future releases as well (especially when a new TAP standard has been introduced).
Note that Caroline amended the **generate_tap** script in February 2016 to include all relevant releases up to TAP3.12. The updated script is available in the TAP3 8.16.1, 8.17.x, 8.17.3, and 8.18.x projects in SVN.

   How to produce the groupings you need:
   - Group releases together using a comma.
   - Separate groups of releases with a space.

   For example: `do_these_releases="2,3 4,9,10 11 12 ALL"`
   This generates five HTML pages:

   - One containing releases 2 and 3
   - One containing releases 4, 9 and 10
   - One containing release 11
   - One containing release 12
   - One containing all releases

9. Amend the **omit_these_releases** line to specify if any releases should be omitted from the build. (This is rare and you should not do it unless explicitly told to by TAP development.)

   For example: `omit_these_releases="10"`If no releases should be omitted (which is typical), then the line should appear like this:
   `omit_these_releases=""`

10. Edit the **tap.pl** script to add or remove version numbers from the **$ALL_DEFINITION** variable. This must match what you did in the generate_tap shell script.

    For example: `$ALL_DEFINITION="\"2,3,4,9,10,11,12\"";`
    IMPORTANT NOTE: If you update the **tap.pl** script (in particular to add a new TAP standard), commit it to SVN so it is available for future releases.

11. Run the **generate_tap** script from a Cygwin environment to create the HTML files. You need to download and install Cywin from the internet (see this page: https://www.cygwin.com/. Cywin is a Linux-like environment and command-line interface for Microsoft Windows.)

    In the Cygwin session, navigate to the **TAP3_fields_html_src** folder in your generation area:
    `cd C:/<full path to TAP3_fields_html_src directory>`

    Run the script as follows:
    `./generate_tap`

    This will generate the individual HTML files for the release groupings in generate_tap. For example:

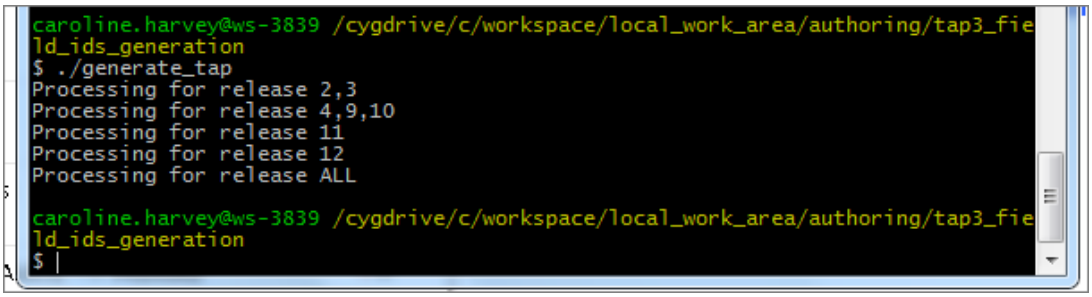


Figure 1 - Generating the Output

To build the final interactive:

RECOMMENDATION: The remaining steps should be done on the VM using the older IE version there. That seems to ensure that the interactive's Search facility works as planned.

1. In your SVN work area, copy the zip file from the previous release to the new release area for the current TAP release. Unzip it and rename the top folder with the new release number.
2. Copy the HTML files generated in Step 11 above into the new zip file structure (overwrite any old files).
3. For each **.htm** page generated by the scripts, make updates for the current release number. Using Notepad++, replace instances of release **8.XX.1** with the current TAP release number. Also update the copyright statement (search for 2000-20XX) and the legal statement date (also update the legal statement's content if needed).
   Note: In Feb 2016, Caroline updated the **tap.pl** script (in the TAP3 8.16.1, 8.17.x, 8.17.3, and 8.18.x projects in SVN) to produce the current branding for interactives, so these updates are now pretty quick and straightforward.
4. Ensure that the **index.htm** (home page for the interactive) reflects the latest standard. For example, if the latest standard is 3.12, then **index.htm** should contain:
   `<SCRIPT>document.location="tap3_12.htm"</SCRIPT>`

5. Test the interactive. To do it, find some IDs and some strings you can see exist in the interactive and use the **Search** fields to check they are highlighted (the search ID/string should appear in red).
   NOTE: The interactive's Search facility will not work in Chrome. Test it in IE and ensure you have compatibility settings turned on (to allow older web technologies to be used). It also appears to be the case that some newer IE versions do not allow Search to work correctly, even with compatibility settings turned on. This probably needs investigation in future.
   NOTE: There is a known problem with the "all releases" page such that the **transferBatch** parent grouping is nested under the **notification** parent grouping. This is an acceptable problem. However, if it occurs on other pages, particularly the current release, investigate and attempt to fix it. Contact Sridhar Davuluru for help. It is probably related to the JavaScript running this interactive.
6. Zip up the interactive to a file called **RBM_TAP3_Extension_Field_Identifiers_Interactive_8.X.zip** and commit to SVN. (You should match the filename in the BOM. Normally, we do not include the minor release number in the zip file name unless it is a non-standard release. For example, you do need the minor release number if it is anything other than X.X.1 (for example, X.X.3). Then the zip should be, for example, RBM_TAP3_Extension_Field_Identifiers_Interactive_8.17.3.zip.)

10.26 Third Party Tools Generation Process

- 1. Purpose
  - 1.1. The Third Party Tools PDF
  - 1.2. What Do You Need Before You Start
  - 1.3. Process Overview
- 2. Generating the PDF
  - 2.1. Generating the PDF
- 3. Checking the Deliverable

10.26.1 1. Purpose

This section provides an overview of the Third Party Tools document generation process. The Third Party Tools document provides users with information relating to the third party tools that are used for the Rating and Billing Manager including the Extensions and Product Integration for specific releases.

10.26.1.1 1.1. The Third Party Tools PDF

It's easiest to understand the third party tools list by viewing it and navigating the links. The pdf can be accessed at:

http://upsdev.netcracker.com:8089/PDFDoc/Inf_rb_8_0_60/sysadmin/Rating_and_Billing_Manager_Third_Party_Products_and_Tools_8.0.pdf

The PDF document provides the details of the following:

- Operating Systems
- Web Application Servers
- Databases
- Browsers

- Compilers
- Client-side other
- Server-side other

10.26.1.2 1.2. What Do You Need Before You Start

You need to have the following:

- Access to SVN for source materials. You need to access to: https://svnca.netcracker.com/RBMDOC/branches/RB (select the appropriate release) and then go to **/system_admin/third_party_products_and_tools/spreadsheet and cover** Access http://camvlciber.emea.convergys.com/psdi/products_and_tools.php to download the **RBX.Y_App_3rd_Party_Software_Compatibility_List.xls** developed by the CIBER team [NOTE ON 5/4/15: This link has changed.]
- The document can be either in the DRAFT or BASELINED status.
- You can refer to the DRAFT but consider the BASELINED document.
- Zip Genius installed on your (virtual) PC. A version is available at: http://zipgenius.altervista.org/dlc/zipgenius/index.htm *(Note: you can also just use whatever zip application you have installed on your machine.)*
- TextPad editor installed on your (virtual) PC. A version is available at: http://www.textpad.com/download/index.html#downloads
- Xenu link checker software installed on your (virtual) PC. A version is available at: (http://home.snafu.de/tilman/xenulink.html#Download).

Note: TextPad and Xenu are optional.

10.26.1.3 1.3. Process Overview

To complete the Third Party Tools document, you need to complete the following processes:

1. Refer to the existing Third Party Tools document of previous release to understand the flow of the document.
2. Checkout the .xls (***third_party_products_and_tools.xls***) and frame maker cover file (***third_party_products_and_tools_cover.fm***) from SVN to work with.
3. Refer to the spreadsheet developed by the CIBER team and update the excel sheet you have checked-out from SVN.
4. Create a PDF of the excel sheet and raise a RAT for technical review.
5. Fix the review comments in the source excel file.

10.26.2 2. Generating the PDF

Before you generate the final PDF of the Third Party Tools, you must check in the excel sheet you have updated as well as the cover page.

10.26.2.1 2.1. Generating the PDF

Use this procedure to generate the Third Party Tools PDF.

1. Checkout the excel sheet that you have updated.
2. Check out the cover page.
3. Generate the PDF cover page. (PDF 1)
4. Generate the PDF of excel sheet. (PDF 2)
5. Combine the PDF 1 and PDF 2.

10.26.3 3. Checking the Deliverable

You should perform the following checks on the PDF after it is complete:

1. Check that the release and document versions on the front page are correct.
2. Check that the dates of the copyright are correct in the PDF.
3. Check that the legal page is the most recent – you will have been told during a release if the legal statement has changed.
4. Check that the look and feel of the document is as expected and all bookmarks, links are working fine.
5. Ensure that the final version of the PDF is stored in SVN once it is final.

10.27 Updating the RBM Installation Guide

1. Verify that change bars are turned on in all of the installation frame files.
2. Send an e-mail to the documentation team asking for specific enhancement and/or change request (CR) impacts. Update the guide accordingly (using a colored text) and use an enLabel tab in the margins so the SME can easily see the update
3. Search on the previous release number (for example, 8.0) to locate scripts, files, and so on, that include the release number. (You will need to update these and also inform your subject matter expert (SME).) Note that chapters 4, 7, 8, 13, and 14 include many example scripts that mention the release. These are examples, but you should update them to reflect the current release.
   Note: You should not update example code that mentions release numbers, unless advised by your SME.
4. Ask your SME to review/verify the entire guide. If possible, create a Microsoft Word file of the guide (and turn on track changes) for him or her to mark up.

11 NetCracker Release Work

11.1 Перечень выпускаемых документов

11.1.1 Название*

11.1.2 Расположение исходного файла**

11.1.3 General Release Information

- **What's New**

11.1.4 System Administration Documentation

- **Installation Notes for Release**
- **Maintenance Guide**
- **NetCracker License Administrator** (f.k.a. Licence Key Guide)
- **Platform Hardening** (f.k.a. Notes on Security)
- **Supported Software Configurations**
- **3rd Party Products Configuration Requirements**
- **NC Directory**
- **Enabling HTTP over SSL**
- **Password Encryption**
- **Oracle RAC Notes**

- General Release Information/

- Maintenance Guide/

11.1.5 User Documentation

- **NetCracker Database Overview**

- Developer's Guide/NetCracker Database Overview/

- **NetCracker TOMS Integration Overview**

- Developer's Guide/API Overview/

- TOMS product components **User Guide(s)**
- TOMS product components **Administrator Guide(s)**
- TOMS product components **API Integration Guide(s)**

- SVN Repository/

- TOMS product components **Developer Guide(s)**
- TOMS modules **Developer Guide(s)**
- Developer's manual **NetCracker Secure Development**

- Developer's Guide/

- TOMS guide **Active Mediation Module**
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11.2 Release 9.5

Release Date: **December 25, 2014**

Technical Writers Release Team: Evgeniy Osintsev Aliya Devlikanova Unknown User (pepl0913[left]) Andrei Denesh Unknown User (kpai4020[left]) (discrepancy analysis) Carmeline Mario (discrepancy analysis) Unknown User (almazov[left])

11.2.1 Release Documentation:

Document	Status	JIRA Ticket	Assignee
What's New *(technical XLS)*	✓		Aliya Devlikanova
Maintenance Guide	✓	PSUPTW-1105 - NetCracker 9.5 Maintenance Guide is needed CLOSED	Unknown User (almazov[left])
Installation Notes	⚠	PSUPTW-1111 - Installation Notes 9.5 is needed CLOSED	Unknown User (almazov[left])

Document	Status	JIRA Ticket	Assignee
Release Notes	⚠		
License Key Guide	✓	PSUPTW-1107 - NetCracker License Key Guide 9.5 is needed CLOSED	Unknown User (almazov[left])
Notes on Security	✓	PSUPTW-1108 - Notes on Security 9.5 is needed CLOSED	Unknown User (almazov[left])
Supported Software Configurations	✓	PSUPTW-1109 - Supported Software Configurations 9.5 is needed CLOSED	Unknown User (almazov[left])
3rd Party Products Configuration Requirements	✓	PSUPTW-1110 - 3rd Party Products Configuration Requirements 9.5 is needed CLOSED	Unknown User (almazov[left])
NC Directory	✓	PSUPTW-1112 - NC Directory 9.5 is needed CLOSED	Unknown User (almazov[left])
NetCracker Database Overview 9.5	✓	PSUPTW-1180 - NetCracker Database Overview 9.5 is needed CLOSED	Anthony F Popp
NetCracker TOMS Integration Overview	✓	PSUPTW-1181 - NetCracker 9.5 TOMS Integration Overview is needed CLOSED	Anthony F Popp

11.2.2 Release Scope Documentation .jira-issue { background: none repeat scroll 0 0 #F5F5F5; border: 1px solid #CCCCCC; border-radius: 3px; display: inline-block; padding: 0 0 0 2px; font-size: 8pt; line-height: 14px; } .jira-issue .jira-issue-key { padding-left: 2px; } .jira-issue .icon { height: 12px; } .jira-issue .jira-macro-single-issue-export-pdf { line-height: 12px; padding-bottom: 1px; } .jira-status { padding-left:0; padding-bottom:2px; font-size: 7pt; } .jira-issue .summary { padding:2px; } PSUPTW-1106 - TOMS Documentation 9.5 discrepancies must be fixed Closed :

Product Component	File Name	Required Version	Found Version	Status
atm	NC.UG.RI.ATM	8.2.3.0	8.2.3.0	✓
Address Management	NC.UG.FRW.Address_Management	8.2.2.3	8.2.2.2	✓
	NC.AG.FRW.Address_Management	8.2.2.3	8.2.2.2	✓
Alcatel_1353_1354	NC.AG.FRW.Integration_Adapter_for_Alcatel_1353NM-1354RM	8.0.2.1	8.0.2.1	✓

Product Component	File Name	Required Version	Found Version	Status
alcatel-5620-sam-int	NC.AG.DR.Integration_Adapter_for_Alcatel5620SAM	9.0.1.3	9.0.1.2	✓
AssignmentRules	NC.AG.RI.Assignment_Rules	8.2.3.2	8.2.3.1	✓
attachment-management	NC.AG.FRW.Attachment_Management	9.5.1.11	9.3.1.9	✓
Admin Tool	NC.AG.FRW.Administrative_Tools	9.5.3.34	9.3.3.24	✓
	NC.AG.FRW.Managing_Rights	9.5.3.34	9.3.3.24	✓
	NC.AG.FRW.Naming_Conventions	9.5.3.34	9.3.3.24	✓
	NC.AG.FRW.Object_Model_and_User_Interface_Customization	9.5.3.34	9.3.3.24	✓
	NC.AG.FRW.Object_Types_Attributes_and_Schemas	9.5.3.34	9.3.3.24	✓
	NC.AG.FRW.Users_and_Groups	9.5.3.34	9.3.3.24	✓
Auth Framework	NC.AG.FRW.Configuring_SAML	9.5.1.26	9.3.1.26	✓
	NC.AG.FRW.Configuring_CAS_Authentication	9.5.1.26	9.3.1.26	✓
	NC.AG.FRW.Configuring_Kerberos_Authentication	9.5.1.26	9.3.1.26	✓
	NC.AG.FRW.Configuring_X.509_Authentication	9.5.1.26	9.3.1.26	✓
Auto Installer	NC.AG.AutoInstaller	4.18.4.0	4.18.3.0	✓
billing-activation-and-information-provider	NC.UG.CBM.Billing_Activation_and_Information_Provider	9.3.3.7	9.3.3.5	✓
	NC.AG.CBM.Billing_Activation_and_Information_Provider	9.3.3.7	9.3.3.5	✓
BAM	NC.UG.FRW.Business_Activity_Monitoring	9.0.3.38	9.0.3.35	✓
	NC.AG.FRW.Business_Activity_Monitoring	9.0.3.38	9.0.3.35	✓
	NC.MG.FRW.Business_Activity_Monitoring	9.0.3.38	9.0.3.33	✓
Calendar	NC.UG.FRW.Business_Calendar	9.3.2.2	9.3.2.	✓

Product Component	File Name	Required Version	Found Version	Status
		7	25	
EventManagement	NC.UG.SPM.Service_Problem_Management	8.2.3.13	8.2.2.0	✓
	NC.AG.SPM.Service_Problem_Management	8.2.3.13	8.2.2.0	✓
NotificationEscalation	NC.UG.SPM.Service_Problem_Management	8.2.1.4	8.2.1.4	✓
	NC.AG.SPM.Service_Problem_Management	8.2.1.4	8.2.1.4	✓
CIAPlannedMaintenance	NC.UG.SPM.Planned_Maintenance	8.2.1.5	8.2.1.4	✓
	NC.AG.SPM.Planned_Maintenance	8.2.1.5	8.2.1.4	✓
CIAServiceIncidentLogging	NC.UG.SPM.Service_Incident_Logging	8.2.1.8	8.2.1.6	✓
	NC.AG.SPM.Service_Incident_Logging	8.2.1.8	8.2.1.6	✓
CapacityMgmt	NC.UG.RI.Capacity_Management	9.0.3.4	9.0.3.3	✓
	NC.AG.RI.Capacity_Management	9.0.3.4	9.0.3.3	✓
cpl-transport-ntwk	NC.UG.NPD.Capacity_Planning_Transport_Network	9.0.1.3	9.0.1.1	✓
CDRW	NC.UG.RI.Card_and_Device_Replacement_Wizard	9.0.4.6	9.0.4.6	✓
	NC.AG.RI.Cabling_Wizard_Settings	9.0.4.6	9.0.4.6	✓
CatalogResources	NC.UG.SOM.Resource_Catalog	9.0.1.5	9.0.1.4	✓
ConfigurationMgmt	NC.UG.CM.Configuration_Management	8.2.2.1	8.2.2.1	✓
	NC.AG.CM.Configuration_Management	8.2.2.1	8.2.2.1	✓
CIA	NC.UG.SPM.Service_Problem_Management	9.3.2.1	8.2.4.0	✓
	NC.AG.SPM.Service_Problem_Management	9.3.2.1	8.2.4.0	✓
customer-information-and-	NC.AG.CIM.Customer_Information_and_History_Management	9.0.1.12	9.0.1.12	✓

Product Component	File Name	Required Version	Found Version	Status
history-management	NC.UG.CIM.Customer_Information_and_History_Management	9.0.1.12	9.0.1.12	✓
dwdm-ntwk-view	NC.UG.RI.DWDM_Network_View	9.0.1.0	9.0.1.0	✓
DWDM	NC.UG.RI.DWDM	9.0.3.0	9.0.3.0	✓
DataSourceFramework	NC.AG.FRW.Data_Source_Framework	8.2.2.15	8.2.2.15	✓
DP_Path_Management	NC.UG.NPD.Network_Planning_and_Design.Path_Management	9.0.2.3	9.0.2.2	✓
design-planning-device-view	NC.UG.NPD.Network_Planning_and_Design.Device_View	2.1.1.0	2.0.1.0	✓
DP_Framework	NC.UG.NPD.Network_Planning_and_Design.Framework	9.0.7.1	9.0.7.1	✓
	NC.AG.NPD.Network_Planning_and_Design.Validation_Reports	9.0.7.1	9.0.5.1	✓
design-planning-gui-fsm	NC.UG.NPD.Network_Planning_and_Design.Floor_Space_Management	1.4.1.0	1.2.1.0	✓
design-planning-gui-rsm	NC.UG.NPD.Network_Planning_and_Design.Rack_Space_Management	1.3.1.0	1.2.1.0	✓
DP_OSP	NC.UG.NPD.Network_Planning_and_Design.OSP	9.0.3.1	9.0.3.0	✓
dp-search-plugin	NC.AG.NPD.Design_and_Planning_Search_Plugin	9.3.1.4	9.3.1.0	✓
dp-capacity-management	NC.AG.NPD.Network_Planning_and_Design.Capacity_Management	9.0.1.2	9.0.1.1	✓
dp-dwdm	NC.UG.NPD.Network_Planning_and_Design.DWDM	9.0.1.1	9.0.1.0	✓
dp-ip-mpls-me-circuit-designer	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	✓
dp-ip-mpls-metro_ethernet	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet	9.0.1.8	9.0.1.3	✓
dp-mpls-tp-ntwk-view	NC.UG.NPD.Network_Planning_and_Design.MPLS_TP_Network_View	9.0.1.0	9.0.1.0	✓
dp-me-ntwk-view	NC.UG.NPD.Network_Planning_and_Design.Metro_Ethernet_Network_View	9.0.1.1	9.0.1.0	✓
dp-microwave	NC.UG.NPD.Network_Planning_and_Design.Microwave	9.0.1.2	9.0.1.0	✓

Product Component	File Name	Required Version	Found Version	Status
dp-mobileran	NC.UG.NPD.Network_Planning_and_Design.Mobile_RAN	9.0.1.2	9.0.1.0	✓
dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.Resource_Inventory	9.0.4.2	9.0.3.7	✓
	NC.UG.NPD.Network_Planning_and_Design.ISP_Cables	9.0.4.2	9.0.2.4	✓
dp-sdh-pdh	NC.UG.NPD.Network_Planning_and_Design.SDH-PDH	9.0.1.1	9.0.1.1	✓
device-view	NC.UG.RI.Device_View	6.6.1.0	6.5.0.0	✓
	NC.AG.RI.Device_View	6.6.1.0	6.5.0.0	✓
diagram-template-editor	NC.UG.FRW.Diagram_Template_Editor	1.4.3.0	1.4.1.0	✓
DS	NC.AG.DR.Discovery_Solution	9.0.1.4	7.3.1.3	✓
ERICSSON_OSS_INT	NC.AG.FRW.Integration_Adapter_for_Ericsson_OSS	9.0.3.0	9.0.3.0	✓
Ericsson_SOEM	NC.AG.FRW.Integration_Adapter_for_Ericsson_SOEM	8.2.1.0	8.2.1.0	✓
ErrorHandling	NC.UG.FRW.Error_Handling_Framework	9.0.2.14	9.0.2.14	✓
	NC.AG.FRW.Error_Handling_Framework	9.0.2.14	9.0.2.13	✓
ethernet-ring-view	NC.UG.RI.Ethernet_Ring_View	1.3.0.0	1.3.0.0	✓
	NC.AG.RI.Ethernet_Ring_View	1.3.0.0	1.3.0.0	✓
execution-statistics-collector	NC.AG.FRW.Execution_Statistics_Collector	9.3.1.0	9.3.1.0	✓
ExportImport	NC.AG.FRW.Export_and_Import	7.3.3.17	7.3.3.17	✓
FloorSpaceMgmt	NC.UG.RI.Floor_Space_Management.Textual_Mode	8.0.1.1	8.0.1.1	✓
	NC.UG.RI.Floor_Space_Management.Graphical_Mode	8.0.1.1	8.0.1.1	✓
FrameRelay	NC.UG.RI.Frame_Relay	8.2.2.0	8.2.2.0	✓
gui-capacity-planning	NC.UG.NPD.GUI_Capacity_Planning	0.7.0.0	0.6.0.0	✓

Product Component	File Name	Required Version	Found Version	Status
	NC.AG.NPD.GUI_Capacity_Planning	0.7.0.0	0.6.0.0	✓
GUI_Core	NC.UG.FRW.Network_Configurator	11.2.4.0	11.2.3.0	✓
GUI_DiagramEditor	NC.UG.FRW.Diagram_Editor	9.5.0.0	9.3.1.0	✓
GUI_Inventory	NC.UG.RI.Network_Modeling_in_Network_Configurator	16.7.3.0	16.4.1.0	✓
	NC.AG.RI.Graph_Views	16.7.3.0	16.4.1.0	✓
	NC.UG.RI.Geographical_View	16.7.3.0	16.4.1.0	✓
	NC.AG.RI.Geographical_View	16.7.3.0	16.4.1.0	✓
GUI_MSC	NC.UG.RI.MSC_Graphical_Mode	9.1.0.0	9.0.2.0	✓
GUI_OSP	NC.UG.OSP.OSP_Graphical_Mode	13.10.0.0	13.9.0.0	✓
GUI_PowerMgmt	NC.UG.RI.Power_Management_and_Cooling_Equipment_Graphical_Mode	9.1.0.0	9.0.3.0	✓
GUI_ServiceVisualization	NC.UG.FRW.Service_Visualization	10.5.2.0	10.5.2.0	✓
	NC.AG.FRW.Service_Visualization	10.5.2.0	10.5.2.0	✓
GUI_Coloring	NC.AG.FRW.Coloring_Configuration_for_GUI_Views	3.5.0.0	3.5.0.0	✓
GUI_FSM	NC.UG.RI.Floor_Space_Management_Graphical_User_Interface	4.6.2.0	4.6.1.0	✓
	NC.AG.RI.Floor_Space_Management_Graphical_User_Interface	4.6.2.0	4.6.1.0	✓
GUI_RSM	NC.UG.RI.Rack_Space_Management_Graphical_User_Interface	6.6.4.0	6.6.2.0	✓
	NC.AG.RI.Rack_Space_Management_Graphical_User_Interface	6.6.4.0	6.6.2.0	✓
GUI_RuleEngine	NC.AG.FRW.Rules_Engine_Graphical_Mode	2.5.0.0	2.3.1.0	✓
hfc-network-view	NC.UG.RI.HFC_Network_View	9.3.1.0	9.3.1.0	✓
hfc	NC.UG.RI.HFC_Network	9.3.1.0	9.3.1.0	✓

Product Component	File Name	Required Version	Found Version	Status
HDS	NC.UG.FRW.Historical_Data_Storage	9.0.4.3	9.0.4.1	✓
	NC.AG.FRW.Historical_Data_Storage	9.0.4.3	9.0.4.1	✓
	NC.MG.FRW.Historical_Data_Storage	9.0.4.3	9.0.4.1	✓
history-framework	NC.UG.FRW.History_Framework	9.3.2.11	9.3.2.10	✓
	NC.AG.FRW.History_Framework	9.3.2.11	9.3.2.10	✓
Huawei_M2000_3G_Int	NC.AG.FRW.3G_Integration_Adapter_for_Huawei_M2000	9.0.2.3	9.0.2.3	✓
Huawei_M2000_Core_Int	NC.AG.FRW.Integration_Adapter_for_Huawei_M2000_Mobile_Core	8.2.1.2	8.2.1.0	✓
Huawei_M2000_Int	NC.AG.FRW.2G_Integration_Adapter_for_Huawei_M2000	9.0.2.1	9.0.2.1	✓
Huawei_T2000	NC.AG.FRW.Integration_Adapter_for_Huawei_T2000	8.2.3.3	8.2.3.1	✓
icoms-integration-services-bso	NC.AG.FRW.ICOMS_Integration_Services	8.2.1.63	8.2.1.38	✓
IPPlanner	NC.UG.RI.IP_Planner	9.0.4.1	9.0.4.1	✓
	NC.AG.RI.IP_Planner	9.0.4.1	9.0.4.1	✓
ip-mpls-me-circuit-designer	NC.UG.RI.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	✓
IP_MPLS_Eth_Conf	NC.CG.RI.IP_MPLS_Metro_Ethernet	8.2.2.1	8.2.2.1	✓
IP_MPLS_Metro_Ethernet	NC.UG.RI.IP_MPLS_Metro_Ethernet	9.0.3.10	9.0.3.10	✓
ITInfrastructureExt	NC.UG.RI.IT_Infrastructure_Extension	8.0.1.1	8.0.1.1	✓
ITInfrastructure	NC.UG.RI.IT_Infrastructure	7.3.2.1	7.3.2.1	✓
JeopardyMgmt	NC.UG.FRW.Jeopardy_Management	8.0.1.24	8.0.1.23	✓
	NC.AG.FRW.Jeopardy_Management	8.0.1.24	8.0.1.23	✓
SchedulerQuartz	NC.AG.FRW.Jobs	9.5.3.16	9.3.7.9	✓

Product Component	File Name	Required Version	Found Version	Status
l2tp	NC.UG.RI.L2TP	8.2.2.1	8.2.2.1	✓
LDAP	NC.AG.FRW.Enterprise_Directories_Integration	9.0.1.26	9.0.1.25	✓
	NC.AG.FRW.Application_Server_Configuration_for_LDAP_Integration	9.0.1.26	9.0.1.25	✓
localization-tool	NC.AG.FRW.Localization_Tool	9.0.1.1	9.0.1.0	✓
me-mpls-ntwk-view	NC.UG.RI.ME_MPLS_Network_View	9.0.1.0	9.0.1.0	✓
mpls-tp-ntwk-view	NC.UG.RI.MPLS_TP_Network_View	9.0.1.0	9.0.1.0	✓
mte-device-library-mapping	NC.AG.DR.MTE_Device_Library_Mapping	9.0.2.1	9.0.2.1	✓
mailsender	NC.AG.FRW.Mail_Sender	9.5.2.12	9.3.2.9	✓
MediationDataFlowWS	NC.AG.FRW.Mediation_DataFlow_WebServices_Pack	8.2.1.15	7.1.1.13	✓
MediationDataFlow	NC.AG.FRW.Mediation_DataFlow	9.3.4.13	9.3.4.13	✓
MediationTransition	NC.AG.DR.Mediation_Transition.Unified_Model_Configuration	9.3.4.11	8.2.4.8	✓
	NC.AG.DR.Mediation_Transition.Validation_Engine	9.3.4.11	8.2.4.8	✓
	NC.AG.DR.Mediation_Transition.Transformation_Engine	9.3.4.11	8.2.4.8	✓
dispatcher	NC.UG.FRW.Message_Dispatcher	9.0.1.0	9.0.1.0	✓
	NC.AG.FRW.Message_Dispatcher	9.0.1.0	9.0.1.0	✓
dispatcher-webservice	NC.AG.FRW.Message_Dispatcher_DataFlow_Interface	9.0.1.0	9.0.1.0	✓
dispatcher-sms	NC.AG.FRW.Message_Dispatcher_SMSC_Integration	9.0.1.0	9.0.1.0	✓
MessageEngine	NC.AG.FRW.Message_Engine	9.0.1.18	9.0.1.18	✓
Microwave	NC.UG.RI.Microwave	9.0.3.4	9.0.3.4	✓
	NC.AG.RI.Microwave	9.0.3.4	9.0.3.4	✓

Product Component	File Name	Required Version	Found Version	Status
mobileran	NC.UG.RI.Mobile_RAN	9.0.2.1	9.0.2.1	✓
MSC	NC.UG.RI.MSC_Textual_Mode	8.2.3.4	8.2.3.4	✓
	NC.AG.RI.Shared_Services	8.2.3.4	8.2.3.4	✓
NC2NCReplication	NC.AG.FRW.NC_to_NC_Replication	8.0.2.7	8.0.2.7	✓
NEC_PNMSj_Int	NC.AG.DR.Integration_Adapter_for_NEC_PNMSj	9.0.1.0	9.0.1.0	✓
NSS	NC.UG.RI.Network_Switching_Subsystem	8.2.1.1	8.2.1.1	✓
netcool	NC.AG.FRW.Netcool_Integration_Adapter	7.3.1.0	7.3.1.0	✓
nss-view	NC.AG.RI.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	✓
	NC.UG.RI.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	✓
Nokia_NetAct_Int	NC.AG.DR.Integration_Adapter_for_Nokia_Siemens_Networks_NetAct	8.2.2.0	8.2.2.0	✓
OMEngine	NC.AG.OPF.Mapping_Tables	9.0.7.9	9.0.7.7	✓
OPF_OTV	NC.UG.OPF.Order_Tree_View	8.2.1.9	8.2.1.9	✓
osp	NC.UG.OSP.OSP_Textual_Mode	9.0.9.4	9.0.9.4	✓
	NC.AG.OSP.OSP_Textual_Mode	9.0.9.4	9.0.9.4	✓
	NC.AG.OSP.OSP_Configuring_Cable_Coloring	9.0.9.4	9.0.9.4	✓
OSSJ_FM_INT	NC.AG.SPM.OSSJ_Fault_Management_Integration	7.3.1.7	7.3.1.5	✓
OTN	NC.UG.RI.OTN	8.2.1.0	8.2.1.0	✓
order-decomposition-gui	NC.AG.OPF.Order_Decomposition_View	2.1.1.0	1.8.1.0	✓
	NC.UG.OPF.Order_Decomposition_View	2.1.1.0	1.8.1.0	✓
OrderEntry	NC.UG.COM.Order_Entry	8.1.5.6	8.1.5.6	✓

Product Component	File Name	Required Version	Found Version	Status
	NC.UG.COM.Order_Entry_Wholesale	8.1.5.6	8.1.5.6	✓
	NC.UG.COM.Pricing_Engine	8.1.5.6	8.1.5.6	✓
OM_Dashboards	NC.UG.OPF.Order_Management_Dashboards	9.3.2.1	8.2.1.5	✓
parameters-visualization	NC.AG.FRW.Parameter_Visualization_Configuration_for_GUI_Views	3.3.0.0	3.3.0.0	✓
partner-management	NC.UG.PM.Partner_Management	9.0.1.9	9.0.1.8	✓
path-management	NC.UG.RI.Path_Management	9.0.4.3	9.0.4.0	✓
PDT	NC.AG.FRW.Performance_Diagnostics_Tool	8.1.2.0	8.1.2.0	✓
PhoneBookAmerica	NC.UG.RI.Phone_Book_US	8.2.1.4	8.2.1.4	✓
PhoneBookEurope	NC.UG.RI.Phone_Book_EU	8.2.2.2	8.2.2.2	✓
PolicyFramework	NC.AG.FRW.Security_Policies	9.3.2.13	9.3.2.13	✓
PM_Cooling	NC.UG.RI.Power_Management_and_Cooling_Equipment_Textual_Mode	7.2.1.4	7.2.1.4	✓
ProcessOrchestrator	NC.UG.FRW.Process_Orchestrator	9.0.3.38	9.0.3.38	✓
ProcessOrchestrator	NC.AG.FRW.Process_Orchestrator	9.0.3.38	9.0.3.38	✓
POM	NC.UG.COM.Customer_Order_Management	9.0.7.11	9.0.7.11	✓
	NC.AG.COM.Customer_Order_Management	9.0.7.11	9.0.7.11	✓
	NC.UG.CIM.Product_Inventory	9.0.7.11	9.0.7.7	✓
	NC.UG.PIM.Product_Information_Management	9.0.7.11	9.0.7.7	✓
QueueService	NC.AG.FRW.Queue	9.0.2.9	9.0.2.8	✓
rdblight	NC.AG.FRW.RDB_Light	8.2.5.15	8.2.5.5	✓
radio-controller-view	NC.UG.Radio_Controller_View	2.0.0.0	2.0.0.0	✓

Product Component	File Name	Required Version	Found Version	Status
	NC.AG.Radio_Controller_View	2.0.0.0	2.0.0.0	✓
Reconciliation	NC.AG.DR.Reconciliation_Framework	8.2.9.23	8.2.9.20	✓
RDB	NC.AG.FRW.Replicated_Database	8.2.5.13	8.2.5.13	✓
	NC.MG.FRW.Replicated_Database	8.2.5.13	8.2.5.13	✓
Reports	NC.UG.FRW.Reports	9.3.7.12	9.3.7.11	✓
	NC.AG.FRW.Reports	9.3.7.12	9.3.7.11	✓
ResourceInventory	NC.UG.RI.Resource_Inventory_Basics	9.0.7.5	9.0.7.5	✓
	NC.UG.RI.Network_Modeling	9.0.7.5	9.0.7.5	✓
	NC.UG.RI.Templates	9.0.7.5	9.0.7.5	✓
	NC.AG.RI.Resource_Inventory	9.0.7.5	9.0.7.5	✓
	NC.AG.RI.Device_Library	9.0.7.5	9.0.7.5	✓
	NC.UG.RI.Archiving	9.0.7.5	9.0.7.5	✓
NetworkPlanningEngine	NC.AG.FRW.Rules_Engine	8.2.6.3	8.2.6.3	✓
sdh-circuit-designer sdh-circuit-designer	NC.UG.RI.PDH_Circuit_Designer	9.0.2.0	9.0.2.0	✓
	NC.UG.RI.SDH_Circuit_Designer	9.0.2.0	9.0.2.0	✓
sdh	NC.UG.RI.SDH-PDH	9.0.3.2	9.0.3.2	✓
sonet-ntwk-view	NC.UG.RI.SONET_Network_View	9.0.1.1	9.0.1.1	✓
sonet	NC.UG.RI.SONET	8.2.2.10	8.2.2.10	✓
SS7_SIGTRAN	NC.UG.RI.SS7_and_SIGTRAN	8.2.1.1	8.2.1.1	✓
sales-force-automation	NC.UG.MSM.Sales_Force_Automation	9.0.1.11	9.0.1.5	✓

Product Component	File Name	Required Version	Found Version	Status
Scripting	NC.AG.FRW.Scripting_Framework	9.3.1.18	9.3.1.18	✓
Search	NC.UG.FRW.Search	9.3.5.47	9.3.5.46	✓
Search	NC.AG.FRW.Configuring_Search_Profiles	9.3.5.47	9.3.5.46	✓
SAF	NC.UG.SA.Service_Activation_Framework	9.0.6.14	9.0.6.13	✓
ServiceInventory	NC.UG.SI.Service_Inventory	9.0.4.4	9.0.4.3	✓
SPF	NC.UG.SOM.Service_Order_Management	9.0.9.9	9.0.9.9	✓
	NC.AG.SOM.Service_Order_Management	9.0.9.9	9.0.9.9	✓
	NC.UG.SIM.Service_Information_Management	9.0.9.9	9.0.9.6	✓
SolutionConfigurationMgmt	NC.AG.FRW.Solution_Configuration_Management	8.2.1.9	8.1.2.7	✓
	NC.AG.FRW.Solution_Configuration_Management_Domains	8.2.1.9	8.2.1.8	✓
	NC.UG.FRW.Solution_Configuration_Management_Domains	8.2.1.9	8.2.1.8	✓
specification-catalog-gui	NC.UG.OPF.Specification_Catalog_Graphical_Mode	1.17.0.0	1.15.0.0	✓
	NC.AG.OPF.Specification_Catalog_Graphical_Mode	1.17.0.0	1.15.0.0	✓
SubscriberInventory	NC.UG.SI.Subscriber_Inventory	8.0.1.2	8.0.1.2	✓
TAR	NC.AG.FRW.Task_Assignment_Rules	8.1.2.10	8.1.2.10	✓
template-based-document-generator	NC.AG.FRW.Template-based_Document_Generation	9.0.1.6	9.0.1.2	✓
	NC.UG.FRW.Template-based_Document_Generation	9.0.1.6	9.0.1.2	✓
TBIntegration	NC.UG.FRW.Template_Based_Integration	8.0.2.15	8.0.2.15	✓
	NC.AG.FRW.Template_Based_Integration	8.0.2.15	8.0.2.15	✓
TextualUI	NC.UG.FRW.Text_Navigation_Mode	9.0.8.36	9.0.8.36	✓

Product Component	File Name	Required Version	Found Version	Status
TTM	NC.UG.SPM.Trouble_Ticket_Management	8.2.3.8	8.2.3.5	✓
	NC.AG.SPM.Trouble_Ticket_Management	8.2.3.8	8.2.3.5	✓
ui-data-sources	NC.AG.FRW.UI_Data_Sources	9.5.1.16	9.0.1.10	✓
vpn-view	NC.UG.RI.VPN_View	1.2.3.0	1.2.1.0	✓
	NC.AG.RI.VPN_View	1.2.3.0	1.2.1.0	✓
voice	NC.UG.RI.Voice	9.0.3.0	8.2.2.5	✓
AssignmentTool	NC.UG.WFM.WFM_Assignment_Tool	8.2.2.1	8.2.2.1	✓
	NC.AG.WFM.WFM_Assignment_Tool	8.2.2.1	8.2.2.1	✓
WorkOrderManagement	NC.UG.WFM.Workforce_Management	8.2.4.5	8.2.4.5	✓
WorkforceInventory	NC.UG.WFM.Workforce_Management	8.2.4.9	8.2.4.9	✓
WidgetsOOB	NC.UG.FRW.Dashboards_and_Widgets	8.2.4.12	8.2.4.11	✓
	NC.CG.FRW.Dashboards_and_Widgets	8.2.4.12	8.2.4.11	✓
WorkOrderStructure	NC.UG.FRW.Work_Orders_and_Work_Items	8.2.4.2	8.2.4.2	✓
WF	NC.AG.FRW.Workflow	9.0.4.36	9.0.4.36	✓
Xpath	NC.AG.FRW.XPath	9.5.2.0	9.0.1.13	✓
xpon-views	NC.UG.RI.xPON_OLT_Network_View	0.2.5.0	0.2.5.0	✓
xpon	NC.UG.RI.xPON	8.2.2.1	8.2.2.1	✓
Core	NC.AG.FRW.Attribute_Details_and_Object_Type_Properties	9.5.3.5	9.3.6.23	✓
	NC.AG.FRW.Attribute_Adapters	9.5.3.5	9.3.6.23	✓
	NC.AG.FRW.Event_Listeners	9.5.3.5	9.3.6.23	✓

Product Component	File Name	Required Version	Found Version	Status
LicenseManager3	NC.AG.FRW.License_Manager_3	9.0.1.4	9.0.1.4	

11.2.3 TW Discrepancy Analysis 9.5

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ProductComponentName		Required Version	User-impacting Issues Found (Yes/No)	User-impacting Issue Name	User-impacting Issue Link	Additional Info about Issue	Comments	Status
atm	NC.UG.RI.ATM	8.2.3.0	No					Document is available in SVN
AddressManagement	NC.UG.FRW.Address_Management	8.2.2.3	No				Available version in SVN is 8.2.2.2	New version is added to SVN
	NC.AG.FRW.Address_Management	8.2.2.3	No					New version is added to SVN
Alcatel_13153	NC.AG.FRW.Integration_Adapter_for_Alcatel_	8.0.2	No			What's new doc is not availabl	Note: This is under Discovery and Reconciliation???	Version 8.0.2.1 exists in SVN

_1354	1353NM-1354RM	.1				e for 8.0.2.1		
alcatel-5620-sam-int	NC.AG.DR.Integration_Adapter_for_Alcatel5620SAM	9.0.1.3	Yes	Fixing installation errors	https://project.netcracker.com/ncobject.jsp?id=9139749519213244173	NC.PROD.ALU5620INT#28	Available in SVN: 9.0.1.2	No changes are needed. Version 9.0.1.3 is added to SVN
AssignmentRules	NC.AG.RI.Assignment_Rules	8.2.3.2	Yes	Copy/Move Functionality in Assignment Rules	https://project.netcracker.com/ncobject.jsp?id=9137835541413096142	https://psup.netcracker.com/browse/PSUPTS-2035	NC.AG.RI.Assignment_Rules_8.2.3.1.docx available on SVN	No changes are needed. Version 8.2.3.2 is added to SVN
				[PSUPTS-2371] System does not allow terminating STM-16 multiplex sections at OC48 ports	https://project.netcracker.com/ncobject.jsp?id=9139076107513071569			No changes are needed.
attachment-management	NC.AG.FRW.Attachment_Management	9.5.1.11	Yes	FileSystemStorageProvider check for category support fix	https://project.netcracker.com/ncobject.jsp?id=9139448902513755681	https://psup.netcracker.com/browse/INTPID-4547	What's new document is not avalable for 9.5.1.11	No changes are needed. New version is added to SVN
Admin	NC.AG.FRW.Administrative	9.5	Yes	Adding ability to	https://project.netcrack	https://psup.netcrack	No such documents available on https://svn/ProductDocuments/Documents90/NetCracker%20Framework/	No changes are

Tool	_Tools	.3.34		export list_values via ExportToSQL	er.com/ncobject.jsp?id=91395596735139465 18	er.com/browse/PSUPCORE-16767	NetCracker%20Framework%20for%20Administrators/	needed. New version is added to SVN
	NC.AG.FRW.Managing_Rights	9.5.3.34	No					New version is added to SVN
	NC.AG.FRW.Naming_Conventions	9.5.3.34	No					New version is added to SVN
	NC.AG.FRW.Object_Model_and_User_Interface_Customization	9.5.3.34	No					New version is added to SVN
	NC.AG.FRW.Object_Types_Attributes_and_Schemas	9.5.3.34	No					New version is added to SVN
	NC.AG.FRW.Users_and_Groups	9.5.3.34	No					New version is added to SVN
AuthFramework	NC.AG.FRW.Configuring_SAML	9.5.1.26	Yes	[INTPID-4846]Problems with login in 9.5 AuthFa	https://project.netcracker.com/ncobject.jsp?id=91395074349	https://psup.netcracker.com/browse/INTPID-4648	Available version in SVN is 9.3.1.26	No changes are needed. New version is added to SVN

				cade.java, LicenseManager	13854976			
	NC.AG.FRW.Configuring_CAS_Authentication	9.5.1.26	No					New version is added to SVN
	NC.AG.FRW.Configuring_Kerberos_Authentication	9.5.1.26	No					New version is added to SVN
	NC.AG.FRW.Configuring_X.509_Authentication	9.5.1.26	Yes					No changes are needed. New version is added to SVN
				Added to fill the field "internal name" attributes for "Domaine name", "Domain Login" and "NT Domain User"	https://project.netcracker.com/ncobject.jsp?id=9139749554213244279	https://psup.netcracker.com/browse/PSUPCORE-18800		
Auto Installer	NC.AG.AutoInstaller	4.18.4.0	Yes	SSL errors after upgrade to new AI version	https://project.netcracker.com/ncobject.jsp?id=91394585772137831		Previous Version NC.AG.AutoInstaller_4.18.3.0.docxavailable on SVN	No changes are needed. 4.18.4.0 is added to SVN

					04			
				Lost public properties ai.db.kpi.* ai.db.hds.* ai.db.rdb.*	https://project.netcracker.com/ncobject.jsp?id=91394651592137923 98		What's New document is checked out by Olga Gavriliuk (01-13-2015)	No changes are needed.
				The task 'compareVersion' uses value of the property 'installed.version' inside Java class. It leads to ambiguity.	https://project.netcracker.com/ncobject.jsp?id=91394586318137834 03	https://psup.netcracker.com/browse/PSUPAI-1860		No changes are needed.
billing-activation-and-	NC.UG.CBM.Billing_Activation_and_Information_Provider	9.3.3.7	No				Available in SVN: 9.3.3.5. Add the new version 9.3.3.7.	Version 9.3.3.7 is added to SVN
information-provider								
	NC.AG.CBM.Billing_Activatio	9.3	No				Available in SVN: 9.3.3.5. Add the new version 9.3.3.7.	Version 9.3.3.7 is added to

	n_and_Information_Provider	.3.7						SVN
BAM	NC.UG.FRW.Business_Activity_Monitoring	9.0.3.38	Yes	[DOC][INTPID-3479]Change [Deactivate All] button name	https://project.netcracker.com/ncobject.jsp?id=9138592470213235794	https://psup.netcracker.com/browse/INTPID-3479	Available version in SVN is 9.0.3.35	UG. No changes are needed. New version is added to SVN.
	NC.AG.FRW.Business_Activity_Monitoring	9.0.3.38	No					AG. Done. New version is added to SVN.
	NC.MG.FRW.Business_Activity_Monitoring	9.0.3.38	No					New version is added to SVN
Calendar	NC.UG.FRW.Business_Calendar	9.3.2.27	Yes	[9.4_QA_Calendar] - Tasks are scheduled on the wrong time	https://project.netcracker.com/ncobject.jsp?id=9139345795913600499	https://psup.netcracker.com/browse/INTPID-4170	What's new document is not available for 9.3.2.27	No changes are needed. New version is added to SVN
EventManagement	NC.UG.SPM.Service_Problem_Management	8.2.3.13	[9.0_QA_Event Management] - [Localizatio	https://project.netcracker.com/ncobject.jsp?id=9137253668713176439		Previous version NC.UG.SPM.Service_Problem_Management_8.2.2.0.docx available on SVN		No changes are needed. Version 8.2.3.13 is added to SVN

			n][CIAEM1.2] Add localisation to columns of Events Manager					
			Please update Queue Dispatcher. It should be possibility to specify specific queue for performing	https://project.netcracker.com/ncobject.jsp?id=913731424421326 2460		What's new doc		No changes are needed.

			of event.					
	NC.AG.SPM.Service_Problem_Management	8.2.3.13					Previous version NC.AG.SPM.Service_Problem_Management_8.2.2.0.docx available on SVN	
Notification Escalation	NC.UG.SPM.Service_Problem_Management	8.2.1.4	No	N.A	N.A	N.A	NC.UG.SPM.Planned_Maintenance_8.2.1.4.docx available on SVN. Status is green in https://bass.netcracker.com/display/CDT/Release+9.5	
	NC.AG.SPM.Service_Problem_Management	8.2.1.4	No	N.A	N.A	N.A	NC.AG.SPM.Service_Problem_Management_8.2.1.4.docx available on SVN. Status is green in https://bass.netcracker.com/display/CDT/Release+9.5	
CI APlanned Maintenance	NC.UG.SPM.Planned_Maintenance	8.2.1.5	Yes	[PDCR-4229][QA] The system doesn't validate input "Start date" and "End date" while editing Maintenance ticket	https://project.netcracker.com/ncobject.jsp?id=9138239916113703922		What's new document not available for 8.2.15 Previous version NC.UG.SPM.Planned_Maintenance_8.2.1.4.docx available on SVN	No changes are needed. Version 8.2.1.5 is added to SVN
				[9.3_QA_CIA PlannedMaintenance] - [CIA.PM4][INTPID-2216]Maintenance	https://project.netcracker.com/ncobject.jsp?id=9137893489313181991			

				Ticket creation dialog doesn't shown after pressing “Create Maintenance Ticket” button				
	NC.AG.SPM.Planned_Maintenance	8.2.1.5	Yes				Previous version NC.AG.SPM.Planned_Maintenance_8.2.1.4.docx available on SVN	No changes are needed. Version 8.2.1.5 is added to SVN
CIASerivceIncidentLogging	NC.UG.SPM.Service_Incident_Logging	8.2.1.8	Yes	XML External Entity (XXE) Processing-problem of vulnerability	https://project.netcracker.com/ncobject.jsp?id=91385589473132048	https://psup.netcracker.com/browse/PSUPCIA-259	Previous version NC.UG.SPM.Service_Incident_Logging_8.2.1.6.docx available on SVN	No changes are needed. 8.2.1.8 is added to SVN
				Avoid mixing of ANSI and Native Joins in queries. Use Native joins if possible.	https://project.netcracker.com/ncobject.jsp?id=91383092016137978	https://psup.netcracker.com/browse/PSUPCIA-210	What's new document not available Previous version NC.UG.SPM.Planned_Maintenance_8.2.1.4.docx available on SVN	No changes are needed.
	NC.AG.SPM.Service_Incident_Logging	8.2.1.8					Previous version NC.AG.SPM.Service_Incident_Logging_8.2.1.6.docx available on SVN	8.1.2.8 is added to SVN
CapacityMg	NC.UG.RI.Capacity_Management	9.0.3.	Yes	View Circuit does not display full	https://project.netcracker.com/ncobject.jsp?id	https://psup.netcracker.com/browse/INTPID		No changes are needed. Version 9.0.3.4 is

mt		4		protection path.	=9139983270413616387	-2320		added to SVN
				New threshold instance should be automatically created	https://project.netcracker.com/ncobject.jsp?id=9139983270513616399			No changes are needed.
	NC.AG.RI.Capacity_Management	9.0.3.4	No				NC.AG.RI.Capacity_Management_9.0.3.4.docx available on SVN	Version 9.0.3.4 is available in SVN
cpl-transport-ntwk	NC.UG.NPD.Capacity_Planning_Transport_Network	9.0.1.3					Available version in SVN is 9.0.1.1. However, the required version is 9.0.1.3	9.0.1.3 is added to SVN
			Yes	Geometry wasn't created while loading topology	https://project.netcracker.com/ncobject.jsp?id=9136613430813261692	https://psup.netcracker.com/browse/INTPID-1065		No changes are needed.
			Yes	Highlight last message red in UserDialog in case of operation failure	https://project.netcracker.com/ncobject.jsp?id=9136613430813261730			No changes are needed.
			Yes	Error while routing 1000 demands in	https://project.netcracker.com/ncobject.jsp?id			No changes are needed.

				bulk	=91365044838130980 05			
CDRW	NC.UG.RI.Card_and_Device_Replacement_Wizard	9.0.4.6	Yes	[9.0.1_QA_IP_MPLS_Metro_Ethernet] - [INTPID-151][MPLSME1.44][MPLSME1.45][MPLSME1.46] No warning messages about incorrect port mapping	https://project.netcracker.com/ncobject.jsp?id=91401138254138298 93		NC.UG.RI.Card_and_Device_Replacement_Wizard_9.0.4.6.docx available on SVN. Status is Green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	No changes are needed. Version 9.0.4.6 is available in SVN
	NC.AG.RI.Cabling_Wizard_Settings	9.0.4.6	Yes		No links		NC.AG.RI.Cabling_Wizard_Settings_9.0.4.6.docx available on SVN Status is green in Staus is Green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	No changes are needed. Green tick.
Catalog Resources	NC.UG.SOM.Resource_Catalog	9.0.1.5	Yes	Changing old verrsion of attrbuild,changeset.plugin	https://project.netcracker.com/ncobject.jsp?id=91394408070137385 98	https://psup.netcracker.com/browse/PSUPOM-3671	Previous version NC.UG.SOM.Resource_Catalog_9.0.1.4.docx available on SVN	No changes are needed. 9.0.1.5 is added to SVN
				[9.0_QA_CatalogResources] - Wrong Type name	https://project.netcracker.com/ncobject.jsp?id=91372706897132066		What's New document not available	No changes are needed.

					58			
Configuration Mgmt	NC.UG.CM.Configuration_Management	8.2.2.1						
	NC.AG.CM.Configuration_Management	8.2.2.1						
CIA	NC.UG.SPM.Service_Problem_Management	9.3.2.1	Yes	Unnecessary NC_CIA% tables	https://project.netcracker.com/ncobject.jsp?id=91378262958130721 14	https://psup.netcracker.com/browse/PSUPCIA-200	Previous version NC.UG.SPM.Service_Problem_Management_8.2.4.0.docx available on SVN	No changes are needed. Version 9.3.2.1 is available in SVN
							What's new document not available	
	NC.AG.SPM.Service_Problem_Management	9.3.2.1					Previous version NC.AG.SPM.Service_Problem_Management_8.2.4.0.docx available on SVN	No changes are needed. Version 9.3.2.1 is available in SVN
customer-information-and-	NC.AG.CIM.Customer_Information_and_History_Management	9.0.1.12	Yes	Parameter "Customer Account NUmber" must be read only	https://project.netcracker.com/ncobject.jsp?id=91387057890134411 84	https://psup.netcracker.com/browse/PSUPSM-299	Available version in SVN is 9.0.1.12	No changes are needed.
				Creation of Appointment in Calendar should be	https://project.netcracker.com/ncobject.jsp?id=91387057889	https://psup.netcracker.com/browse/PSUPSM-691		

				possible	13441175			
history-management								
	NC.UG.CIM.Customer_Information_and_History_Management	9.0.1.12					Available version in SVN is 9.0.1.12	No changes are needed.
dwdm-ntwk-view	NC.UG.RI.DWDM_Network_View	9.0.1.0					Green tick mark in https://bass.netcracker.com/	No changes are needed
DWDM	NC.UG.RI.DWDM	9.0.3.0					Green tick mark in https://bass.netcracker.com/	No changes are needed
DataSourceFramework	NC.AG.FRW.Data_Source_Framework	8.2.2.15	Yes	OLAP Report Provider should support macros in reports.	https://project.netcracker.com/ncobject.jsp?id=91393977929136676678	https://psup.netcracker.com/browse/PSUPPLAT-7291	available version in SVN 8.2.2.15	No changes are needed. Version 8.2.2.15 exists in SVN
				Date with Timestamp should be extract	https://project.netcracker.com/ncobject.jsp?id=91390	NC.PROD.OMDPH1#117		No changes are needed.

				ed from Date columns of reports.	67733713046576			
DP_Path_Management	NC.UG.NPD.Network_Planning_and_Design.Path_Management	9.0.2.3	Yes	Physical CrossConnect functionality	https://project.netcracker.com/ncobject.jsp?id=9138591820913233258			The document has been updated.
			Yes	Long loading of physical crossconnect tab	https://project.netcracker.com/ncobject.jsp?id=9138723883313484137	https://psup.netcracker.com/browse/PSUPTS-2573		No changes are needed
design-planning-device-view	NC.UG.NPD.Network_Planning_and_Design.Device_View	2.1.1.0	No				Available version in SVN is 2.0.1.0. However, the required version is 2.1.1.0	Version 2.1.1.0 is added to SVN
DP_Framework	NC.UG.NPD.Network_Planning_and_Design.Framework	9.0.7.1	Yes	Impossible to create Device from Template with 2 same cards	https://project.netcracker.com/ncobject.jsp?id=9139915608913495510	https://psup.netcracker.com/browse/INTPID-4743		No changes are needed. 9.0.7.1 is available in SVN
			Yes	Incorrect error message when user	https://project.netcracker.com/ncobjec	https://psup.netcracker.com/browse/		No changes are needed.

				doesn't have rights on creation Plan Operation Lock	t.jsp?id=9139991789113634942	PSUPDP-1160		
			Yes	Policy Providers doesn't delete	https://project.netcracker.com/ncobject.jsp?id=9139646208213092186	https://psup.netcracker.com/browse/INTPID-4625		No changes are needed.
	NC.AG.NPD.Network_Planning_and_Design.Validation_Reports	9.0.7.1	No				Available version in SVN is 9.0.5.1. However, the required version is 9.0.7.1	Version 9.0.7.1 is added to SVN
	NC.UG.NPD.Network_Planning_and_Design.Floor_Space_Management	1.4.1.0	No				Available version in SVN is 1.2.1.0. However, the required version is 1.4.1.0	Version 1.4.1.0 is added to SVN
design-planning-gui-rsm	NC.UG.NPD.Network_Planning_and_Design.Rack_Space_Management	1.3.1.0	No				Available version in SVN is 1.2.1.0. However, the required version is 1.3.1.0	Version 1.3.1.0 is added to SVN
DP_OSP	NC.UG.NPD.Network_Planning_and_Design.OSP	9.0.3.1	Yes	Not all OSP cables appear in splicing Dialog	https://project.netcracker.com/ncobject.jsp?id=9138741416213519714			No changes are needed. 9.0.3.1 is available in SVN
dp	NC.AG.N	9	Ye	pkgCal	https://p	https://	Available version in SVN is 9.3.1.0.	No

-search-plugin	PD.Design_and_Planning_Search_Plugin	.3.1.4	s	culation should use DP context for explicitly specified values	roject.netcracker.com/ncobject.jsp?id=9139087250013101429	psup.netcracker.com/browse/PSUPDP-1080	However, the required version is 9.3.1.4	changes are needed. Version 9.3.1.4 is added to SVN
dp-capacity-management	NC.AG.NPD.Network_Planning_and_Design.Capacity_Management	9.0.1.2	No				Available version in SVN is 9.0.1.1. However, the required version is 9.0.1.2	
							What's new document is available. Link:https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%2FProductDocumentation%2FIM%2FDesign%20and%20Planning%20Capacity%20Management&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603E31A813	
			Yes	Threshold Instances should be recalculated after [Cancel] of Planned Actions	https://project.netcracker.com/ncobject.jsp?id=9139205303113340297	https://psup.netcracker.com/browse/INTPID-3724		No changes are needed. Version 9.0.1.2 is added to SVN
dp-dwdm	NC.UG.NPD.Network_Planning_and_Design.DWDM	9.0.1.1	No				What's new document is available. Link: https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%2FProductDocumentation%2FIM%2FDesign%20and%20Planning%2E%20DWDM&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603	

							E31A813	
			Yes	DP configuration	https://project.netcracker.com/ncobject.jsp?id=91356977499130007 89			No changes are needed. 9.0.1.1 is available in SVN
dp-ip-mpls-me-circuit-designer	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	Yes	Information about planning in CD not displayed	https://project.netcracker.com/ncobject.jsp?id=91364844555130545 14			No changes are needed. Version 9.0.1.0 is available in SVN
			Yes	Exception appears at performing any actions	https://project.netcracker.com/ncobject.jsp?id=91364924502130728 20			No changes are needed.
dp-ip-mpls-metro_ethernet	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet	9.0.1.8	No				Available version in SVN is 9.0.1.3. However, the required version is 9.0.1.8	Version 9.0.1.8 is added to SVN
dp-mpls-tp-nt	NC.UG.NPD.Network_Planning_and_Design.MPLS_TP_Networ	9.0.1.	Yes	Wrong dialog is displayed in case of All	https://project.netcracker.com/ncobject.jsp?id=91388			No changes are needed. 9.0.1.0 is available

wk-view	k_View	0		Links Removing after removing one Link in Plan On	62882713723978			in SVN
							What's new document is available. Link: https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%2FProductDocumentation%2FIM%2FDesign%20and%20Planning%2E%20MPLS%2DTP%20Network%20View&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603E31A813	
			Yes	Ethernet link still displayed after aggregate to LAC	https://project.netcracker.com/ncobject.jsp?id=91365356722131270764			No changes are needed.
			Yes	Tunnel parameters aren't displayed on view	https://project.netcracker.com/ncobject.jsp?id=91364924307130726779			No changes are needed.
			Yes	Parameters of curve can't be drawn.	https://project.netcracker.com/ncobject.jsp?id=9136441660113998124			No changes are needed.
			Yes	Create NGM/NVM configurations	https://project.netcracker.com/ncobject.jsp?id=91362			No changes are needed.

					19375613661902			
dp-me-ntwk-view	NC.UG.NPD.Network_Planning_and_Design.Metro_Ethernet_Network_View	9.0.1.1	No				Available version in SVN is 9.0.1.0. However, the required version is 9.0.1.1	9.0.1.1 is added to SVN
dp-microwave	NC.UG.NPD.Network_Planning_and_Design.Microwave	9.0.1.2					Available version in SVN is 9.0.1.1. However, the required version is 9.0.1.2	9.0.1.2 is added to SVN
							What's new document is available. Link: https://psup.netcracker.com/browse/PDCR-4923	
			Yes	Name of the newly created MW Link	https://project.netcracker.com/ncobject.jsp?id=9138611914713292325			No changes are needed.
			Yes	Plan remark displayes while plan is turn off	https://project.netcracker.com/ncobject.jsp?id=9138774281013553974			No changes are needed.
dp-mobileran	NC.UG.NPD.Network_Planning_and_Design.Mobile_RAN	9.0.1.2					Available version in SVN is 9.0.1.0. However, the required version is 9.0.1.2	9.0.1.2 is added to SVN
							What's new document available. Link: https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%	

							2FProductDocumentation%2FIM%2FDesign%20and%20Planning%2E%20Mobile%20RAN&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603E31A813	
			Yes	Parameter role can not be filled	https://project.netcracker.com/ncobject.jsp?id=9138894809013756694			No changes are needed.
dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.Resource_Inventory	9.0.4.2					Available version in SVN is 9.0.4.5. However, the required version is 9.0.4.2	9.0.4.2 is added to SVN.
			Yes	Naming Convention>Name of circuits should contain abbreviation of circuit type	https://project.netcracker.com/ncobject.jsp?id=9139388955213657712			No changes are needed.
			Yes	<Naming Convention>for circuits should be supported in DP mode	https://project.netcracker.com/ncobject.jsp?id=9139388955313657716			No changes are needed.
	NC.UG.NPD.Network_Planning_and_Design.ISP_Cables	9.0.4.2	No				Available version in SVN is 9.0.4.5. However, the required version is 9.0.4.2	9.0.4.2 is added to SVN.
dp-sdh-pdh	NC.UG.NPD.Network_Planning_and_Design.SDH-PDH	9.0.1.1					New Feature Document is available. Link: https://psup.netcracker.com/browse/PDCR-3417	

			Yes	Calculate Protection Quality	https://project.netcracker.com/ncobject.jsp?id=91355856017138677795			No changes are needed.
			Yes	DP SDH configuration	https://project.netcracker.com/ncobject.jsp?id=91356985419130031143			No changes are needed.
			Yes	The system should not allow to use busy channels	https://project.netcracker.com/ncobject.jsp?id=91357429351130538776			No changes are needed.
device-view	NC.UG.RI.Device_View	6.6.1.0	Yes	Release v.6.6.1.0	https://project.netcracker.com/ncobject.jsp?id=91397687263132902990		NC.UG.RI.Device_View_6.5.0.0.docx available on SVN .	No changes are needed. Version 6.6.1.0 is added to SVN
				Implementation	https://project.netcracker.com/ncobject.jsp?id=91397687488132903779	https://psup.netcracker.com/browse/PSUPGUI-4589 Incorrect displaying of slots EMF parsing . support		

						MWT_SET and save transform to DC		
	NC.AG.RI.Device_View	6.6.1.0	Yes	Release v.6.6.1.0 Incorrect displaying of slots	https://project.netcracker.com/ncobject.jsp?id=9139768748813290379	https://psup.netcracker.com/browse/PSUPGUI-4589	Previous version NC.AG.RI.Device_View_6.5.0.0.docx available on SVN	No changes are needed. Version 6.6.1.0 is added to SVN
diagram-template-editor	NC.UG.FRW.Diagram_Template_Editor	1.4.3.0	No				Doc available in SVN is 1.4.1.0. need to add the latest version.	New version is added to SVN
DS	NC.AG.DR.Discovery_Solution	9.0.1.4	Yes	Add dependency on Export / Import	https://project.netcracker.com/ncobject.jsp?id=9137616554113747073	https://psup.netcracker.com/browse/PSUPIS-63	Doc availale in SVN: 7.3.1.3	No changes are needed. 9.0.1.4 is added to SVN
			Yes	Set dependency to Mediation Commons with fix for XXE vulnerability	https://project.netcracker.com/ncobject.jsp?id=9138421378513994512	https://psup.netcracker.com/browse/PSUPIS-79		No changes are needed.
ERICSSON_OSS	NC.AG.FRW.Integration_Adapter_for_Ericsson_OSS	9.0.3.0	Yes	New version of Ericsson OSS-RC Integration	https://project.netcracker.com/ncobject.jsp?id=91385407419		available version in SVN 9.0.3.0	No changes are needed.

_INT				(2G, 3G, 4G)	13178794			
				Create Base Station Antenna Frequency Range	https://project.netcracker.com/ncobject.jsp?id=9131855800113299958	PROD.SUPP.DR.REC#2245		No changes are needed. Version 9.0.3.0 is available in SVN
Ericsson_SOEM	NC.AG.FRW.Integration_Adapter_for_Ericsson_SOEM	8.2.1.0	Yes	Installation errors	https://project.netcracker.com/ncobject.jsp?id=9139758821513265631	https://project.netcracker.com/ncobject.jsp?id=9139758821513265631	Doc available in SVN 8.2.1.0.	No changes are needed. Version 8.2.1.0 exists in SVN
Error Handling	NC.UG.FRW.Error_Handlig_Framework	9.0.2.14	Yes	Wrong extra binding of some Error Handling attributes in Order Management Schema.	https://project.netcracker.com/ncobject.jsp?id=9138472703113065634	https://psup.netcracker.com/browse/PSUPPLAT-6337	Doc available in SVN 9.0.2.15	No changes are needed. Version 9.0.2.14 exists in SVN
	NC.AG.FRW.Error_Handlig_Framework	9.0.2.14	No				Doc available in SVN 9.0.2.15	Version 9.0.2.14 is added to SVN
ethernet-ring-vie	NC.UG.RI.Ethernet_Ring_View	1.3.0.0	Yes	Ready for Testing in ethernet-ring-view_1.3.0.0_0	https://project.netcracker.com/ncobject.jsp?id=91365365434	https://psup.netcracker.com/browse/PDGUICAMB-954	NC.UG.RI.Ethernet_Ring_View_1.3.0.0.docx available on SVN Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	PDCR has been completed. No changes are needed. Version

w				1	13130235	see also https://psup.netcracker.com/browse/PDCR-3588		1.3.0.0 is available in SVN
			No	Feature added		Support multiple Management IP Address attribute	Document 1.3.0.0 available on SVN	
	NC.AG.RI.Ethernet_Ring_View	1.3.0.0	No					1.3.0.0 is available in SVN
execution-statistics-collector	NC.AG.FRW.Execution_Statistics_Collector	9.3.1.0	Yes	Implement execution-statistics-collector 9.3.1.0 Import initial Product Component structure	https://project.netcracker.com/ncobject.jsp?id=9136908490113696202 https://project.netcracker.com/ncobject.jsp?id=9128338934613747093	Issues ID NC.PROD.PFLR#1	SVN: 9.3.1.0 I savailable.	No changes are needed.
ExportImport	NC.AG.FRW.Export_and_Import	7.3.3.17	No				What's new document is not available. SVN: 7.3.3.17 available.	Version 7.3.3.17 is available in SVN
FloorS	NC.UG.RI.Floor_Space_Ma	8.0	Yes	[FT8.2.1][FSM] The	https://project.netcrack		NC.UG.RI.Floor_Space_Management.Textual_Mode_8.0.1.1.docx available on SVN Status is green in	No changes are

paceMgmt	nagement.Textual_Mode	.1.1		warning message should appear that the value in Floor Height Occupation, m attribute on the floor is not appropriate.	er.com/ncobject.jsp?id=9137565928713669573		https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	needed. Version 8.0.1.1 is available in SVN
			No				Document 8.0.1.1 available on SVN	
	NC.UG.RI.Floor_Space_Management.Graphical_Mode	8.0.1.1						
FrameRelay	NC.UG.RI.Frame_Relay	8.2.2.0	Yes	Import initial Product Component structure	https://project.netcracker.com/ncobject.jsp?id=9128371348913466231		NC.UG.RI.Frame_Relay_8.2.2.0.docx available on SVN Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	No changes are needed.
				import.xml should be added to component	https://project.netcracker.com/ncobject.jsp?id=9129177002313494794			No changes are needed. Version 8.2.2.0 is available in SVN
gui-capacity-planning	NC.UG.NPD.GUI_Capacity_Planning	0.7.0.0					Available version in SVN Is 0.6.0.0. However, the required version is 0.7.0.0	0.7.0.0 is added to SVN
							What's new document is available. Link: https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%2FProductDocumentation%2FIM%2F	

							GUI%20Capacity%20Planning&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603E31A813	
	NC.AG.NPD.GUI_Capacity_Planning	0.7.0.0					Available version in SVN Is 0.6.0.0. However, the required version is 0.7.0.0	0.7.0.0 is added to SVN
GUI_Core	NC.UG.FRW.Network_Configurator	11.2.4.0	Yes	Moved appletupload.jsp from Inventory to Core. Same with ATTACHMENT_UPLOAD_URL constant.	https://project.netcracker.com/ncobject.jsp?id=70831461010130877758	PSUPGUI-4226	Doc available in SVN: 11.2.3.0	No changes are needed. Version 11.2.4.0 is added to SVN
GUI_Diagram Editor	NC.UG.FRW.Diagram_Editor	9.5.0.0	Yes	Feature Changed> Name: Use new style of toolbar and footer. Description: Used ui components for toolbar and footer from flex common component	https://project.netcracker.com/ncobject.jsp?id=90702431070138810839	https://psup.netcracker.com/browse/PDGUICAMB-1035	Doc available in SVN: 9.3.1.0	Done: Screenshots have been updated throughout the UG. Version 9.5.0.0 is added to SVN
GUI_Inven	NC.UG.RI.Network_Modeling_in_Network_Co	16.7.	Yes	Release v.16.7.3.0	https://project.netcracker.com/ncobjec	Following mention in 9.5_14	NC.UG.RI.Network_Modeling_in_Network_Configurator_16.4.1.0.docx available on SVN	No changes are needed. Version

tory	nfigurator	3.0			t.jsp?id=91399936052136462 27	1114_Int.xlsx 1. [VC][CAPL] Уезжают лейблы линок на GUI Capacity Planning. 2. [VC][CAPL] Legend for GUI Inventory. 3. GUI Splicing Dialog in D&P mode		16.7.3.0 is added to SVN
	NC.AG.RI.Graph_Views	16.7.3.0	Yes	[9.5_Regression_QA_GUI_Inventory] - [GUIINV1.91][INTPID-5159] - Copy Visualization Layer is'nt available	https://project.netcracker.com/ncobject.jsp?id=91398717321134322 78		Previous version NC.AG.RI.Graph_Views_16.4.1.0.docx available on SVN	No changes are needed. 16.7.3.0 Is added to SVN
				[9.5_Regression_QA_GUI_Inventory] - [GUIINV1.93][INTPID-5162]- “County/State” site is'nt display	https://project.netcracker.com/ncobject.jsp?id=91398717321134322 79			No changes are needed.

				ed on workspace				
	NC.UG.RI.Geographical_View	16.7.3.0	Yes	Same as above	same as above		Previous Version NC.UG.RI.Geographical_View_16.4.1.0.docx available on SVN	No changes are needed.
	NC.AG.RI.Geographical_View	16.7.3.0	Yes	Same as above	same as above		Previous version NC.AG.RI.Geographical_View_16.4.1.0.docx available on SVN	No changes are needed.
GUI_MSC	NC.UG.RI.MSC_Graphical_Mode	9.1.0.0	Yes	Release v.9.1.0.0	https://project.netcracker.com/ncobject.jsp?id=9136978378213798779	https://psup.netcracker.com/browse/PDGUICAMB-964	NC.UG.RI.MSC_Graphical_Mode_9.0.2.0.docx available on SVN	No changes are needed. Version 9.1.0.0 is added to SVN
GUI_OSP	NC.UG.OSP.OSP_Graphical_Mode	13.10.0.0					What's new feture document is available. Link: https://sps3.netcracker.com/corporate/ProductDocumentation/IM/Forms/CFV.aspx?RootFolder=%2Fcorporate%2FProductDocumentation%2FIM%2FGUI%20OSP&FolderCTID=0x012000FC3C47D94440AF43A042996E91E994A50050710FB7D7288C448F64E1603E31A813	
			Yes	Fibers coloring on the Splicing Dialog.	https://project.netcracker.com/ncobject.jsp?id=9139499088613837970	https://psup.netcracker.com/browse/PDCR-4925	New feature added.	PDCR has been completed. No changes are needed. Version 13.10.0.0 is available in SVN
GUI_Pow	NC.UG.RI.Power_Management_and_	9.1.	Yes	Release v.9.1.0.0	https://project.netcracker.com/		NC.UG.RI.Power_Management_and_Cooling_Equipment_Graphical_Mode_9.0.3.0.docx	No changes are needed.

erMgmt	Cooling_Equipment_Graphical_Mode	0.0			ncobject.jsp?id=9136978124413797603			Version 9.1.0.0 is added to SVN
GUI_ServiceVisualization	NC.UG.FRW.Service_Visualization	10.5.2.0	No				SVN: Available	Version 10.5.2.0 is available in SVN
	NC.AG.FRW.Service_Visualization	10.5.2.0	No				SVN: Available	Version 10.5.2.0 is available in SVN
GUI_Coloring	NC.AG.FRW.Coloring_Configuration_for_GUI_Views	3.5.0.0	No				SVN: Available	Version 3.5.0.0 is available in SVN
GUI_FSM	NC.UG.RI.Floor_Space_Management_Graphical_User_Interface	4.6.2.0	Yes	Release v.4.6.2.0	https://project.netcracker.com/ncobject.jsp?id=9139432266613719040	Following mentioned in 9.5_141114_Int.xlsx 1. Ability to setup Order and set of displayed template Projects 2. [KDDI] Возможность вызывать перезагрузку вью	NC.UG.RI.Floor_Space_Management_Graphical_User_Interface_4.6.1.0.docx available on SVN	No changes are needed. Version 4.6.2.0 is added to SVN

						при navigate action'е 3.[KDDI] Возможность иметь больше 15 экшн айтемов в контекстном меню GUI FSM, GUI RSM, Device View 4. [Powerlink] Кнопка Export to PDF на FSM		
	NC.AG.RI.Floor_Space_Management_Graphical_User_Interface	4.6.2.0	Yes	Same as above	same as above	Same as above	NC.AG.RI.Floor_Space_Management_Graphical_User_Interface_4.6.1.0.docx available on SVN	No changes are needed. 4.6.2.0 is added to SVN
GUI_RSM	NC.UG.RI.Rack_Space_Management_Graphical_User_Interface	6.6.4.0	Yes	Release v. 6.6.4.0	https://project.netcracker.com/ncobject.jsp?id=91394558928137678 47	Following mentioned in 9.5_141114_Int.xlsx 1.Ability to setup Order and set of displayed template Projects 2. [KDDI] Возмо	NC.UG.RI.Rack_Space_Management_Graphical_User_Interface_6.6.2.0.docx available on SVN	No changes are needed. Version 6.6.4.0 is added to SVN

						жность вызывать перезагрузкувью при navigate action'е 3.[KDDI] Возможность иметь больше 15 экшн айтемов в контекстном меню GUI FSM,		
	NC.AG.RI.Rack_Space_Management_Graphical_User_Interface	6.6.4.0	Yes	Same as above	same as above	Same as above	NC.AG.RI.Rack_Space_Management_Graphical_User_Interface_6.6.2.0.docx available on SVN	No changesa are needed. 6.6.4.0 is added to SVN
GUI_RuleEngine	NC.AG.FRW.Rules_Engine_Graphical_Mode	2.5.0.0	No				Doc available in SVN: 2.3.1.0	Version 2.5.0.0 is added to SVN
hfc-network-view	NC.UG.RI.HFC_Network_View	9.3.1.0	No				NC.UG.RI.HFC_Network_View_9.3.1.0.docx available on SVN Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	Version 9.3.1.0 is available in SVN
hfc	NC.UG.RI.HFC_Network	9.3.1.0	No				NC.UG.RI.HFC_Network_9.3.1.0.docx available on SVN Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	Version 9.3.1.0 is available in SVN

HDS	NC.UG.FRW.Historical_Data_Storage	9.0.4.3	No				Doc available in SVN: 9.0.4.1	Version 9.0.4.3 is added to SVN
	NC.AG.FRW.Historical_Data_Storage	9.0.4.3	No					Version 9.0.4.3 is added to SVN
	NC.MG.FRW.Historical_Data_Storage	9.0.4.3	No				What's new not updated for 9.0.4.3	Version 9.0.4.3 is added to SVN
history-framework	NC.UG.FRW.History_Framework	9.3.2.11	Yes	query block has incorrect number of result columns" in HistoryBrowserBean when trying to view history with HDS	https://project.netcracker.com/ncobject.jsp?id=91393711605136220 12	https://psup.netcracker.com/browse/PSUPCORE-18005	Doc available in SVN: 9.3.2.10	No changes are needed. Version 9.3.2.11 is added to SVN
				User field does not contain available values for filtering	https://project.netcracker.com/ncobject.jsp?id=91391646559132907 20	https://psup.netcracker.com/browse/PSUPCORE-17686		NC Directory AG had been updated. AG History Framework - no changes are needed. Version 9.3.2.11 is added to SVN

	NC.AG.FRW.History_Framework	9.3.2.11	No					
Huawei_M2000_Core_Int	NC.AG.FRW.Integration_Adapter_for_Huawei_M2000_Mobile_Core	8.2.1.2	No				Doc available in SVN: 8.2.1.0. This is under Discovery and Reconciliation???	Version 8.2.1.2 is added to SVN
Huawei_M2000_Int	NC.AG.FRW.2G_Integration_Adapter_for_Huawei_M2000	9.0.2.1	No					9.0.2.1 is available in SVN
Huawei_T2000	NC.AG.FRW.Integration_Adapter_for_Huawei_T2000	8.2.3.3	No					Version 8.2.3.3 is added to SVN
icoms-integration-services-bso	NC.AG.FRW.ICOMS_Integration_Services	8.2.1.63	No					Version 8.2.1.63 is added to SVN
IPPlanner	NC.UG.RI.IP_Planner	9.0.4.1	No				NC.UG.RI.IP_Planner_9.0.4.1.docx available on SVN. Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	
	NC.AG.RI	9	No				NC.AG.RI.IP_Planner_9.0.4.1.docx	No

	.IP_Planner	.0.4.1					available on SVN. Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	changes are needed.
ip-mpls-me-circuit-designer	NC.UG.RI.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	No				NC.UG.RI.IP_MPLS_Metro_Ethernet_Circuit_Designer_9.0.1.0.docx available on SVN. Status is green in https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	No changes are needed.
IP_MPLS_Eth_Conf	NC.CG.RI.IP_MPLS_Metro_Ethernet	8.2.2.1	No				NC.CG.RI.IP_MPLS_Metro_Ethernet_8.2.2.1.docx available on https://bass.netcracker.com/pages/viewpage.action?title=Release+9.5&spaceKey=CDT	No changes are needed.
IP_MPLS_Metro_Ethernet	NC.UG.RI.IP_MPLS_Metro_Ethernet	9.0.3.10	No				NC.UG.RI.IP_MPLS_Metro_Ethernet_9.0.3.10.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
ITInfrastructureExt	NC.UG.RI.IT_Infrastructure_Extension	8.0.1.1	No				NC.UG.RI.IT_Infrastructure_Extension_8.0.1.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Data%20Center%20Inventory/	No changes are needed.
ITInfrastructure	NC.UG.RI.IT_Infrastructure	7.3.2.1	Yes	Incorrect use of comments in migrate_partitionables	https://project.netcracker.com/ncobject.jsp?id=91326338000	https://psup.netcracker.com/browse/PSUPDCI-67 for	NC.UG.RI.IT_Infrastructure_7.3.2.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Data%20Center%20Inventory/	No changes are needed. Version 7.3.2.1 is available

				.sql installation script	13857332	more details		in SVN
Jeopardy Mgmt	NC.UG.FRW.Jeopardy_Management	8.0.1.24	Yes	Removing Workflow duplicates	https://project.netcracker.com/ncobject.jsp?id=91382236074136778551	https://psup.netcracker.com/browse/PSUPPLAT-5916	Available version in SVN 8.0.1.23	No changes are needed. 8.0.1.24 is available in SVN
				CMT_Packages fixes	https://project.netcracker.com/ncobject.jsp?id=91377025101138894457	https://psup.netcracker.com/browse/PSUPPLAT-5487		No changes are needed.
	NC.AG.FRW.Jeopardy_Management	8.0.1.24	Yes	Removing dependency 'Form Designer' from JP	https://project.netcracker.com/ncobject.jsp?id=91376861996138600090	https://psup.netcracker.com/browse/PSUPPLAT-5486	Available version in SVN 8.0.1.23	No changes are needed. 8.0.1.24is added to SVN
Scheduler Quartz	NC.AG.FRW.Jobs	9.5.3.16	Yes	/platform/scheduler/logout.jsp to many transaction…	https://project.netcracker.com/ncobject.jsp?id=91394499125137609888	https://psup.netcracker.com/browse/PSUPCORE-17982	Available version in SVN 9.3.7.9	No changes are needed. Version 9.5.3.16 is added to SVN
l2tp	NC.UG.RI.L2TP	8.2.2.1	No				NC.UG.RI.L2TP_8.2.2.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	Version 8.2.2.1 is available in SVN
LDAP	NC.AG.FRW.Enterprise_Directories_I	9.0.	Yes	DOC][LDAP1.3][INTPID-	https://project.netcracker.com/	https://psup.netcracker.com/	What's new not avaialable for LDAP v9.0.1.26. SVN: 9.0.1.25.docx	No changes are needed.

	ntegration	1.26		708]Users cannot be selected in field Domain Members	ncobject.jsp?id=9139336094313578591	browse/INTPID-708		Version 9.0.1.26 is added to SVN
				Informative error message should be displayed during attempt to login with NT Domain User=False, with wrong Domain Login, Domain Name	https://project.netcracker.com/ncobject.jsp?id=9139336094413578603	No PSUPPROD.FRM.CORE#368		No changes are needed.
	NC.AG.FRW.Application_Server_Configuration_for_LDAP_Integration	9.0.1.26	No		No links		Doc available in SVN: 9.0.1.25	Vesrion 9.0.1.26 is added to SVN
localization-tool	NC.AG.FRW.Localization_Tool	9.0.1.1	Yes	Display correct error description if problem with connection occured	https://project.netcracker.com/ncobject.jsp?id=9136865232213645723	NC.PSUP.CRE13#94	Doc available in SVN: 9.0.1.0. No What's new doc available.	No changes are needed. Version 9.0.1.1 is added to SVN
me-mpls-nt	NC.UG.RI.ME_MPLS_Network_View	9.0.1.						

wk-view		0						
mpls-tp-ntwk-view	NC.UG.RI.MPLS_TP_Network_View	9.0.1.0						
mte-device-library-mapping	NC.AG.DR.MTE_Device_Library_Mapping	9.0.2.1					Doc available in SVN: 9.0.2.1	No changes are needed.
mailsender	NC.AG.FRW.Mail_Sender	9.5.2.12	Yes	Bug report: mail.smtp.host is overridden after component re-install	https://project.netcracker.com/ncobject.jsp?id=91396810804131337 09	https://psup.netcracker.com/browse/PSUPCORE-18591	Doc available in SVN 9.3.2.9. No What's new doc available.	No changes are needed. 9.5.2.12 is added to SVN
MediationDataFlowWS	NC.AG.FRW.Mediation_DataFlow_WebServices_Pack	8.2.1.15	No					Version 8.2.1.15 is added to SVN
MediationDataFlow	NC.AG.FRW.Mediation_DataFlow	9.3.4.13	Yes	Fixed TempFileInterface	https://project.netcracker.com/ncobject.jsp?id=91393188830135367 91	https://psup.netcracker.com/browse/PSUPMED-4479	Doc available in SVN 9.3.4.13	No changes are needed. Version 9.3.4.13 is available in SVN

Mediation Transition	NC.AG.DR.Mediation_Transition.Unified_Model_Configuration	9.3.4.11	Yes	Fixed generation of scripts update tables	https://project.netcracker.com/ncobject.jsp?id=9139803565813326399	https://psup.netcracker.com/browse/PSUPMED-4784	Doc Available in SVN is 8.2.4.8	No changes are needed. 9.3.4.11 is added to SVN
	NC.AG.DR.Mediation_Transition.Validation_Engine	9.3.4.11	No				Doc Available in SVN is 8.2.4.8	9.3.4.11 is added to SVN
	NC.AG.DR.Mediation_Transition.Transformation_Engine	9.3.4.11	No				Doc Available in SVN is 8.2.4.8	9.3.4.11 is added to SVN
dispatcher	NC.UG.FRW.Message_Dispatcher	9.0.1.0	No				What's new doc: available for 9.0.1.0	Version 9.0.1.0 is available in SVN
							Doc available in SVN: 9.0.1.0	
	NC.AG.FRW.Message_Dispatcher	9.0.1.0	No				Doc available in SVN: 9.0.1.0	Version 9.0.1.0 is available in SVN
dispatcher-webservice	NC.AG.FRW.Message_Dispatcher_DataFlow_Interface	9.0.1.0						
dispatcher-sms	NC.AG.FRW.Message_Dispatcher_SMSC_Integration	9.0.1.						

		0						
MessageEngine	NC.AG.FRW.Message_Engine	9.0.1.18	Yes	MessageEngineFacade remoting	https://project.netcracker.com/ncobject.jsp?id=9138620528913309019	https://psup.netcracker.com/browse/TDPG-4479	Doc available in SVN: 9.0.1.18	No changes are needed. Version 9.0.1.18 is available in SVN
Microwave	NC.UG.RI.Microwave	9.0.3.4	No				NC.UG.RI.Microwave_9.0.3.4.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
	NC.AG.RI.Microwave	9.0.3.4					NC.AG.RI.Microwave_9.0.3.4.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
mobileran	NC.UG.RI.Mobile_RAN	9.0.2.1	No				NC.UG.RI.Mobile_RAN_9.0.2.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
MSC	NC.UG.RI.MSC_Textual_Mode	8.2.3.4	No				NC.UG.RI.MSC_Textual_Mode_8.2.3.4.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
	NC.AG.RI.Shared_Services	8.2.3.4					NC.AG.RI.Shared_Services_8.2.3.4.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
NC2NCReplication	NC.AG.FRW.NC_to_NC_Replication	8.0.2.7	Yes	Support sorting on Objects/Parameters/References	https://project.netcracker.com/ncobject.jsp?id=91379204501	no ticket		No changes are needed. Version 8.0.2.7 is available in SVN

				Errors pages	13208492			
NEC_PNMSj_Int	NC.AG.DR.Integration_Adapter_for_NEC_PNMSj	9.0.1.0	No				SVN: 9.0.1.0 available.	No changes are needed.
NSS	NC.UG.RI.Network_Switching_Subsystem	8.2.1.1	No				NC.UG.RI.Network_Switching_Subsystem_8.2.1.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	
netcool	NC.AG.FRW.Netcool_Integration_Adapter	7.3.1.0	Yes	Problem with NetCool views	https://project.netcracker.com/ncobject.jsp?id=9136864852513643549	https://psup.netcracker.com/browse/PSUPRECON-1955	Doc available in SVN: 9.3.1.0	No changes are needed. Version 7.3.1.0 is available in SVN
ns-view	NC.AG.RI.Network_Switching_Subsystem_View	2.0.0.0	No				NC.AG.RI.Network_Switching_Subsystem_View_2.0.0.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
	NC.UG.RI.Network_Switching_Subsystem_View	2.0.0.0	No				NC.UG.RI.Network_Switching_Subsystem_View_2.0.0.0.docx available on available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
Nokia_NetAct_Int	NC.AG.DR.Integration_Adapter_for_Nokia_Siemens_Networks_NetAct	8.2.2.0	No				Doc available in SVN 8.2.2.0	No changes are needed.
OM Engin	NC.AG.OPF.Mapping_Tables	9.0.	Yes	XML External Entity (XXE)	https://project.netcracker.com/	https://psup.netcracker.com/	Doc available in SVN 9.0.7.7	No changes are needed.

e		7.9		Processing - problem of vulnerability (OM Engine part)	ncobject.jsp?id=9138291771713758802	browse/PSUPOM-3237		9.0.7.9 is added to SVN
OPF_OTV	NC.UG.OPF.Order_Tree_View	8.2.1.9	No				Doc available in SVN 8.2.1.9	Doc available in SVN 8.2.1.9
osp	NC.UG.OSP.OSP_Textual_Mode	9.0.9.4						
	NC.AG.OSP.OSP_Textual_Mode	9.0.9.4						
	NC.AG.OSP.OSP_Configuring_Cable_Coloring	9.0.9.4						
OSSJ_FM_INT	NC.AG.SPM.OSSJ_Fault_Management_Integration	7.3.1.7	Yes	Update locking mechanism to support parallel alarm processing	https://project.netcracker.com/ncobject.jsp?id=9138919872413808134		Previous version NC.AG.SPM.OSSJ_Fault_Management_Integration_7.3.1.5.docx available on SVN	No changes are needed. 7.3.1.7 is added to SVN
				Caching for configuration and parallel handling for	https://project.netcracker.com/ncobject.jsp?id=91387909211	https://psup.netcracker.com/browse/PSUPRECON-2925	What's new document not available	No changes are needed.

				incoming alarme vents	13592178			
OTN	NC.UG.RI.OTN	8.2.1.0	No				NC.UG.RI.OTN_8.2.1.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed.
order-decomposition-gui	NC.AG.OPF.Order_Decomposition_View	2.1.1.0	No				Doc available in SVN 1.8.1.0. Need the latest version.	2.1.1.0 is added to SVN
	NC.UG.OPF.Order_Decomposition_View	2.1.1.0	No					2.1.1.0 is added to SVN
OrderEntry	NC.UG.COM.Order_Entry	8.1.5.6						
	NC.UG.COM.Order_Entry_Wholesale	8.1.5.6						
	NC.UG.COM.Pricing_Engine	8.1.5.6						
OM_Dashboards	NC.UG.OPF.Order_Management_Dashboards	9.3.2.1	Yes	OM Dashboards are incompatible with new	https://project.netcracker.com/ncobject.jsp?id=91389835528	https://psup.netcracker.com/browse/PSUPPLAT-6730	Doc available in SVN: 8.2.1.5. need the latest version.	No changes are needed.

				Order Monitoring	13919462			
			Yes	Widgets are filled although should be empty	https://project.netcracker.com/ncobject.jsp?id=9139006801213930444	https://psup.netcracker.com/browse/INTPID-4031		No changes are needed.
parameters-visualization	NC.AG.FRW.Parameter_Visualization_Configuration_for_GUI_Views	3.3.0.0	No				Doc available in SVN: 3.3.0.0	Version .3.3.0.0 is available in SVN
partner-management	NC.UG.PM.Partner_Management	9.0.1.9					Available version in SVN Is 9.0.1.8. However, the required version is 9.0.1.9	9.0.1.9 is added to SVN
			Yes	For attribute “Partner Type” should be displayed matching criteria “Not Equals”	https://project.netcracker.com/ncobject.jsp?id=9138853696313700575	https://psup.netcracker.com/browse/TDPG-1155		No changes are needed.
			Yes	'Planned' value of 'Instance Status' is display	https://project.netcracker.com/ncobject.jsp?id=91388536967	https://psup.netcracker.com/browse/TDPG-2616		No changes are needed.

				ed without icon box	13700591			
			Yes	Created branch is not displayed in Branches table	https://project.netcracker.com/ncobject.jsp?id=91388536973137000629	https://psup.netcracker.com/browse/TDPG-1052		No changes are needed.
			Yes	When create Contract with non-filled required fields and incorrect date then required fields hasn`t error message and red border	https://project.netcracker.com/ncobject.jsp?id=91388536981137000681	https://psup.netcracker.com/browse/TDPG-6248		No changes are needed.
			Yes	Multiple impacts found.	https://project.netcracker.com/ncobject.jsp?id=91388536575137000465			No changes are needed.
path-management	NC.UG.RI.Path_Management	9.0.4.3	Yes	Physical CrossConnect functionality	https://project.netcracker.com/ncobject.jsp?id=91385918209132332258			Document has been updated.
P	NC.AG.FRW.Perfo	8.	Ye	Security: non	https://project.n	No	Doc available in SVN: 8.1.2.0	No changes

DT	rmance_Diagnostics_Tool	1.2.0	s	administrative user is able to download archive	etcracker.com/ncobject.jsp?id=9129030665813363632	ticket		are needed. Version 8.1.2.0 is available
PhoneBookAmerica	NC.UG.RI.Phone_Book_US	8.2.1.4	No				NC.UG.RI.Phone_Book_US_8.2.1.4.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed.
PhoneBookEurope	NC.UG.RI.Phone_Book_EU	8.2.2.2	No				NC.UG.RI.Phone_Book_EU_8.2.2.2.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed.
PolicyFramework	NC.AG.FRW.Security_Policies	9.3.2.13	Yes	PolicyFramework must support grouping of providers by folders	https://project.netcracker.com/ncobject.jsp?id=9138618492613300466	No ticket	Doc available in SVN: 9.3.2.13	The doc has been updated.
PM_Cooling	NC.UG.RI.Power_Management_and_Cooling_Equipment_Textual_Mode	7.2.1.4	No				NC.UG.RI.Power_Management_and_Cooling_Equipment_Textual_Mode_7.2.1.4.docx https://svn/ProductDocuments/Documents90/Resource%20Inventory/Data%20Center%20Inventory/	No changes are needed.
ProcessOrchestrator	NC.UG.FRW.Process_Orchestrator	9.0.3.38	Yes	It should be possible to perform completion of task with On Hold status	https://project.netcracker.com/ncobject.jsp?id=9138584214613220569	https://psup.netcracker.com/browse/PSUPPLAT-5802	Doc available in SVN: 9.0.3.38	No changes are needed.
				Manual	https://p	https://	See detail in PSUPCORE-9024.	No

				operation history must be recorded using history framework API with custom user	roject.netcracker.com/ncobject.jsp?id=91384757225130731 08	psup.netcracker.com/browse/PSUPPLAT-3186		changes are needed. Version 9.0.3.38 is available.
ProcessOrchestrator	NC.AG.FRW.Process_Orchestrator	9.0.3.38	No					
POM	NC.UG.COM.Customer_Order_Management	9.0.7.11						
	NC.AG.COM.Customer_Order_Management	9.0.7.11						
	NC.UG.CIM.Product_Inventory	9.0.7.11	No				Doc available in SVN: 9.0.7.7??	Version 9.0.7.11 is added to SVN
	NC.UG.PIM.Product_Information_Management	9.0.7.11	Yes	Product Instance should be used as primary source object during	https://project.netcracker.com/ncobject.jsp?id=91386534734133516	https://psup.netcracker.com/browse/PDCR-5113	Previous version NC.UG.PIM.Product_Information_Management_9.0.7.7.docx available on SVN	No changes are needed. PDCR-5171. 9.0.7.11 is added to SVN

				baseline Proudct Order creation when Previous Holder Order is Completed.	75			
				nc.om.default_pc_alias should be updated after installation	https://project.netcracker.com/ncobject.jsp?id=91395779448139856 15	https://psup.netcracker.com/browse/PSUPOM-3709	Unable to find issues/user impacts in the 9.5_141114_Int.xlsx	No changes are needed.
				Customer Account UI fixing.	https://project.netcracker.com/ncobject.jsp?id=91395705027139742 94			No changes are needed.
				OOB permissions for buttons on popup panel	https://project.netcracker.com/ncobject.jsp?id=91395701237139726 58			No changes are needed.
QueueService	NC.AG.FRW.Queue	9.0.2.9	Yes	Need for installation' attribute value should depend on 'system parameters of queue'	https://project.netcracker.com/ncobject.jsp?id=91377988365130125 50	No Ticke: NC.PROD.90 CIACS #46	Doc available in SVN 9.0.2.8	No changes are needed. Version 9.0.2.9 is added

				only				
rdblight	NC.AG.FRW.RDB_Light	8.2.5.15	Yes	Add validation "Only realtime relations are allowed for manually synchronized tables"	https://project.netcracker.com/ncobject.jsp?id=9139628749213058948	NC.PROD.RDBL#503	Doc available in SVN 8.2.5.5	No changes are needed. 8.2.5.15 is added to SVN
radio-controller-view	NC.UG.Radio_Controller_View	2.0.0.0						
	NC.AG.Radio_Controller_View	2.0.0.0						
Reconciliation	NC.AG.DR.Reconciliation_Framework	8.2.9.23	Yes	Merge of manual discrepancy set allocations doesn't work in some cases	https://project.netcracker.com/ncobject.jsp?id=9140459258113195346	https://psup.netcracker.com/browse/PSUPRECON-3532	Doc available in SVN 8.2.9.20	No changes are needed. 8.2.9.23 is added to SVN
RDB	NC.AG.FRW.Replicated_Database	8.2.5.13	Yes	Impossible to set L rights of button create circuit from port	https://project.netcracker.com/ncobject.jsp?id=9139674358813125564	https://psup.netcracker.com/browse/INTPID-5458	Doc version in SVN is 8.2.5.7	No changes are needed. Version 8.2.5.13 is available
	NC.MG.F	8	Ye	Impossi	https://p	https://	Document version in SVN is 8.2.5.7	No

	RW.Replicated_Database	.2.5.13	s	ble to set L rights of button create circuit from port	roject.netcracker.com/ncobject.jsp?id=9139674358813125564	psup.netcracker.com/browse/INTPID-5458		changes are needed. Green ticks. Version 8.2.5.13 is available in SVN
Reports	NC.UG.FRW.Reports Engine	9.3.7.12	Yes	History deleting queries use incorrect indexes	https://project.netcracker.com/ncobject.jsp?id=9139379382513637809	https://psup.netcracker.com/browse/PSUPCORE-17830	Not available in SVN	No changes are needed. 9.3.7.12 is added to SVN
				Reference parameters links support	https://project.netcracker.com/ncobject.jsp?id=9139372686913629242	https://psup.netcracker.com/browse/PSUPCORE-17561		No changes are needed.
	NC.AG.FRW.Reports Engine	9.3.7.12	Yes	Excel 2003 exporter class attribute loads wrong	https://project.netcracker.com/ncobject.jsp?id=9139336732813580898	https://psup.netcracker.com/browse/PSUPCORE-17981	Not available in SVN	No changes are needed. 9.3.7.12 is added to SVN
Resourcelnventory	NC.UG.RI.Resource_Inventory_Basics	9.0.7.5	No				NC.UG.RI.Resource_Inventory_Basics_9.0.7.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed
	NC.UG.RI.Network_Modeling	9.0.7.5	No				NC.UG.RI.Network_Modeling_9.0.7.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed
	NC.UG.RI.Templat	9.	No				NC.UG.RI.Templates_9.0.7.5.docx available on	No changes

	es	0.7.5					https://svn/ProductDocuments/Documents90/Resource%20Inventory/	are needed
	NC.AG.RI.Resource_Inventory	9.0.7.5	No				NC.AG.RI.Resource_Inventory_9.0.7.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed
	NC.AG.RI.Device_Library	9.0.7.5	No				NC.AG.RI.Device_Library_9.0.7.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/	No changes are needed
	NC.UG.RI.Archiving	9.0.7.5	No				NC.UG.RI.Archiving_9.0.7.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory	No changes are needed
NetworkPlanningEngine	NC.AG.FRW.Rules_Engine	8.2.6.3	No				Document version in SVN is 8.2.6.3	Version 8.2.6.3 is available
sdh-circuit-designer	NC.UG.RI.PDH_Circuit_Designer	9.0.2.0	No				NC.UG.RI.PDH_Circuit_Designer_9.0.2.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed
								No changes are needed
sdh-circuit-de	NC.UG.RI.SDH_Circuit_Designer	9.0.2.	No				NC.UG.RI.SDH_Circuit_Designer_9.0.2.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed

signer		0						
sdh	NC.UG.RI.SDH-PDH	9.0.3.2	No				NC.UG.RI.SDH-PDH_9.0.3.2.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed
sonet-ntwk-view	NC.UG.RI.SONET_Network_View	9.0.1.1	No				NC.UG.RI.SONET_Network_View_9.0.1.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed
sonet	NC.UG.RI.SONET	8.2.2.10	No				NC.UG.RI.SONET_8.2.2.10.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed
SS7_SIGTRAN	NC.UG.RI.SS7_and_SIGTRAN	8.2.1.1	No				NC.UG.RI.SS7_and_SIGTRAN_8.2.1.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed
sales-force-automation	NC.UG.MSM.Sales_Force_Automation	9.0.1.11	Yes	[9.5_Regression_QA_customer-information-and-history-management] - [CIHM1.42][INTPID-5460] - Fields "Created By" and "Modified By" are	https://project.netcracker.com/ncobject.jsp?id=9140254035713036159	[CIHM1.42][INTPID-5460] - Fields "Created By" and "Modified By" are duplicated	Previous version NC.UG.MSM.Sales_Force_Automation_9.0.1.5.docx available on SVN.	Nio changes are needed. 9.0.1.11 is added to SVN

				duplicated				
				[SFA1.44] [INTPID-5867] 'New Proposal' button is absent	https://project.netcracker.com/ncobject.jsp?id=91404260839131603 33	https://psup.netcracker.com/browse/INTPID-5867		No changes are needed.
				'Customer Category' field is absent	https://project.netcracker.com/ncobject.jsp?id=91402452340130164 41	https://psup.netcracker.com/browse/PSUPSM-1230		No changes are needed.
				[9.4_QA_customer-information-and-history-management] - [CIHM1.117][INTPID-4119]'Calendar' and 'Tasks' items from 'Customer Information Management' menu work incorrectly	https://project.netcracker.com/ncobject.jsp?id=91395615430139562 25	https://psup.netcracker.com/browse/INTPID-4119		No changes are needed.
						There are multiple impacts mentio		No changes are needed.

						ned, check link below for more details. https://project.netcracker.com/ncobject.jsp?id=913956145901395 4781		
Scripting	NC.AG.FRW.Scripting_Framework	9.3.1.18	Yes	Installing Scripting delete Legacy Configuration	https://project.netcracker.com/ncobject.jsp?id=91389728954138932 24	https://psup.netcracker.com/browse/PSUPCORE-17288	SVN: 9.3.1.18	No changes are needed. Version 9.3.1.18 is available
Search	NC.UG.FRW.Search	9.3.5.47	Yes	Wrong Search Scope in case of fast search when default profile scope = Entire system	https://project.netcracker.com/ncobject.jsp?id=91393710431136212 55	PROD.FRM.SEARCH.COMP #546	SVN: 9.3.5.46	No changes are needed. Version 9.3.5.47 is added
Search	NC.AG.FRW.Configuring_Search_Profiles	9.3.5.47	No				SVN: 9.3.5.46	Version 9.3.5.47 is added to SVN
SAF	NC.UG.SA.Service_Activation_Framework	9.0.6.14	Yes	PSUPSAF-538 add CONNECTION_TIMEOUT parameter for HTTPA	https://project.netcracker.com/ncobject.jsp?id=91404595879131986	https://psup.netcracker.com/browse/PSUPSAF-538	Previous version NC.UG.SA.Service_Activation_Framework_9.0.6.13.docx available on SVN	The document has been updated. 9.0.6.14 is added to SVN

				dapter	89			
							What's New does not have change description details for version 9.0.6.14	
ServiceInventory	NC.UG.SI.Service_Inventory	9.0.4.4	Yes	[9.3_QA_ServiceInventory] - [INTPID-1290] Cannot select Component in Role	https://project.netcracker.com/ncobject.jsp?id=9137407956313437853		Previoous version NC.UG.SI.Service_Inventory_9.0.4.3.docx available on SVN	No changes are needed. 9.0.4.4 is added to SVN
				Group Services should be "Children Tab" and should be located under "Services" tab.	https://project.netcracker.com/ncobject.jsp?id=9138645078913335674	https://psup.netcracker.com/browse/PSUPOM-3387		no changes are needed.
				Incorrect Type Definition on Customer Account attribute	https://project.netcracker.com/ncobject.jsp?id=9136440536813994107			No changes are needed.
				Serivce Inventory deletes 'Product Catalog' from navigation menu	https://project.netcracker.com/ncobject.jsp?id=9136345532213830338			
SPF	NC.UG.SOM.Service_Order_Manage	9.0.	No				Required version NC.UG.SOM.Service_Order_Management_9.0.9.9.docx available on SVN	Required version NC.UG.SOM.Service

	ment	9.9						_Order_Management_9.0.9.9.docx available on SVN
	NC.AG.SOM.Service_Order_Management	9.0.9.9					Required version NC.AG.SOM.Service_Order_Management_9.0.9.9.docx available on SVN	
	NC.UG.SIM.Service_Information_Management	9.0.9.9	Yes	CI Problems	https://project.netcracker.com/ncobject.jsp?id=91400967037137942 29		Previous version NC.UG.SIM.Service_Information_Management_9.0.9.6.docx available on SVN	No changes are needed. 9.0.9.9 is added to SVN
				LifeCycle extencsion for Orders Peristence	https://project.netcracker.com/ncobject.jsp?id=91398554987134030 17			No changes are needed.
				Bugs founded in process of Orders Persistence activity	https://project.netcracker.com/ncobject.jsp?id=91398554987134030 32			No changes are needed.
Solution Configuration Mgmt	NC.AG.FRW.Solution_Configuration_Management	8.2.1.9	Yes	Ability to exclude entity types from sqlldr generation	https://project.netcracker.com/ncobject.jsp?id=91392833389134826 01#	https://psup.netcracker.com/browse/PSUPSCM-1063	No documents in SVN :(	No changes are needed. Version 8.2.1.9 is added to SVN (Documents90 > Solution Configuration

								Management)
	NC.AG.FRW.Solution_Configuration_Management_Domains	8.2.1.9	No				No documents in SVN :(	Version 8.2.1.9 is added to SVN
	NC.UG.FRW.Solution_Configuration_Management_Domains	8.2.1.9	No				No documents in SVN :(	Version 8.2.1.9 is added to SVN
specification-catalog-gui	NC.UG.OPF.Specification_Catalog_Graphical_Mode	1.17.0.0	No				Documents in SVN 1.15.0.0. Need the latest versions.	1.17.0.0 is added to SVN
	NC.AG.OPF.Specification_Catalog_Graphical_Mode	1.17.0.0	No					1.17.0.0 is added to SVN
SubscriberInventory	NC.UG.SI.Subscriber_Inventory	8.0.1.2	No				Requiored version NC.UG.SI.Subscriber_Inventory_8.0.1.2.docx available on SVN	Requiored version NC.UG.SI.Subscriber_Inventory_8.0.1.2.docx available on SVN
TAR	NC.AG.FRW.Task_Assignment_Rules	8.1.2.10	No				SVN: 8.1.2.8	Version 8.1.2.10 is available in SVN
template-	NC.AG.FRW.Template-based_D	9.0.	No				SVN: 9.0.1.2	Version 9.0.1.6 is added to SVN

based-document-generator	ocument_Generation	1.6						
	NC.UG.FRW.Template-based_Document_Generation	9.0.1.6	No					Version 9.0.1.6 is added to SVN
TB Integration	NC.UG.FRW.Template_Based_Integration	8.0.2.15	No				SVN: 8.0.2.15	Version 8.0.2.15 is available
	NC.AG.FRW.Template_Based_Integration	8.0.2.15	No					8.0.2.15 is available
Textual UI	NC.UG.FRW.Text_Navigation_Mode	9.0.8.36	No				Available in SVN	9.0.8.36 is available
TTM	NC.UG.CPM.Trouble_Ticket_Management	8.2.3.8	Yes	The screen displays more than one notification and don't delete oldest	https://project.netcracker.com/ncobject.jsp?id=9139508881013860646		Unable to find the previosu version on SVN?	No changes are needed. Version 8.2.3.8 is added to SVN
				Change adapter in calculated attributes	https://project.netcracker.com/ncobject.jsp?id=9139551378013921 4	https://psup.netcracker.com/browse/PSUPCIA-310		No changes are needed.

					96			
	NC.AG.CPM.Trouble_Ticket_Management	8.2.3.8						
ui-data-sources	NC.AG.FRW.UI_Data_Sources	9.5.1.16	Yes	Support of dynamic fetch plans in getAvailableValues	https://project.netcracker.com/ncobject.jsp?id=9139828870713374326	https://psup.netcracker.com/browse/PSUPCORE-18750	SVN: 9.0.1.10 version?? Ticke has been Resolved….	No changes are needed. 9.5.1.16 is added to SVN
vpn-view	NC.UG.RI.VPN_View	1.2.3.0	Yes	Release v.1.2.3.0	https://project.netcracker.com/ncobject.jsp?id=9138974106613897935		Bug Fix Name: Localization of error messages Version Change: micro Links: https://psup.netcracker.com/browse/PSUPGUI-4302	No changes are needed. 1.2.3.0 is added to SVN
	NC.AG.RI.VPN_View	1.2.3.0	Yes				NC.AG.RI.VPN_View_1.2.1.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	NC.AG.RI.VPN_View_1.2.1.0.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/
voice	NC.UG.RI.Voice	9.0.3.0	Yes	VoIP Subinterface' is right spelling	https://project.netcracker.com/ncobject.jsp?id=9139690311613154110	https://psup.netcracker.com/browse/INTPID-4367	NC.UG.RI.Voice_8.2.2.5.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	No changes are needed, as there is no server to make updated screenshots. The

								issue regarding the incorrect subinterface spelling will be closed later + the new spelling will be applied starting from 9.3. See the comments to the ticket - https://psup.netcracker.com/browse/INTPID-4367 Version 9.0.3.0 is added to SVN
AssignmentTool	NC.UG.WFM.WFM_Assignment_Tool	8.2.2.1						
	NC.AG.WFM.WFM_Assignment_Tool	8.2.2.1						
WorkOrderManagement	NC.UG.WFM.Workforce_Management	8.2.4.5						
Workfo	NC.UG.WFM.Workforce_Man	8.2						

rcelnventory	agement	.4.9						
WidgetsOOB	NC.UG.FRW.Dashboards_and_Widgets	8.2.4.12	No				Available in SVN 8.2.4.5	Using search in widgets chapter is added in 8.2.4.12
	NC.CG.FRW.Dashboards_and_Widgets	8.2.4.12	Yes	Add ability to search date by period	https://project.netcracker.com/ncobject.jsp?id=91388343891136544432	Issue ID: ALST.IM.SOW1#521		No changes are needed. 8.2.4.12 is added to SVN
				Ability to display dimension name on TableWidget	https://project.netcracker.com/ncobject.jsp?id=91388096812136274435	NC.SLS.DTTWPRTP#592		
WorkOrderStructure	NC.UG.FRW.Work_Orders_and_Work_Items	8.2.4.2	No				Available in SVN: 8.2.4.2	Available in SVN: 8.2.4.2
WF	NC.AG.FRW.Workflow	9.0.4.36	No					Available in SVN: 9.0.4.36
Xpath	NC.AG.FRW.XPath	9.5.	No				SVN: 9.0.1.13 only??	Version 9.5.2.0 is added to SVN

		2.0						
xpon-views	NC.UG.RI.xPON_OLT_Network_View	0.2.5.0	No				NC.UG.RI.xPON_OLT_Network_View_0.2.5.0.docx availabe on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	NC.UG.RI.xPON_OLT_Network_View_0.2.5.0.docx availabe on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/
xpon	NC.UG.RI.xPON	8.2.2.1	No				NC.UG.RI.xPON_8.2.2.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/	NC.UG.RI.xPON_8.2.2.1.docx available on https://svn/ProductDocuments/Documents90/Resource%20Inventory/Technology%20Components/
Core	NC.AG.FRW.Attribute_Details_and_Object_Type_Properties	9.5.3.5	Yes	When "Open in Excel" on sorted search results, the results table is empty (K5)	https://project.netcracker.com/ncobject.jsp?id=91393124310135263 53	https://psup.netcracker.com/browse/PSUPCORE-17935	SVN: 9.3.6.23 only!!	No changes are needed. 9.5.3.5 is added to SVN
								9.5.3.5 is added to SVN

	NC.AG.FRW.Attribute_Adapters	9.5.3.5	No					
	NC.AG.FRW.Event_Listeners	9.5.3.5	No				SVN: 9.5.3.5 available.	SVN: 9.5.3.5 available.
License Manager 3	NC.AG.FRW.License_Manager_3	9.0.1.4	No				9.0.1.4 document is available in SVN	9.0.1.4 document is available in SVN

11.3 Release 9.6 Checklist

11.3.1 Перечень выпускаемых документов 9.6

PSUP: PSUPTW-1117 - NetCracker 9.6 Release Documentation should be prepared CLOSED

11.3.1.1 Название*

11.3.1.2 Расположение исходного файла**

- **What's New**
- **Installation Notes for Release**
- **NC Directory**

General Release Information/

* "Жирным" шрифтом обозначены действительные названия книг.

** Root-папка репозитория находится по полному пути \\svn\ProductDocuments\Documents90\

11.3.2 Release 9.6

Release Date: **March, 2015**

Technical Writers Release Team: Evgeny Osintsev Aliya Devlikanova Petr Plekhov Andrey Denesh

11.3.2.1 Release Documentation

Document	Status	JIRA Ticket
What's New *(technical XLS)*	⚠	

Document	Status	JIRA Ticket
Maintenance Guide		
Installation Notes		
Release Notes		
License Key Guide		
Notes on Security		
Supported Software Configurations		PSUPTW-1116 - Updating Supported_Software_Configurations document CLOSED
3rd Party Products Configuration Requirements		
NC Directory		

11.3.2.2 Discrepancy Report

Edit Document

Validation Phase							
#	Component Name	Source Document Name	Output Document Name	Required Version	Found Version	Output Version	Comments
1	atm	NC.UG.RI.ATM	UG.ATM	8.2.3.0	8.2.3.0	9.6.3.0	
2	Address Management	NC.UG.FRW.Address_Management	UG.Address_Management	8.2.2.2	8.2.2.2	9.6.2.2	
3	Address Management	NC.AG.FRW.Address_Management	AG.Address_Management	8.2.2.2	8.2.2.2	9.6.2.2	
4	Alcatel_1353_1354	NC.AG.FRW.Integration_Adapter_for_Alcatel_1353NM-1354RM	AG.Integration_Adapter_for_Alcatel_1353NM-1354RM	8.0.2.1	8.0.2.1	9.6.2.1	
5	alcatel-5620-sam-int	NC.AG.DR.Integration_Adapter_for_Alcatel5620SAM	AG.Integration_Adapter_for_Alcatel5620SAM	9.0.1.2	9.0.1.2	9.6.1.2	

6	AssignmentRules	NC.AG.RI.Assignment_Rules	AG.Assignment_Rules	8.2.3.2	8.2.3.2	9.6.3.2	
7	attachment-management	NC.AG.FRW.Attachment_Management	AG.Attachment_Management	9.5.1.13	9.5.1.11	9.6.1.11	
8	AdminTool	NC.AG.FRW.Administrative_Tools	AG.Administrative_Tools	9.5.4.4	9.5.4.0	9.6.4.0	
9	AdminTool	NC.AG.FRW.Naming_Conventions	AG.Naming_Conventions	9.5.4.4	9.5.4.0	9.6.4.0	
10	AdminTool	NC.AG.FRW.Object_Model_and_User_Interface_Customization	AG.Object_Model_and_User_Interface_Customization	9.5.4.4	9.5.3.34	9.6.3.34	
11	AdminTool	NC.AG.FRW.Object_Types_Attributes_and_Schemas	AG.Object_Types_Attributes_and_Schemas	9.5.4.4	9.5.3.34	9.6.3.34	
12	AuthFramework	NC.AG.FRW.Configuring_SAML	AG.Configuring_SAML	9.5.1.29	9.5.1.26	9.6.1.26	
13	AuthFramework	NC.AG.FRW.Configuring_CAS_Authentication	AG.Configuring_CAS_Authentication	9.5.1.29	9.5.1.26	9.6.1.26	
14	AuthFramework	NC.AG.FRW.Configuring_Kerberos_Authentication	AG.Configuring_Kerberos_Authentication	9.5.1.29	9.5.1.26	9.6.1.26	
15	AuthFramework	NC.AG.FRW.Configuring_X.509_Authentication	AG.Configuring_X.509_Authentication	9.5.1.29	9.5.1.26	9.6.1.26	
16	autoinstaller	NC.AG.AutoInstaller	AG.AutoInstaller	4.19.8.0	4.19.4.0	9.6.4.19	
17	billing-activation-and-information-provider	NC.UG.CBM.Billing_Activation_and_Information_Provider	UG.CBM.Billing_Activation_and_Information_Provider	9.3.4.1	9.3.3.7	9.6.3.7	

18	billing-activation-and-information-provider	NC.AG.CBM.Billing_Activation_and_Information_Provider	AG.CBM.Billing_Activation_and_Information_Provider	9.3.4.1	9.3.3.7	9.6.3.7	
19	BAM	NC.UG.FRW.Business_Activity_Monitoring	UG.Business_Activity_Monitoring	9.0.3.38	9.0.3.38	9.6.3.38	
20	BAM	NC.AG.FRW.Business_Activity_Monitoring	AG.Business_Activity_Monitoring	9.0.3.38	9.0.3.38	9.6.3.38	
21	BAM	NC.MG.FRW.Business_Activity_Monitoring	MG.Business_Activity_Monitoring	9.0.3.38	9.0.3.38	9.6.3.38	
22	Calendar	NC.UG.FRW.Business_Calendar	UG.Business_Calendar	9.5.2.28	9.3.2.27	9.6.2.27	
23	EventManagement	NC.UG.SPM.Service_Problem_Management	UG.Service_Problem_Management	8.2.3.13	8.2.3.13	9.6.3.13	
24	EventManagement	NC.AG.SPM.Service_Problem_Management	AG.Service_Problem_Management	8.2.3.13	8.2.2.0	9.6.2.0	
25	NotificationEscalation	NC.UG.SPM.Service_Problem_Management	UG.Service_Problem_Management	8.2.1.4	8.2.1.4	9.6.1.4	
26	NotificationEscalation	NC.AG.SPM.Service_Problem_Management	AG.Service_Problem_Management	8.2.1.4	8.2.1.4	9.6.1.4	
27	CIAPlannedMaintenance	NC.UG.SPM.Planned_Maintenance	UG.Planned_Maintenance	8.2.1.5	8.2.1.5	9.6.1.5	
28	CIAPlannedMaintenance	NC.AG.SPM.Planned_Maintenance	AG.Planned_Maintenance	8.2.1.5	8.2.1.5	9.6.1.5	
29	CIAServiceIncidentLogging	NC.UG.SPM.Service_Incident_Logging	UG.Service_Incident_Logging	8.2.1.8	8.2.1.8	9.6.1.8	

30	CIAServiceIncidentLogging	NC.AG.SPM.Service_Incident_Logging	AG.Service_Incident_Logging	8.2.1.8	8.2.1.8	9.6.1.8	
31	CapacityMgmt	NC.UG.RI.Capacity_Management	UG.Capacity_Management	9.0.3.4	9.0.3.4	9.6.3.4	
32	CapacityMgmt	NC.AG.RI.Capacity_Management	AG.Capacity_Management	9.0.3.4	9.0.3.4	9.6.3.4	
33	cpl-transport-ntwk	NC.UG.NPD.Capacity_Planning_Transport_Network	UG.NPD.Capacity_Planning_Transport_Network	9.0.1.3	9.0.1.3	9.6.1.3	
34	CDRW	NC.UG.RI.Card_and_Device_Replacement_Wizard	UG.Card_and_Device_Replacement_Wizard	9.0.4.6	9.0.4.6	9.6.4.6	
35	CDRW	NC.AG.RI.Cabling_Wizard_Settings	AG.Cabling_Wizard_Settings	9.0.4.6	9.0.4.6	9.6.4.6	
36	Catalog Resources	NC.UG.SOM.Resource_Catalog	UG.Resource_Catalog	9.0.1.4	9.0.1.4	9.6.1.4	
37	ConfigurationMgmt	NC.UG.CM.Configuration_Management	UG.Configuration_Management	8.2.2.1	8.2.2.1	9.6.2.1	
38	ConfigurationMgmt	NC.AG.CM.Configuration_Management	AG.Configuration_Management	8.2.2.1	8.2.2.1	9.6.2.1	
39	CIA	NC.UG.SPM.Service_Problem_Management	UG.Service_Problem_Management	9.3.2.1	9.3.2.1	9.6.2.1	
40	CIA	NC.AG.SPM.Service_Problem_Management	AG.Service_Problem_Management	9.3.2.1	9.3.2.1	9.6.2.1	
41	customer-information-and-history-management	NC.AG.CIM.Customer_Information_and_History_Management	AG.Customer_Information_and_History_Management	9.0.1.14	9.0.1.12	9.6.1.12	

42	customer-information-and-history-management	NC.UG.CIM.Customer_Information_and_History_Management	UG.Customer_Information_and_History_Management	9.0.1.14	9.0.1.12	9.6.1.12	
43	dwdm-ntwk-view	NC.UG.RI.DWDM_Network_View	UG.DWDM_Network_View	9.0.1.0	9.0.1.0	9.6.1.0	
44	DWDM	NC.UG.RI.DWDM	UG.DWDM	9.0.3.0	9.0.3.0	9.6.3.0	
45	DataSourceFramework	NC.AG.FRW.Data_Source_Framework	AG.Data_Source_Framework	8.2.2.16	8.2.2.15	9.6.2.15	
46	DP_Path_Management	NC.UG.NPD.Network_Planning_and_Design.Path_Management	UG.NPD.Network_Planning_and_Design.Path_Management	9.0.2.3	9.0.2.3	9.6.2.3	
47	design-planning-device-view	NC.UG.NPD.Network_Planning_and_Design.Device_View	UG.NPD.Network_Planning_and_Design.Device_View	2.3.0.0	2.1.1.0	9.6.2.1	
48	DP_Framework	NC.UG.NPD.Network_Planning_and_Design.Framework	UG.NPD.Network_Planning_and_Design.Framework	9.0.7.1	9.0.7.1	9.6.7.1	
49	DP_Framework	NC.AG.NPD.Network_Planning_and_Design.Validation_Reports	AG.NPD.Network_Planning_and_Design.Validation_Reports	9.0.7.1	9.0.7.1	9.6.7.1	
50	design-planning-gui-fsm	NC.UG.NPD.Network_Planning_and_Design.Floor_Space_Management	UG.NPD.Network_Planning_and_Design.Floor_Space_Management	1.6.0.0	1.4.1.0	9.6.1.4	
51	design-planning-gui-rsm	NC.UG.NPD.Network_Planning_and_Design.Rack_Space_Management	UG.NPD.Network_Planning_and_Design.Rack_Space_Management	1.5.0.0	1.3.1.0	9.6.1.3	
52	DP_OSP	NC.UG.NPD.Network_Planning_and_Design.OSP	UG.NPD.Network_Planning_and_Design.OSP	9.0.3.2	9.0.3.1	9.6.3.1	
53	dp-search-plugin	NC.AG.NPD.Design_and_Planning_Search_Plugin	AG.NPD.Design_and_Planning_Search_Plugin	9.3.1.4	9.3.1.4	9.6.1.4	

54	dp-capacity-management	NC.AG.NPD.Network_Planning_and_Design.Capacity_Management	AG.NPD.Network_Planning_and_Design.Capacity_Management	9.0.1.2	9.0.1.2	9.6.1.2	
55	dp-dwdm	NC.UG.NPD.Network_Planning_and_Design.DWDM	UG.NPD.Network_Planning_and_Design.DWDM	9.0.1.1	9.0.1.1	9.6.1.1	
56	dp-ip-mpls-me-circuit-designer	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet_Circuit_Designer	UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	9.6.1.0	
57	dp-ip-mpls-metro_ethernet	NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet	UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet	9.0.2.1	9.0.2.1	9.6.2.1	
58	dp-mpls-tp-ntwk-view	NC.UG.NPD.Network_Planning_and_Design.MPLS_TP_Network_View	UG.NPD.Network_Planning_and_Design.MPLS_TP_Network_View	9.0.1.0	9.0.1.0	9.6.1.0	
59	dp-me-ntwk-view	NC.UG.NPD.Network_Planning_and_Design.Metro_Ethernet_Network_View	UG.NPD.Network_Planning_and_Design.Metro_Ethernet_Network_View	9.0.1.1	9.0.1.1	9.6.1.1	
60	dp-microwave	NC.UG.NPD.Network_Planning_and_Design.Microwave	UG.NPD.Network_Planning_and_Design.Microwave	9.0.1.2	9.0.1.2	9.6.1.2	
61	dp-mobileran	NC.UG.NPD.Network_Planning_and_Design.Mobile_RAN	UG.NPD.Network_Planning_and_Design.Mobile_RAN	9.0.1.2	9.0.1.2	9.6.1.2	
62	dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.Resource_Inventory	UG.NPD.Network_Planning_and_Design.Resource_Inventory	9.0.4.6	9.0.4.5	9.6.4.5	
63	dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.ISP_Cables	UG.NPD.Network_Planning_and_Design.ISP_Cables	9.0.4.6	9.0.4.5	9.6.4.5	
64	dp-sdh-pdh	NC.UG.NPD.Network_Planning_and_Design.SDH-PDH	UG.NPD.Network_Planning_and_Design.SDH-PDH	9.0.1.1	9.0.1.1	9.6.1.1	
65	device-view	NC.UG.RI.Device_View	UG.Device_View	7.2.0.	6.6.1.	9.6.6.	

				0	0	6	
66	device-view	NC.AG.RI.Device_View	AG.Device_View	7.2.0.0	6.6.1.0	9.6.6.6	
67	diagram-template-editor	NC.UG.FRW.Diagram_Template_Editor	UG.Diagram_Template_Editor	1.4.3.0	1.4.3.0	9.6.3.0	
68	DS	NC.AG.DR.Discovery_Solution	AG.Discovery_Solution	9.0.1.4	9.0.1.4	9.6.1.4	
69	ERICSSON_OSS_INT	NC.AG.FRW.Integration_Adapter_for_Ericsson_OSS	AG.Integration_Adapter_for_Ericsson_OSS	9.0.3.0	9.0.3.0	9.6.3.0	
70	Ericsson_SOEM	NC.AG.FRW.Integration_Adapter_for_Ericsson_SOEM	AG.Integration_Adapter_for_Ericsson_SOEM	8.2.1.0	8.2.1.0	9.6.1.0	
71	ErrorHandling	NC.UG.FRW.Error_Handling_Framework	UG.Error_Handling_Framework	9.0.2.16	9.0.2.15	9.6.2.15	
72	ErrorHandling	NC.AG.FRW.Error_Handling_Framework	AG.Error_Handling_Framework	9.0.2.16	9.0.2.15	9.6.2.15	
73	ethernet-ring-view	NC.UG.RI.Ethernet_Ring_View	UG.Ethernet_Ring_View	1.3.0.0	1.3.0.0	9.6.1.3	
74	ethernet-ring-view	NC.AG.RI.Ethernet_Ring_View	AG.Ethernet_Ring_View	1.3.0.0	1.3.0.0	9.6.1.3	
75	execution-statistics-collector	NC.AG.FRW.Execution_Statistics_Collector	AG.Execution_Statistics_Collector	9.3.1.0	9.3.1.0	9.6.1.0	
76	ExportImport	NC.AG.FRW.Export_and_Import	AG.Export_and_Import	7.3.3.17	7.3.3.17	9.6.3.17	
77	FloorSpaceMgmt	NC.UG.RI.Floor_Space_Management.Textual_Mode	UG.Floor_Space_Management.Textual_Mode	8.0.1.1	8.0.1.1	9.6.1.1	

78	FloorSpaceMgmt	NC.UG.RI.Floor_Space_Management.Graphical_Mode	UG.Floor_Space_Management.Graphical_Mode	8.0.1.1	8.0.1.1	9.6.1.1	
79	FrameRelay	NC.UG.RI.Frame_Relay	UG.Frame_Relay	8.2.2.0	8.2.2.0	9.6.2.0	
80	gui-capacity-planning	NC.UG.NPD.GUI_Capacity_Planning	UG.NPD.GUI_Capacity_Planning	1.0.0.0	0.7.0.0	9.6.0.0	
81	gui-capacity-planning	NC.AG.NPD.GUI_Capacity_Planning	AG.NPD.GUI_Capacity_Planning	1.0.0.0	0.7.0.0	9.6.0.0	
82	GUI_Core	NC.UG.FRW.Network_Configurator	UG.Network_Configurator	12.0.0.0	11.2.4.0	9.6.11.2	
83	GUI_DiagramEditor	NC.UG.FRW.Diagram_Editor	UG.Diagram_Editor	9.6.0.0	9.5.0.0	9.6.0.0	
84	GUI_Inventory	NC.UG.RI.Network_Modeling_in_Network_Configurator	UG.Network_Modeling_in_Network_Configurator	17.0.3.0	16.7.3.0	9.6.16.7	
85	GUI_Inventory	NC.AG.RI.Graph_Views	AG.Graph_Views	17.0.3.0	16.7.3.0	9.6.16.7	
86	GUI_Inventory	NC.UG.RI.Geographical_View	UG.Geographical_View	17.0.3.0	16.7.3.0	9.6.16.7	
87	GUI_Inventory	NC.AG.RI.Geographical_View	AG.Geographical_View	17.0.3.0	16.7.3.0	9.6.16.7	
88	GUI_MSC	NC.UG.RI.GUI_MSC	UG.GUI_MSC	10.0.0.0	9.1.0.0	9.6.9.1	
89	GUI_OSP	NC.UG.OSP.OSP_Graphical_Mode	UG.OSP_Graphical_Mode	15.1.2.0	15.1.0.0	9.6.15.1	
90	GUI_PowerMgm	NC.UG.RI.Power_Management_and_Cooling_Equipment	UG.Power_Management_and_Cooling_Equipment_Gr	10.0.	9.1.	9.6.	

	t	_Graphical_Mode	aphical_Mode	0.0	0.0	9.1	
91	GUI_ServiceVisualization	NC.UG.FRW.Service_Visualization	UG.Service_Visualization	10.6.0.0	10.5.2.0	9.6.2.0	
92	GUI_ServiceVisualization	NC.AG.FRW.Service_Visualization	AG.Service_Visualization	10.6.0.0	10.5.2.0	9.6.2.0	
93	GUI_Coloring	NC.AG.FRW.Coloring_Configuration_for_GUI_Views	AG.Coloring_Configuration_for_GUI_Views	3.6.0.0	3.5.0.0	9.6.3.5	
94	GUI_FSM	NC.UG.RI.Floor_Space_Management_Graphical_User_Interface	UG.Floor_Space_Management_Graphical_User_Interface	4.8.0.0	4.6.2.0	9.6.4.6	
95	GUI_FSM	NC.AG.RI.Floor_Space_Management_Graphical_User_Interface	AG.Floor_Space_Management_Graphical_User_Interface	4.8.0.0	4.6.2.0	9.6.4.6	
96	GUI_RSM	NC.UG.RI.Rack_Space_Management_Graphical_User_Interface	UG.Rack_Space_Management_Graphical_User_Interface	7.1.0.0	6.6.4.0	9.6.6.6	
97	GUI_RSM	NC.AG.RI.Rack_Space_Management_Graphical_User_Interface	AG.Rack_Space_Management_Graphical_User_Interface	7.1.0.0	6.6.4.0	9.6.6.6	
98	GUI_RuleEngine	NC.AG.FRW.Rules_Engine_Graphical_Mode	AG.Rules_Engine_Graphical_Mode	2.6.0.0	2.5.0.0	9.6.2.5	
99	hfc-network-view	NC.UG.RI.HFC_Network_View	UG.HFC_Network_View	9.3.1.0	9.3.1.0	9.6.9.3	
100	hfc	NC.UG.RI.HFC_Network	UG.HFC_Network	9.3.1.0	9.3.1.0	9.6.9.3	
101	HDS	NC.UG.FRW.Historical_Data_Storage	UG.Historical_Data_Storage	9.0.4.4	9.0.4.3	9.6.4.3	
102	HDS	NC.AG.FRW.Historical_Data_Storage	AG.Historical_Data_Storage	9.0.4.4	9.0.4.3	9.6.4.3	

103	HDS	NC.MG.FRW.Historical_Data_Storage	MG.Historical_Data_Storage	9.0.4.4	9.0.4.3	9.6.4.3	
104	history-framework	NC.UG.FRW.History_Framework	UG.History_Framework	9.5.2.12	9.3.2.11	9.6.2.11	RDCR-6000 is not started yet
105	history-framework	NC.AG.FRW.History_Framework	AG.History_Framework	9.5.2.12	9.3.2.11	9.6.2.11	no changes, 9.5.2.12 is added to SVN (UG, AG)
106	Huawei_M2000_3G_Int	NC.AG.FRW.3G_Integration_Adapter_for_Huawei_M2000	AG.3G_Integration_Adapter_for_Huawei_M2000	9.0.2.3	9.0.2.3	9.6.2.3	
107	Huawei_M2000_Core_Int	NC.AG.FRW.Integration_Adapter_for_Huawei_M2000_Mobile_Core	AG.Integration_Adapter_for_Huawei_M2000_Mobile_Core	8.2.1.1	8.2.1.0	9.6.1.0	no changes, 8.2.1.1 is added to SVN (AG)
108	Huawei_M2000_Int	NC.AG.FRW.2G_Integration_Adapter_for_Huawei_M2000	AG.2G_Integration_Adapter_for_Huawei_M2000	9.0.2.1	9.0.2.1	9.6.2.1	
109	Huawei_T2000	NC.AG.FRW.Integration_Adapter_for_Huawei_T2000	AG.Integration_Adapter_for_Huawei_T2000	8.2.3.3	8.2.3.3	9.6.3.3	
110	icoms-integration-services-bso	NC.AG.FRW.ICOMS_Integration_Services	AG.ICOMS_Integration_Services	8.2.1.82	8.2.1.78	9.6.1.78	no changes, 8.2.1.82 is added to SVN (no version in indicated in the doc)
111	IPPlanner	NC.UG.RI.IP_Planner	UG.IP_Planner	9.0.4.1	9.0.4.1	9.6.4.1	
112	IPPlanner	NC.AG.RI.IP_Planner	AG.IP_Planner	9.0.4.1	9.0.4.1	9.6.4.1	
113	ip-mpls-me-circuit-designer	NC.UG.RI.IP_MPLS_Metro_Ethernet_Circuit_Designer	UG.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	9.6.1.0	
114	IP_MPLS_Eth_Conf	NC.CG.RI.IP_MPLS_Metro_Ethernet	CG.IP_MPLS_Metro_Ethernet	8.2.2.1	8.2.2.1	9.6.2.1	

115	IP_MPLS_Metro_Ethernet	NC.UG.RI.IP_MPLS_Metro_Ethernet	UG.IP_MPLS_Metro_Ethernet	9.0.4.1	9.0.4.1	9.6.4.1	
116	ITInfrastructureExt	NC.UG.RI.IT_Infrastructure_Extension	UG.IT_Infrastructure_Extension	8.0.1.1	8.0.1.1	9.6.1.1	
117	ITInfrastructure	NC.UG.RI.IT_Infrastructure	UG.IT_Infrastructure	7.3.2.1	7.3.2.1	9.6.2.1	
118	JeopardyMgmt	NC.UG.FRW.Jeopardy_Management	UG.Jeopardy_Management	8.0.1.24	8.0.1.24	9.6.1.24	
119	JeopardyMgmt	NC.AG.FRW.Jeopardy_Management	AG.Jeopardy_Management	8.0.1.24	8.0.1.24	9.6.1.24	
120	SchedulerQuartz	NC.AG.FRW.Jobs	AG.Jobs	9.5.3.19	9.5.3.16	9.6.3.16	no changes. 9.2.3.19 is added to SVN
121	l2tp	NC.UG.RI.L2TP	UG.L2TP	8.2.2.1	8.2.2.1	9.6.2.1	
122	LDAP	NC.AG.FRW.Enterprise_Directories_Integration	AG.Enterprise_Directories_Integration	9.5.1.27	9.0.1.26	9.6.1.26	no changes. 9.5.1.27 is added to SVN
123	LDAP	NC.AG.FRW.Application_Server_Configuration_for_LDAP_Integration	AG.Application_Server_Configuration_for_LDAP_Integration	9.5.1.27	9.0.1.26	9.6.1.26	no changes. 9.5.1.27 is added to SVN
124	LicenseManager3	NC.AG.FRW.License_Manager_3	AG.License_Manager_3	9.0.1.4	9.0.1.4	9.6.1.4	
125	localization-tool	NC.AG.FRW.Localization_Tool	AG.Localization_Tool	9.0.1.1	9.0.1.1	9.6.1.1	
126	me-mpls-ntwk-view	NC.UG.RI.ME_MPLS_Network_View	UG.ME_MPLS_Network_View	9.0.1.0	9.0.1.0	9.6.9.0	
12	mpls-tp-ntwk-	NC.UG.RI.MPLS_TP_Network_View	UG.MPLS_TP_Network_View	9.0.	9.0.	9.6.	

7	view			1.0	1.0	9.0	
128	mte-device-library-mapping	NC.AG.DR.MTE_Device_Library_Mapping	AG.MTE_Device_Library_Mapping	9.0.2.1	9.0.2.1	9.6.2.1	
129	MUI	NC.AG.FRW.Multilanguage_Support	AG.Multilanguage_Support	9.3.1.0	8.2.1.0	9.6.1.0	no changes. 9.3.1.0 is added to SVN
130	mailsender	NC.AG.FRW.Mail_Sender	AG.Mail_Sender	9.5.2.13	9.5.2.12	9.6.2.12	no changes. 9.5.2.13 is added to SVN
131	MediationDataFlowWS	NC.AG.FRW.Mediation_DataFlow_WebServices_Pack	AG.Mediation_DataFlow_WebServices_Pack	8.2.1.16	8.2.1.15	9.6.1.15	no changes. 8.2.1.16 is added to SVN
132	MediationDataFlow	NC.AG.FRW.Mediation_DataFlow	AG.Mediation_DataFlow	9.3.4.14	9.3.4.13	9.6.4.13	changes have been introduced, 9.3.4.14 is added to SVN
133	MediationTransition	NC.AG.DR.Mediation_Transition.Unified_Model_Configuration	AG.Mediation_Transition.Unified_Model_Configuration	9.3.4.11	9.3.4.11	9.6.4.11	
134	MediationTransition	NC.AG.DR.Mediation_Transition.Validation_Engine	AG.Mediation_Transition.Validation_Engine	9.3.4.11	9.3.4.11	9.6.4.11	
135	MediationTransition	NC.AG.DR.Mediation_Transition.Transformation_Engine	AG.Mediation_Transition.Transformation_Engine	9.3.4.11	9.3.4.11	9.6.4.11	
136	dispatcher	NC.UG.FRW.Message_Dispatcher	UG.Message_Dispatcher	9.0.1.0	9.0.1.0	9.6.1.0	
137	dispatcher	NC.AG.FRW.Message_Dispatcher	AG.Message_Dispatcher	9.0.1.0	9.0.1.0	9.6.1.0	
138	dispatcher-webservice	NC.AG.FRW.Message_Dispatcher_DataFlow_Interface	AG.Message_Dispatcher_DataFlow_Interface	9.0.1.0	9.0.1.0	9.6.1.0	
139	dispatcher-sms	NC.AG.FRW.Message_Dispatcher_SMSC_Integration	AG.Message_Dispatcher_SMSC_Integration	9.0.1.	9.0.1.	9.6.1.	

				0	0	0	
140	MessageEngine	NC.AG.FRW.Message_Engine	AG.Message_Engine	9.0.1.18	9.0.1.18	9.6.1.18	
141	Microwave	NC.UG.RI.Microwave	UG.Microwave	9.0.3.4	9.0.3.4	9.6.3.4	
142	Microwave	NC.AG.RI.Microwave	AG.Microwave	9.0.3.4	9.0.3.4	9.6.3.4	
143	mobileran	NC.UG.RI.Mobile_RAN	UG.Mobile_RAN	9.0.2.1	9.0.2.1	9.6.2.1	
144	MSC	NC.UG.RI.Mobile_Service_Catalog	UG.Mobile_Service_Catalog	8.2.3.4	8.2.3.4	9.6.3.4	
145	MSC	NC.AG.RI.Shared_Services	AG.Shared_Services	8.2.3.4	8.2.3.4	9.6.3.4	
146	NC2NC Replication	NC.AG.FRW.NC_to_NC_Replication	AG.NC_to_NC_Replication	8.0.3.1	8.0.3.1	9.6.3.1	
147	NEC_PNMSj_Int	NC.AG.DR.Integration_Adapter_for_NEC_PNMSj	AG.Integration_Adapter_for_NEC_PNMSj	9.0.1.0	9.0.1.0	9.6.1.0	
148	NSS	NC.UG.RI.Network_Switching_Subsystem	UG.Network_Switching_Subsystem	9.0.1.2	8.2.1.1	9.6.1.1	no changes. 9.0.1.2 is added to SVN
149	netcool	NC.AG.FRW.Netcool_Integration_Adapter	AG.Netcool_Integration_Adapter	7.3.1.0	7.3.1.0	9.6.1.0	
150	nss-view	NC.AG.RI.Network_Switching_Subsystem_View	AG.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	9.6.2.0	
151	nss-view	NC.UG.RI.Network_Switching_Subsystem_View	UG.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	9.6.2.0	

152	Nokia_NetAct_Int	NC.AG.DR.Integration_Adapter_for_Nokia_Siemens_Networks_NetAct	AG.Integration_Adapter_for_Nokia_Siemens_Networks_NetAct	8.2.2.0	8.2.2.0	9.6.2.0	
153	OMEngine	NC.AG.OPF.Mapping_Tables	AG.Mapping_Tables	9.0.8.1	9.0.7.9	9.6.7.9	no changes, 9.0.8.1 is added to SVN
154	OPF_OTV	NC.UG.OPF.Order_Tree_View	UG.Order_Tree_View	8.2.1.10	8.2.1.9	9.6.1.9	8.2.1.10 exists in SVN
155	osp	NC.UG.OSP.OSP_Textual_UI	UG.OSP_Textual_UI	9.0.9.7	9.0.9.7	9.6.9.7	
156	osp	NC.AG.OSP.OSP_Textual_UI	AG.OSP_Textual_UI	9.0.9.7	9.0.9.7	9.6.9.7	
157	osp	NC.AG.OSP.OSP_Configuring_Cable_Coloring	AG.OSP_Configuring_Cable_Coloring	9.0.9.7	9.0.9.7	9.6.9.7	
158	OSSJ_FM_INT	NC.AG.SPM.OSSJ_Fault_Management_Integration	AG.OSSJ_Fault_Management_Integration	7.3.1.7	7.3.1.7	9.6.1.7	
159	OTN	NC.UG.RI.OTN	UG.OTN	8.2.1.0	8.2.1.0	9.6.1.0	
160	order-decomposition-gui	NC.AG.OPF.Order_Decomposition_View	AG.Order_Decomposition_View	2.2.0.0	2.1.1.0	9.6.2.1	no changes, 2.2.0.0 is added to SVN
161	order-decomposition-gui	NC.UG.OPF.Order_Decomposition_View	UG.Order_Decomposition_View	2.2.0.0	2.1.1.0	9.6.2.1	no changes, 2.2.0.0 is added to SVN
162	OrderEntry	NC.UG.COM.Order_Entry	UG.Order_Entry	8.1.5.6	8.1.5.6	9.6.5.6	
163	OrderEntry	NC.UG.COM.Order_Entry_Wholesale	UG.Order_Entry_Wholesale	8.1.5.6	8.1.5.6	9.6.5.6	
16	OrderEntry	NC.UG.COM.Pricing_Engine	UG.Pricing_Engine	8.1.	8.1.	9.6.	

4				5.6	5.6	5.6	
165	OM_Dashboards	NC.UG.OPF.Order_Management_Dashboards	UG.Order_Management_Dashboards	9.3.2.1	9.3.2.1	9.6.2.1	
166	parameters-visualization	NC.AG.FRW.Parameter_Visualization_Configuration_for_GUI_Views	AG.Parameter_Visualization_Configuration_for_GUI_Views	3.3.1.0	3.3.0.0	9.6.3.3	no changes, 3.3.1.0 is added to SVN
167	partner-management	NC.UG.PM.Partner_Management	UG.PM.Partner_Management	9.0.1.9	9.0.1.9	9.6.1.9	
168	path-management	NC.UG.RI.Path_Management	UG.Path_Management	9.0.4.3	9.0.4.3	9.6.4.3	
169	PDT	NC.AG.FRW.Performance_Diagnostics_Tool	AG.Performance_Diagnostics_Tool	8.1.2.0	8.1.2.0	9.6.2.0	
170	PhoneBookAmerica	NC.UG.RI.Phone_Book_US	UG.Phone_Book_US	8.2.1.4	8.2.1.4	9.6.1.4	
171	PhoneBookEurope	NC.UG.RI.Phone_Book_EU	UG.Phone_Book_EU	8.2.2.2	8.2.2.2	9.6.2.2	
172	PolicyFramework	NC.AG.FRW.Security_Policies	AG.Security_Policies	9.5.2.14	9.3.2.13	9.6.2.13	no changes, 9.5.2.14 is added to SVN
173	PM_Cooling	NC.UG.RI.Power_Management_and_Cooling_Equipment_Textual_Mode	UG.Power_Management_and_Cooling_Equipment_Textual_Mode	7.2.1.4	7.2.1.4	9.6.1.4	
174	Process Orchestrator	NC.UG.FRW.Process_Orchestrator	UG.Process_Orchestrator	9.0.3.41	9.0.3.41	9.6.3.41	
175	Process Orchestrator	NC.AG.FRW.Process_Orchestrator	AG.Process_Orchestrator	9.0.3.41	9.0.3.39	9.6.3.39	no changes, 9.0.3.41 is added to SVN
176	POM	NC.UG.COM.Customer_Order_Management	UG.Customer_Order_Management	9.0.8.0	9.0.8.0	9.6.8.0	

177	POM	NC.AG.COM.Customer_Order_Management	AG.Customer_Order_Management	9.0.8.0	9.0.8.0	9.6.8.0	
178	POM	NC.UG.CIM.Product_Inventory	UG.Product_Inventory	9.0.8.0	9.0.7.11	9.6.7.11	no changes, 9.0.8.0 is added to SVN
179	POM	NC.UG.PIM.Product_Information_Management	UG.Product_Information_Management	9.0.8.0	9.0.8.0	9.6.8.0	
180	QueueService	NC.AG.FRW.Queue	AG.Queue	9.0.2.9	9.0.2.9	9.6.2.9	
181	rdblight	NC.AG.FRW.RDB_Light	AG.RDB_Light	8.2.5.16	8.2.5.16	9.6.5.16	
182	radio-controller-view	NC.UG.Radio_Controller_View	UG.Radio_Controller_View	2.0.0.0	2.0.0.0	9.6.0.0	
183	radio-controller-view	NC.AG.Radio_Controller_View	AG.Radio_Controller_View	2.0.0.0	2.0.0.0	9.6.0.0	
184	Reconciliation	NC.AG.DR.Reconciliation_Framework	AG.Reconciliation_Framework	8.2.9.26	8.2.9.23	9.6.9.23	https://psup.netcracker.com/i#browse/PDCR-6844 - PDCR has not been started yet no changes, 8.2.9.26 is added to SVN
185	RDB	NC.AG.FRW.Replicated_Database	AG.Replicated_Database	8.2.5.13	8.2.5.13	9.6.5.13	
186	RDB	NC.MG.FRW.Replicated_Database	MG.Replicated_Database	8.2.5.13	8.2.5.13	9.6.5.13	
187	Reports	NC.UG.FRW.Reports_Engine	UG.Reports_Engine	9.5.8.4	9.5.8.3	9.6.8.3	no changes, 9.5.8.4 is added to SVN
1	Reports	NC.AG.FRW.Reports_Engin	AG.Reports_Engine	9.	9.	9.	no changes,

88		e		5.8.4	5.8.3	6.8.3	9.5.8.4 is added to SVN
189	ResourceInventory	NC.UG.RI.Resource_Inventory_Basics	UG.Resource_Inventory_Basics	9.0.7.16	9.0.7.11	9.6.7.11	no changes, 9.0.7.16 is added to SVN
190	ResourceInventory	NC.UG.RI.Network_Modeling	UG.Network_Modeling	9.0.7.16	9.0.7.11	9.6.7.11	no changes, 9.0.7.16 is added to SVN
191	ResourceInventory	NC.UG.RI.Templates	UG.Templates	9.0.7.16	9.0.7.11	9.6.7.11	https://psup.netcracker.com/i#browse/PDCR-5634 - hasn't been started yet 9.0.7.16 is added to SVN
192	ResourceInventory	NC.AG.RI.Resource_Inventory	AG.Resource_Inventory	9.0.7.16	9.0.7.11	9.6.7.11	https://psup.netcracker.com/i#browse/PDCR-6560 - hasn't been started yet 9.0.7.16 is added to SVN
193	ResourceInventory	NC.AG.RI.Device_Library	AG.Device_Library	9.0.7.16	9.0.7.11	9.6.7.11	no changes, 9.0.7.16 is added to SVN
194	ResourceInventory	NC.UG.RI.Archiving	UG.Archiving	9.0.7.16	9.0.7.11	9.6.7.11	no changes, 9.0.7.16 is added to SVN
195	Network Planning Engine	NC.AG.FRW.Rules_Engine	AG.Rules_Engine	8.2.6.3	8.2.6.3	9.6.6.3	
196	sdh-circuit-designer	NC.UG.RI.PDH_Circuit_Designer	UG.PDH_Circuit_Designer	9.0.2.0	9.0.2.0	9.6.2.0	
197	sdh-circuit-designer	NC.UG.RI.SDH_Circuit_Designer	UG.SDH_Circuit_Designer	9.0.2.0	9.0.2.0	9.6.2.0	
198	sdh	NC.UG.RI.SDH-PDH	UG.SDH-PDH	9.0.3.2	9.0.3.2	9.6.3.2	

199	sonet-ntwk-view	NC.UG.RI.SONET_Network_View	UG.SONET_Network_View	9.0.1.1	9.0.1.1	9.6.1.1	
200	sonet	NC.UG.RI.SONET	UG.SONET	8.2.2.10	8.2.2.10	9.6.2.10	
201	SS7_SIGTRAN	NC.UG.RI.SS7_and_SIGTRAN	UG.SS7_and_SIGTRAN	8.2.1.3	8.2.1.1	9.6.1.1	no changes, 8.2.1.3 is added to SVN
202	sales-force-automation	NC.UG.MSM.Sales_Force_Automation	UG.MSM.Sales_Force_Automation	9.0.1.11	9.0.1.11	9.6.1.11	
203	Scripting	NC.AG.FRW.Scripting_Framework	AG.Scripting_Framework	9.3.1.18	9.3.1.18	9.6.1.18	
204	Search	NC.UG.FRW.Search	UG.Search	9.3.5.50	9.3.5.47	9.6.5.47	no changes, 9.3.5.50 is added to SVN
205	Search	NC.AG.FRW.Configuring_Search_Profiles	AG.Configuring_Search_Profiles	9.3.5.50	9.3.5.47	9.6.5.47	no changes, 9.3.5.50 is added to SVN
206	SAF	NC.UG.SA.Service_Activation_Framework	UG.Service_Activation_Framework	9.0.6.14	9.0.6.14	9.6.6.14	
207	ServiceInventory	NC.UG.SI.Service_Inventory	UG.Service_Inventory	9.0.4.6	9.0.4.4	9.6.4.4	no changes, 9.0.4.6 is added to SVN
208	SPF	NC.UG.SOM.Service_Order_Management	UG.Service_Order_Management	9.0.10.0	9.0.10.0	9.6.10.0	
209	SPF	NC.AG.SOM.Service_Order_Management	AG.Service_Order_Management	9.0.10.0	9.0.10.0	9.6.10.0	
210	SPF	NC.UG.SIM.Service_Information_Management	UG.Service_Information_Management	9.0.10.0	9.0.10.0	9.6.10.0	
21	specification-	NC.UG.OPF.Specification_Catalog_Graphical_Mode	UG.Specification_Catalog_Graphical_Mode	1.18	1.17	9.6.	no changes, 1.18.0.0 is

1	catalog-gui			.0.0	.0.0	1.17	added to SVN
212	specification-catalog-gui	NC.AG.OPF.Specification_Catalog_Graphical_Mode	AG.Specification_Catalog_Graphical_Mode	1.18.0.0	1.17.0.0	9.6.1.17	no changes, 1.18.0.0 is added to SVN
213	SubscriberInventory	NC.UG.SI.Subscriber_Inventory	UG.Subscriber_Inventory	8.0.1.2	8.0.1.2	9.6.1.2	
214	TAR	NC.AG.FRW.Task_Assignment_Rules	AG.Task_Assignment_Rules	8.1.2.11	8.1.2.10	9.6.2.10	https://psup.netcracker.com/i#browse/PDCR-4950 - PDCR has not been started yet 8.1.2.11 is added to SVN
215	template-based-document-generator	NC.AG.FRW.Template-based_Document_Generation	AG.Template-based_Document_Generation	9.0.1.6	9.0.1.6	9.6.1.6	
216	template-based-document-generator	NC.UG.FRW.Template-based_Document_Generation	UG.Template-based_Document_Generation	9.0.1.6	9.0.1.6	9.6.1.6	
217	TBIntegration	NC.UG.FRW.Template_Based_Integration	UG.Template_Based_Integration	8.0.2.15	8.0.2.15	9.6.2.15	
218	TBIntegration	NC.AG.FRW.Template_Based_Integration	AG.Template_Based_Integration	8.0.2.15	8.0.2.15	9.6.2.15	
219	Textual UI	NC.UG.FRW.Textual_UI	UG.Textual_UI	9.0.8.40	9.0.8.38	9.6.8.38	https://psup.netcracker.com/i#browse/PDCR-7072 - has not been started yet, https://psup.netcracker.com/i#browse/PDCR-6000 - has not been started yet, no changes, 9.0.8.40 is added to SVN

220	TTM	NC.UG.CPM.Trouble_Ticket_Management	UG.CPM.Trouble_Ticket_Management	8.2.3.8	8.2.3.5	9.6.3.5	no changes, 8.2.3.8 is added to SVN
221	TTM	NC.AG.CPM.Trouble_Ticket_Management	AG.CPM.Trouble_Ticket_Management	8.2.3.8	8.2.3.5	9.6.3.5	no changes, 8.2.3.8 is added to SVN
222	ui-data-sources	NC.AG.FRW.UI_Data_Sources	AG.UI_Data_Sources	9.5.3.0	9.5.1.16	9.6.1.16	no changes, 9.5.3.0 is added to SVN
223	user-and-grants-management-ui	NC.AG.FRW.User_and_Grants_Management_UI	AG.User_and_Grants_Management_UI	9.5.1.5	9.5.1.6	-	changes have been introduced, 9.5.1.5 is added to SVN
224	user-grants-management	NC.AG.FRW.User_and_Grants_Management	AG.User_and_Grants_Management	9.5.2.2	9.5.2.3	9.6.2.1	no changes, 9.5.2.2 is added to SVN
225	vpn-view	NC.UG.RI.VPN_View	UG.VPN_View	1.2.3.0	1.2.3.0	9.6.1.2	
226	vpn-view	NC.AG.RI.VPN_View	AG.VPN_View	1.2.3.0	1.2.1.0	9.6.1.2	no changes, 1.2.3.0 is added to SVN
227	voice	NC.UG.RI.Voice	UG.Voice	9.0.3.0	9.0.3.0	9.6.3.0	
228	AssignmentTool	NC.UG.WFM.WFM_Assignment_Tool	UG.WFM_Assignment_Tool	9.0.4.0	9.0.3.0	9.6.3.0	no changes, 9.0.4.0 is added to SVN
229	AssignmentTool	NC.AG.WFM.WFM_Assignment_Tool	AG.WFM_Assignment_Tool	9.0.4.0	8.2.2.2	9.6.2.2	no changes, 9.0.4.0 is added to SVN
230	WorkOrderManagement	NC.UG.WFM.Workforce_Management	UG.Workforce_Management	9.0.6.0	9.0.1.0	9.6.1.0	the doc does not exist any more
231	WorkforceInventory	NC.UG.WFM.Workforce_Management	UG.Workforce_Management	9.0.6.0	9.0.1.0	9.6.1.0	docs in lines 234-240 include its contents
2	SkillMan	NC.UG.FRW.Skill_Managem	UG.Skill_Management	8.	8.		includes the

32	agement	ent		2.4.2	2.4.2		Workforce Management contents
233	AppointmentReservation	NC.UG.WFM.Appointment_Reservation	UG.Appointment_Reservation	8.2.2.1	8.2.2.0		no changes, 8.2.2.1 is added to SVN
234	wfm-dashboards	NC.UG.WFM.Dashboards		9.0.2.0	9.0.1.0		no changes, 9.0.2.0 is added to SVN
235	WFMEmployeeCalendar	NC.UG.WFM.Employee_Calendar		9.0.3.0	9.0.3.0		includes the Workforce Management contents
236	WFM.Work order management	NC.UG.WFM.Work_Order_Management		9.0.6.0	9.0.5.0		no changes, 9.0.6.0 is added to SVN (includes the Workforce Management contents)
237	WFM.Work Planner	NC.UG.WFM.Work_Planner		9.0.6.0	9.0.5.0		no changes, 9.0.6.0 is added to SVN (includes the Workforce Management contents)
238	WFM.Workforce inventory	NC.UG.WFM.Workforce_Inventory		9.0.6.0	9.0.5.0		no changes, 9.0.6.0 is added to SVN (includes the Workforce Management contents)
239	Widgets OOB	NC.UG.FRW.Dashboards_and_Widgets	UG.Dashboards_and_Widgets	8.2.4.16	8.2.4.14	9.6.4.14	http://psup.netcracker.com/i#browse/PDCR-6655 - CR hasn't been completed yet 8.2.4.16 has been added to SVN
240	Widgets OOB	NC.CG.FRW.Dashboards_and_Widgets	CG.Dashboards_and_Widgets	8.2.4.16	8.2.4.14	9.6.4.14	http://psup.netcracker.com/i#browse/PDCR-6655 - CR hasn't been completed yet 8.2.4.16 has been added to

							SVN
241	WorkOrderStructure	NC.UG.FRW.Work_Orders_and_Work_Items	UG.Work_Orders_and_Work_Items	8.2.4.3	8.2.4.2	9.6.4.2	no changes, 8.2.4.3 is added to SVN
242	WF	NC.AG.FRW.Workflow	AG.Workflow	9.0.4.40	9.0.4.37	9.6.4.37	no changes, 9.0.4.40 is added to SVN
243	Xpath	NC.AG.FRW.XPath	AG.XPath	9.5.2.0	9.5.2.0	9.6.2.0	
244	xpon-views	NC.UG.RI.xPON_OLT_Network_View	UG.xPON_OLT_Network_View	0.2.5.0	0.2.5.0	9.6.5.0	
245	xpon	NC.UG.RI.xPON	UG.xPON	8.2.2.1	8.2.2.1	9.6.2.1	
246	Core	NC.AG.FRW.Attribute_Details_and_Object_Type_Properties	AG.Attribute_Details_and_Object_Type_Properties	9.0.3.1	9.0.2.21	9.6.2.21	no changes, 9.0.3.1 is added to SVN
247	Core	NC.AG.FRW.Attribute_Adapters	AG.Attribute_Adapters	9.0.3.1	9.0.2.21	9.6.2.21	no changes, 9.0.3.1 is added to SVN
248	Core	NC.AG.FRW.Event_Listeners	AG.Event_Listeners	9.0.3.1	9.0.2.21	9.6.2.21	no changes, 9.0.3.1 is added to SVN

11.4Release 10 Checklist

11.4.1 Bill of Materials 10.0

PSUP:PSUPTW-1378 - NetCracker Release 10 Documentation Set is Needed OPEN

11.4.1.1 Title*

11.4.1.2 Source File Storage**

11.4.1.3 General Release Information

- **What's New**

11.4.1.4 System Administration Documentation

- **Installation Notes for Release**

- **Maintenance Guide**
- **Licence Key Guide**
- **Notes on Security**
- **Supported Software Configurations**
- **3rd Party Products Configuration Requirements**
- **NC Directory**
- **Enabling HTTP over SSL**
- **Password Encryption**
- **Oracle RAC Notes**

General Release Information/

Maintenance Guide/

11.4.1.5 User Documentation

- **NetCracker Database Overview**

Developer's Guide/NetCracker Database Overview/

- **NetCracker TOMS Integration Overview**

Developer's Guide/API Overview/

- TOMS product components **User Guide(s)**
- TOMS product components **Administrator Guide(s)**
- TOMS product components **API Integration Guide(s)**

SVN Repository/

- TOMS product components **Developer Guide(s)**
- TOMS modules **Developer Guide(s)**
- Developer's manual **NetCracker Secure Development**

Developer's Guide/

- TOMS Guide **Active Mediation Module**
- TOMS Guide **Administrative Services**
- TOMS Guide **Analytics & Decisioning**
- TOMS Guide **Asset Management**
- TOMS Guide **Configuration Management**
- TOMS Guide **Customer Billing Management**
- TOMS Guide **Customer Information Management**
- TOMS Guide **Customer Order Management**

- [ ] TOMS Guide **Customer Problem Management**
- [ ] TOMS Guide **Customer SLA/QoS Management**
- [ ] TOMS Guide **Customer Self-Service**
- [ ] TOMS Guide **Device Management**
- [ ] TOMS Guide **Discovery & Reconciliation**
- [ ] TOMS Guide **Fault Management**
- [ ] TOMS Guide **Financial Analytics**
- [ ] TOMS Guide **HR Management**
- [ ] TOMS Guide **Home Network**
- [ ] TOMS Guide **Knowledge Management**
- [ ] TOMS Guide **M2M Cloud**
- [ ] TOMS Guide **Management & Orchestration**
- [ ] TOMS Guide **Marketing & Sales Management**
- [ ] TOMS Guide **Media Optimization**
- [ ] TOMS Guide **NetCracker Framework**
- [ ] TOMS Guide **Network Planning & Design**
- [ ] TOMS Guide **Network/Element Management System**
- [ ] TOMS Guide **Online Rating & CHarging**
- [ ] TOMS Guide **Outside Plant**
- [ ] TOMS Guide **Partner Management**

- TOMS Guide **Performance Management**
- TOMS Guide **Policy Enforcement**
- TOMS Guide **Policy Management**
- TOMS Guide **Product Information Management**
- TOMS Guide **Product Lifecycle Management**
- TOMS Guide **Resource Activation**
- TOMS Guide **Resource Inventory**
- TOMS Guide **Service Activation**
- TOMS Guide **Service Delivery Platform**
- TOMS Guide **Service Information Management**
- TOMS Guide **Service Inventory**
- TOMS Guide **Service Order Management**
- TOMS Guide **Service Problem Management**
- TOMS Guide **Service Quality Management**
- TOMS Guide **Workforce Management**

Active Mediation/
Administrative Services/
Analytics and Decisioning/
Asset Management/
Configuration Management/
Customer Billing Management/
Customer Information Management/
Customer Order Management/
Customer Problem Management/
Customer SLA-QoS Management/

Customer Self-Service/

Device Management/

Discovery and Reconciliation/

Fault Management/

Financial Analytics/

HR Management/

Home Network/

Knowledge Management/

M2M Cloud/

Management and Orchestration/

Marketing and Sales Management/

Media Optimization/

NetCracker Framework/

Network Planning and Design/

Network-Element Management System/

Online Rating and Charging/

Outside Plant/

Partner Management/

Performance Management/

Policy Enforcement/

Policy Management/

Product Information Management/

Product Lifecycle Management/

Resource Activation/

Resource Inventory/

Service Activation/

Service Delivery Platform/

Service Information Management/

Service Inventory/

Service Order Management/

Service Problem Management/

Service Quality Management/

Workforce Management/

* "Жирным" шрифтом обозначены действительные названия книг. (Book titles are bolded.)

** Root-папка репозитория находится по полному пути \\svn\ProductDocuments\Documents90\ (Repository root folder is located by a full path \\svn\ProductDocuments\Documents90\)

11.4.2 Discrepancy Analysis

11.4.3 Discrepancy Report

Edit Document

Validation Phase						
#	Component Name	Source Document Name	Output Document Name	Required Version	Found Version	Output Version
1	atm	NC.UG.RI.ATM	UG.ATM	8.2.3.0	8.2.3.0	10.0.3.0
2	AddressManagement	NC.UG.FRW.Address_Management	UG.Address_Management	8.2.2.3	8.2.2.3	10.0.2.3
3	AddressManagement	NC.AG.FRW.Address_Management	AG.Address_Management	8.2.2.3	8.2.2.3	10.0.2.3
4	Alcatel_1353_1354	NC.AG.FRW.Alcatel_1353_1354_Integration	AG.Alcatel_1353_1354_Integration	8.0.2.1	8.0.2.1	10.0.2.1
5	alcatel-5620-sam-int	NC.AG.DR.Alcatel_5620_SAM_Integration	AG.Alcatel_5620_SAM_Integration	9.0.1.3	9.0.1.3	10.0.1.3
6	AppointmentReservation	NC.UG.WFM.Appointment_Reservation	UG.Appointment_Reservation	8.2.2.1	8.2.2.1	10.0.2.1
7	AssignmentRules	NC.AG.RI.Assignment_Rules	AG.Assignment_Rules	8.2.3.2	8.2.3.2	10.0.3.2
8	attachment-management	NC.AG.FRW.Attachment_Management	AG.Attachment_Management	9.5.1.13	9.5.1.13	10.0.1.13
9	autoinstaller	NC.AG.AutoInstaller	AG.AutoInstaller	4.19.15.0	4.19.9.0	10.0.4.19
10	billing-activation-and-information-provider	NC.UG.CBM.Billing_Activation_and_Information_Provider	UG.CBM.Billing_Activation_and_Information_Provider	9.3.4.1	9.3.4.1	10.0.4.1
11	billing-activation-and-informatio	NC.AG.CBM.Billing_Activation_and_Information_Provider	AG.CBM.Billing_Activation_and_Information_Provider	9.3.4.1	9.3.4.1	10.0.4.1

	n-provider					
12	billing-dispute-management	NC.AG.CPM.Billing_Dispute_Management	AG.CPM.Billing_Dispute_Management	9.3.1.1	9.3.1.0	10.0.1.0
13	billing-dispute-management	NC.UG.CPM.Billing_Dispute_Management	UG.CPM.Billing_Dispute_Management	9.3.1.1	9.3.1.0	10.0.1.0
14	BAM	NC.UG.FRW.Business_Activity_Monitoring	UG.Business_Activity_Monitoring	9.0.3.40	9.0.3.38	10.0.3.38
15	BAM	NC.AG.FRW.Business_Activity_Monitoring	AG.Business_Activity_Monitoring	9.0.3.40	9.0.3.38	10.0.3.38
16	BAM	NC.MG.FRW.Business_Activity_Monitoring	MG.Business_Activity_Monitoring	9.0.3.40	9.0.3.38	10.0.3.38
17	Calendar	NC.UG.FRW.Business_Calendar	UG.Business_Calendar	10.0.2.31	9.3.2.28	10.0.2.28
18	businesso e	NC.UG.COM.Business_Order_Entry	UG.Business_Order_Entry	8.2.3.15	8.2.3.7	10.0.3.7
19	CIAPlannedMaintenance	NC.UG.SPM.CIAPlannedMaintenance	UG.CIAPlannedMaintenance	8.2.1.5	8.2.1.5	10.0.1.5
20	CIAPlannedMaintenance	NC.AG.SPM.CIAPlannedMaintenance	AG.CIAPlannedMaintenance	8.2.1.5	8.2.1.5	10.0.1.5
21	CIAServiceIncidentLogging	NC.UG.SPM.CIAServiceIncidentLogging	UG.CIAServiceIncidentLogging	8.2.1.8	8.2.1.8	10.0.1.8
22	CIAServiceIncidentLogging	NC.AG.SPM.CIAServiceIncidentLogging	AG.CIAServiceIncidentLogging	8.2.1.8	8.2.1.8	10.0.1.8
23	CapacityMgmt	NC.UG.RI.Capacity_Management	UG.Capacity_Management	9.0.3.4	9.0.3.4	10.0.3.4
24	CapacityMgmt	NC.AG.RI.Capacity_Management	AG.Capacity_Management	9.0.3.4	9.0.3.4	10.0.3.4
25	cpl-transport-ntwk	NC.UG.NPD.Capacity_Planning.Transport_Network	UG.NPD.Capacity_Planning.Transport_Network	9.0.1.3	9.0.1.3	10.0.1.3
26	CDRW	NC.UG.RI.Card_Device_Replacement_Wizard	UG.Card_Device_Replacement_Wizard	9.0.4.6	9.0.4.6	10.0.4.6

27	CDRW	NC.AG.RI.Card_Device_Replacement_Wizard	AG.Card_Device_Replacement_Wizard	9.0.4.6	9.0.4.6	10.0.4.6
28	CatalogGeneric	NC.UG.FRW.Catalog_Generic	UG.Catalog_Generic	9.5.2.4	9.0.2.0	10.0.2.0
29	CatalogResources	NC.UG.SOM.Catalog_Resources	UG.Catalog_Resources	9.0.1.5	9.0.1.5	10.0.1.5
30	ConfigurationMgmt	NC.UG.CM.Configuration_Management	UG.Configuration_Management	8.2.2.1	8.2.2.1	10.0.2.1
31	ConfigurationMgmt	NC.AG.CM.Configuration_Management	AG.Configuration_Management	8.2.2.1	8.2.2.1	10.0.2.1
32	customer-information-and-history-management	NC.AG.CIM.Customer_Information_and_History_Management	AG.Customer_Information_and_History_Management	9.0.1.12	9.0.1.12	10.0.1.12
33	customer-information-and-history-management	NC.UG.CIM.Customer_Information_and_History_Management	UG.Customer_Information_and_History_Management	9.0.1.12	9.0.1.12	10.0.1.12
34	customer-retention-management	NC.AG.CPM.Customer_Retention_Management	AG.CPM.Customer_Retention_Management	9.3.1.2	9.3.1.0	10.0.1.0
35	customer-retention-management	NC.UG.CPM.Customer_Retention_Management	UG.CPM.Customer_Retention_Management	9.3.1.2	9.3.1.0	10.0.1.0
36	dwdm-ntwk-view	NC.UG.RI.DWDM_Network_View	UG.DWDM_Network_View	9.0.1.0	9.0.1.0	10.0.1.0
37	DWDM	NC.UG.RI.DWDM	UG.DWDM	9.0.3.0	9.0.3.0	10.0.3.0
38	DataSourceFramework	NC.AG.FRW.Data_Source_Framework	AG.Data_Source_Framework	8.2.2.17	8.2.2.15	10.0.2.15
39	DP_Path_Management	NC.UG.NPD.Design_and_Planning.Path_Management	UG.NPD.Design_and_Planning.Path_Management	9.0.2.3	9.0.2.3	10.0.2.3
40	DP_Default_Rules	NC.AG.NPD.Design_and_Planning_Default_Rules	AG.NPD.Design_and_Planning_Default_Rules	9.0.3.0	8.0.1.3	10.0.1.

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41	design-planning-device-view	NC.UG.NPD.Design_and_Planning_Device_View	UG.NPD.Design_and_Planning_Device_View	3.0.0.0	2.3.0.0	10.0.2.3
42	DP_Framework	NC.UG.NPD.Design_and_Planning_Framework	UG.NPD.Design_and_Planning_Framework	9.0.7.2	9.0.7.1	10.0.7.1
43	DP_Framework	NC.AG.NPD.Design_and_Planning_Framework	AG.NPD.Design_and_Planning_Framework	9.0.7.2	9.0.5.1	10.0.5.1
44	design-planning-gui-fsm	NC.UG.NPD.Design_and_Planning_GUI.Floor_Space_Management	UG.NPD.Design_and_Planning_GUI.Floor_Space_Management	2.0.0.0	1.4.1.0	10.0.1.4
45	design-planning-gui-rsm	NC.UG.NPD.Design_and_Planning_GUI.Rack_Space_Management	UG.NPD.Design_and_Planning_GUI.Rack_Space_Management	2.0.0.0	1.7.0.0	10.0.1.7
46	DP_OSP	NC.UG.NPD.Design_and_Planning_OSP_Extension	UG.NPD.Design_and_Planning_OSP_Extension	9.0.3.4	9.0.3.4	10.0.3.4
47	dp-search-plugin	NC.AG.NPD.Design_and_Planning_Search_Plugin	AG.NPD.Design_and_Planning_Search_Plugin	9.3.1.5	9.3.1.4	10.0.1.4
48	dp-capacity-management	NC.AG.NPD.Design_and_Planning.Capacity_Management	AG.NPD.Design_and_Planning.Capacity_Management	9.0.1.2	9.0.1.2	10.0.1.2
49	dp-dwdm	NC.UG.NPD.Design_and_Planning.DWDM	UG.NPD.Design_and_Planning.DWDM	9.0.1.1	9.0.1.1	10.0.1.1
50	dp-ip-mpls-me-circuit-designer	NC.UG.NPD.Design_and_Planning.IP_MPLS_Metro_Ethernet_Circuit_Designer	UG.NPD.Design_and_Planning.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	10.0.1.0
51	dp-ip-mpls-metro_ethernet	NC.UG.NPD.Design_and_Planning.IP_MPLS_Metro_Ethernet	UG.NPD.Design_and_Planning.IP_MPLS_Metro_Ethernet	9.0.2.2	9.0.2.1	10.0.2.1
52	dp-mpls-tp-ntwk-view	NC.UG.NPD.Design_and_Planning.MPLS_TP_Network_View	UG.NPD.Design_and_Planning.MPLS_TP_Network_View	9.0.1.0	9.0.1.0	10.0.1.0
53	dp-me-ntwk-view	NC.UG.NPD.Design_and_Planning.Metro_Ethernet_Network_View	UG.NPD.Design_and_Planning.Metro_Ethernet_Network_View	9.0.1.1	9.0.1.1	10.0.1.1
54	dp-microwave	NC.UG.NPD.Design_and_Planning.Microwave	UG.NPD.Design_and_Planning.Microwave	9.0.1.2	9.0.1.2	10.0.1.2
55	dp-	NC.UG.NPD.Design_and_Plan	UG.NPD.Design_and_Plannin	9.0.	9.0.	10.

	mobileran	ning.Mobile_RAN	g.Mobile_RAN	1.2	1.2	0.1.2
56	dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.Resource_Inventory	UG.NPD.Network_Planning_and_Design.Resource_Inventory	9.0.4.8	9.0.4.7	10.0.4.7
57	dp-resource-inventory	NC.UG.NPD.Network_Planning_and_Design.ISP_Cables	UG.NPD.Network_Planning_and_Design.ISP_Cables	9.0.4.8	9.0.4.7	10.0.4.7
58	dp-sdh-pdh	NC.UG.NPD.Design_and_Planning.SDH_PDH	UG.NPD.Design_and_Planning.SDH_PDH	9.0.1.1	9.0.1.1	10.0.1.1
59	device-view	NC.UG.RI.Device_View	UG.Device_View	8.0.0.0	6.6.1.0	10.0.6.6
60	device-view	NC.AG.RI.Device_View	AG.Device_View	8.0.0.0	6.6.1.0	10.0.6.6
61	diagram-template-editor	NC.UG.FRW.Diagram_Template_Editor	UG.Diagram_Template_Editor	1.4.5.0	1.4.3.0	10.0.3.0
62	DS	NC.AG.DR.Discovery_Solution	AG.Discovery_Solution	9.0.1.5	9.0.1.4	10.0.1.4
63	ERICSSON_OSS_INT	NC.AG.FRW.Ericsson_OSS_Integration	AG.Ericsson_OSS_Integration	9.0.3.0	9.0.3.0	10.0.3.0
64	Ericsson_SOEM	NC.AG.FRW.Ericsson_SOEM_Integration	AG.Ericsson_SOEM_Integration	8.2.1.0	8.2.1.0	10.0.1.0
65	ErrorHandling	NC.UG.FRW.Error_Handling_Framework	UG.Error_Handling_Framework	9.0.2.18	9.0.2.16	10.0.2.16
66	ErrorHandling	NC.AG.FRW.Error_Handling_Framework	AG.Error_Handling_Framework	9.0.2.18	9.0.2.16	10.0.2.16
67	ethernet-ring-view	NC.UG.RI.Ethernet_Ring_View	UG.Ethernet_Ring_View	1.3.1.0	1.3.0.0	10.0.1.3
68	ethernet-ring-view	NC.AG.RI.Ethernet_Ring_View	AG.Ethernet_Ring_View	1.3.1.0	1.3.0.0	10.0.1.3
69	execution-statistics-collector	NC.AG.FRW.Execution_Statistics_Collector	AG.Execution_Statistics_Collector	9.3.1.0	9.3.1.0	10.0.1.0
70	ExportImport	NC.AG.FRW.Export_Import	AG.Export_Import	7.3.3.17	7.3.3.17	10.0.3.17

71	FloorSpaceMgmt	NC.UG.RI.Floor_Space_Management	UG.Floor_Space_Management	8.0.1.1	8.0.1.1	10.0.1.1
72	FrameRelay	NC.UG.RI.Frame_Relay	UG.Frame_Relay	8.2.2.0	8.2.2.0	10.0.2.0
73	gui-capacity-planning	NC.UG.NPD.GUI_Capacity_Planning	UG.NPD.GUI_Capacity_Planning	1.0.1.0	1.0.0.0	10.0.0.0
74	gui-capacity-planning	NC.AG.NPD.GUI_Capacity_Planning	AG.NPD.GUI_Capacity_Planning	1.0.1.0	1.0.0.0	10.0.0.0
75	GUI_Core	NC.UG.FRW.GUI_Core	UG.GUI_Core	12.0.2.0	12.0.0.0	10.0.12.0
76	GUI_DiagramEditor	NC.UG.FRW.GUI_Diagram_Editor	UG.GUI_Diagram_Editor	9.6.0.0	9.6.0.0	10.0.0.0
77	GUI_Inventory	NC.AG.RI.GUI_Inventory	AG.GUI_Inventory	17.1.2.0	16.7.3.0	10.0.16.7
78	GUI_Inventory	NC.UG.RI.GUI_Inventory	UG.GUI_Inventory	17.1.2.0	16.7.3.0	10.0.16.7
79	GUI_MSC	NC.UG.RI.GUI_MSC	UG.GUI_MSC	10.0.0.0	9.1.0.0	10.0.9.1
80	GUI_OSP	NC.UG.OSP.GUI_OSP	UG.GUI_OSP	15.1.3.0	15.1.2.0	10.0.15.1
81	GUI_PowerMgmt	NC.UG.RI.Power_Management_and_Cooling	UG.Power_Management_and_Cooling	10.0.0.0	10.0.0.0	10.0.10.0
82	GUI_Coloring	NC.AG.FRW.GUI_Coloring	AG.GUI_Coloring	4.0.0.0	3.6.0.0	10.0.3.6
83	GUI_FSM	NC.UG.RI.GUI_Floor_Space_Management	UG.GUI_Floor_Space_Management	5.0.0.0	4.6.2.0	10.0.4.6
84	GUI_FSM	NC.AG.RI.GUI_Floor_Space_Management	AG.GUI_Floor_Space_Management	5.0.0.0	4.6.2.0	10.0.4.6
85	GUI_RSM	NC.UG.RI.GUI_Rack_Space_Management	UG.GUI_Rack_Space_Management	8.0.0.0	7.3.0.0	10.0.7.3
86	GUI_RSM	NC.AG.RI.GUI_Rack_Space_Management	AG.GUI_Rack_Space_Management	8.0.0.0	7.3.0.0	10.0.7.3

87	GUI_Rule Engine	NC.AG.FRW.GUI_Rule_Engine	AG.GUI_Rule_Engine	3.0.0.0	2.6.0.0	10.0.2.6
88	hfc-network-view	NC.UG.RI.HFC_Network_View	UG.HFC_Network_View	9.3.1.0	9.3.1.0	10.0.9.3
89	hfc	NC.UG.RI.HFC	UG.HFC	9.3.1.1	9.3.1.0	10.0.9.3
90	HDS	NC.UG.FRW.History_Data_Storage	UG.History_Data_Storage	9.0.4.7	9.0.4.4	10.0.4.4
91	HDS	NC.AG.FRW.History_Data_Storage	AG.History_Data_Storage	9.0.4.7	9.0.4.4	10.0.4.4
92	HDS	NC.MG.FRW.History_Data_Storage	MG.History_Data_Storage	9.0.4.7	9.0.4.4	10.0.4.4
93	history-framework	NC.UG.FRW.History_Framework	UG.History_Framework	9.5.2.16	9.5.2.14	10.0.2.14
94	history-framework	NC.AG.FRW.History_Framework	AG.History_Framework	9.5.2.16	9.5.2.14	10.0.2.14
95	Huawei_M2000_3G_Int	NC.AG.FRW.Huawei_M2000_3G_Integration	AG.Huawei_M2000_3G_Integration	9.0.2.3	9.0.2.3	10.0.2.3
96	Huawei_M2000_Core_Int	NC.AG.FRW.Huawei_M2000_Core_Integration	AG.Huawei_M2000_Core_Integration	8.2.1.2	8.2.1.2	10.0.1.2
97	Huawei_M2000_Int	NC.AG.FRW.Huawei_M2000_Integration	AG.Huawei_M2000_Integration	9.0.2.1	9.0.2.1	10.0.2.1
98	Huawei_T2000	NC.AG.FRW.Huawei_T2000_Integration	AG.Huawei_T2000_Integration	8.2.3.3	8.2.3.3	10.0.3.3
99	icoms-integration-services-bso	NC.AG.FRW.ICOMS_Integration_Services(BSO)	AG.ICOMS_Integration_Services(BSO)	8.2.1.84	8.2.1.82	10.0.1.82
100	IPPlanner	NC.UG.RI.IP_Planner	UG.IP_Planner	9.0.4.2	9.0.4.2	10.0.4.2
101	IPPlanner	NC.AG.RI.IP_Planner	AG.IP_Planner	9.0.4.2	9.0.4.2	10.0.4.2
102	ip-mpls-me-circuit-	NC.UG.RI.IP_MPLS_Metro_Ethernet_Circuit_Designer	UG.IP_MPLS_Metro_Ethernet_Circuit_Designer	9.0.1.0	9.0.1.0	10.0.1.

	designer					0
103	IP_MPLS_Eth_Conf	NC.CG.RI.IP_MPLS_Metro_Ethernet	CG.IP_MPLS_Metro_Ethernet	8.2.2.1	8.2.2.1	10.0.2.1
104	IP_MPLS_Metro_Ethernet	NC.UG.RI.IP_MPLS_Metro_Ethernet	UG.IP_MPLS_Metro_Ethernet	9.0.4.2	9.0.4.2	10.0.4.2
105	ITInfrastructureExt	NC.UG.RI.IT_Infrastructure_Extension	UG.IT_Infrastructure_Extension	8.0.1.1	8.0.1.1	10.0.1.1
106	ITInfrastructure	NC.UG.RI.IT_Infrastructure	UG.IT_Infrastructure	7.3.2.1	7.3.2.1	10.0.2.1
107	Jeopardy Mgmt	NC.UG.FRW.Jeopardy_Management	UG.Jeopardy_Management	8.0.1.25	8.0.1.24	10.0.1.24
108	Jeopardy Mgmt	NC.AG.FRW.Jeopardy_Management	AG.Jeopardy_Management	8.0.1.25	8.0.1.24	10.0.1.24
109	Scheduler Quartz	NC.AG.FRW.Jobs_Scheduler	AG.Jobs_Scheduler	9.5.3.21	9.5.3.19	10.0.3.19
110	l2tp	NC.UG.RI.L2TP	UG.L2TP	8.2.2.1	8.2.2.1	10.0.2.1
111	LDAP	NC.AG.FRW.Enterprise_Directories_Integration	AG.Enterprise_Directories_Integration	9.5.2.0	9.0.1.26	10.0.1.26
112	LDAP	NC.AG.Application_Server_Configuration_for_LDAP_Integration	AG.Application_Server_Configuration_for_LDAP_Integration	9.5.2.0	9.0.1.26	10.0.1.26
113	localization-tool	NC.AG.FRW.Localization_Tool	AG.Localization_Tool	9.0.1.1	9.0.1.1	10.0.1.1
114	me-mpls-ntwk-view	NC.UG.RI.ME_MPLS_Network_View	UG.ME_MPLS_Network_View	9.0.1.0	9.0.1.0	10.0.9.0
115	mpls-tp-ntwk-view	NC.UG.RI.MPLS_TP_Network_View	UG.MPLS_TP_Network_View	9.0.1.0	9.0.1.0	10.0.9.0
116	mte-device-library-mapping	NC.AG.DR.MTE.Device_Library_Mapping	AG.MTE.Device_Library_Mapping	9.0.2.1	9.0.2.1	10.0.2.1
117	MUI	NC.AG.FRW.MUI	AG.MUI	9.5.1.1	9.3.1.0	10.0.1.0

118	mailsender	NC.AG.FRW.Mail_Sender	AG.Mail_Sender	10.0.2.15	9.5.2.13	10.0.2.13
119	MediationDataFlowWS	NC.AG.FRW.Mediation_DataFlow_WebServices_Pack	AG.Mediation_DataFlow_WebServices_Pack	8.2.1.16	8.2.1.16	10.0.1.16
120	MediationDataFlow	NC.AG.FRW.Mediation_DataFlow	AG.Mediation_DataFlow	9.3.4.18	9.3.4.18	10.0.4.18
121	MediationTransition	NC.AG.DR.Mediation_Transition.Unified_Model_Configuration	AG.Mediation_Transition.Unified_Model_Configuration	9.3.4.11	8.2.4.8	10.0.4.8
122	MediationTransition	NC.AG.DR.Mediation_Transition.Validation_Engine	AG.Mediation_Transition.Validation_Engine	9.3.4.11	8.2.4.8	10.0.4.8
123	MediationTransition	NC.AG.DR.Mediation_Transition.Transformation_Engine	AG.Mediation_Transition.Transformation_Engine	9.3.4.11	8.2.4.8	10.0.4.8
124	dispatcher	NC.UG.FRW.Message_Dispatcher	UG.Message_Dispatcher	9.0.1.3	9.0.1.0	10.0.1.0
125	dispatcher	NC.AG.FRW.Message_Dispatcher	AG.Message_Dispatcher	9.0.1.3	9.0.1.0	10.0.1.0
126	dispatcher-webservice	NC.AG.FRW.Message_Dispatcher_DataFlow_Interface	AG.Message_Dispatcher_DataFlow_Interface	9.0.1.0	9.0.1.0	10.0.1.0
127	dispatcher-sms	NC.AG.FRW.Message_Dispatcher_SMSC_Integration	AG.Message_Dispatcher_SMSC_Integration	9.0.1.0	9.0.1.0	10.0.1.0
128	MessageEngine	NC.AG.FRW.Message_Engine	AG.Message_Engine	10.0.1.20	9.0.1.18	10.0.1.18
129	metro-ethernet-topology-view	NC.UG.RI.Metro_Ethernet_Topology_View	UG.Metro_Ethernet_Topology_View	3.0.0.0	2.3.3.0	10.0.2.3
130	metro-ethernet-topology-view	NC.AG.RI.Metro_Ethernet_Topology_View	AG.Metro_Ethernet_Topology_View	3.0.0.0	2.3.3.0	10.0.2.3
131	Microwave	NC.UG.RI.Microwave	UG.Microwave	9.0.3.4	9.0.3.4	10.0.3.4
132	Microwave	NC.AG.RI.Microwave	AG.Microwave	9.0.3.4	9.0.3.4	10.0.3.4

133	mobileran	NC.UG.RI.Mobile_RAN	UG.Mobile_RAN	9.0.2.1	9.0.2.1	10.0.2.1
134	MSC	NC.UG.RI.Mobile_Service_Catalog	UG.Mobile_Service_Catalog	8.2.3.4	8.2.3.4	10.0.3.4
135	MSC	NC.AG.RI.Shared_Services	AG.Shared_Services	8.2.3.4	8.2.3.4	10.0.3.4
136	NC2NCReplication	NC.AG.FRW.NC_to_NC_Replication	AG.NC_to_NC_Replication	8.0.2.8	8.0.2.8	10.0.2.8
137	NEC_PNMSj_Int	NC.AG.DR.NEC_PNMSj_Integration	AG.NEC_PNMSj_Integration	9.0.1.0	9.0.1.0	10.0.1.0
138	NSS	NC.UG.RI.Network_Switching_Subsystem	UG.Network_Switching_Subsystem	9.0.1.3	9.0.1.3	10.0.1.3
139	netcool	NC.AG.FRW.Netcool_Integration_Adapter	AG.Netcool_Integration_Adapter	7.3.1.0	7.3.1.0	10.0.1.0
140	nss-view	NC.AG.RI.Network_Switching_Subsystem_View	AG.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	10.0.2.0
141	nss-view	NC.UG.RI.Network_Switching_Subsystem_View	UG.Network_Switching_Subsystem_View	2.0.0.0	2.0.0.0	10.0.2.0
142	Nokia_NetAct_Int	NC.AG.DR.Nokia_NetAct_Integration	AG.Nokia_NetAct_Integration	8.2.2.1	8.2.2.0	10.0.2.0
143	OMEngine	NC.AG.FRW.OM_Engine	AG.OM_Engine	9.0.8.1	9.0.8.1	10.0.8.1
144	OPFConfigurationUI	NC.UG.FRW.OPF_Configuration_UI	UG.OPF_Configuration_UI	8.2.1.5	8.2.1.4	10.0.1.4
145	OPF_OTV	NC.UG.OPF.Order_Tree_View	UG.Order_Tree_View	8.2.1.11	8.2.1.9	10.0.1.9
146	osp	NC.UG.OSP.OSP	UG.OSP	9.0.9.8	9.0.9.8	10.0.9.8
147	osp	NC.AG.OSP.OSP_Configuring_Cable_Coloring	AG.OSP_Configuring_Cable_Coloring	9.0.9.8	9.0.9.6	10.0.9.6
148	OSSJ_FM_INT	NC.AG.SPM.OSSJ_Fault_Management_Integration	AG.OSSJ_Fault_Management_Integration	7.3.1.7	7.3.1.7	10.0.1.7

149	OTN	NC.UG.RI.OTN	UG.OTN	8.2.1.0	8.2.1.0	10.0.1.0
150	order-decomposition-gui	NC.AG.FRW.Order_Decomposition_GUI	AG.Order_Decomposition_GUI	3.0.0.0	2.2.0.0	10.0.2.2
151	order-decomposition-gui	NC.UG.FRW.Order_Decomposition_GUI	UG.Order_Decomposition_GUI	3.0.0.0	2.2.0.0	10.0.2.2
152	OrderEntry	NC.UG.COM.Order_Entry	UG.Order_Entry	8.1.5.6	8.1.5.6	10.0.5.6
153	OM_Dashboards	NC.UG.FRW.Order_Management_Dashboards	UG.Order_Management_Dashboards	9.3.2.3	9.3.2.1	10.0.2.1
154	parameters-visualization	NC.AG.FRW.Parameter_Visualization_Configuration_for_GUI_Views	AG.Parameter_Visualization_Configuration_for_GUI_Views	4.0.0.0	1.1.1.0	10.0.1.1
155	partner-management	NC.UG.PM.Partner_Management	UG.PM.Partner_Management	9.0.1.9	9.0.1.9	10.0.1.9
156	path-management	NC.UG.RI.Path_Management	UG.Path_Management	9.0.4.3	9.0.4.3	10.0.4.3
157	PhoneBookAmerica	NC.UG.RI.Phone Book_American_Data_Model	UG.Phone Book_American_Data_Model	9.4.1.6	9.4.1.6	10.0.1.6
158	PhoneBookEurope	NC.UG.RI.Phone_Book_European_Data_Model	UG.Phone_Book_European_Data_Model	9.4.2.3	9.4.2.3	10.0.2.3
159	PolicyFramework	NC.AG.FRW.Security_Policies	AG.Security_Policies	9.5.2.15	9.5.2.14	10.0.2.14
160	PM_Cooling	NC.UG.RI.Power_Management_and_Cooling_Equipment_Textual_Mode	UG.Power_Management_and_Cooling_Equipment_Textual_Mode	7.2.1.4	7.2.1.4	10.0.1.4
161	ProcessOrchestrator	NC.UG.FRW.Process_Orchestrator	UG.Process_Orchestrator	9.0.3.45	9.0.3.45	10.0.3.45
162	ProcessOrchestrator	NC.AG.FRW.Process_Orchestrator	AG.Process_Orchestrator	9.0.3.45	9.0.3.45	10.0.3.45
163	POM	NC.UG.COM.Customer_Order_Management	UG.Customer_Order_Management	9.0.8.0	9.0.7.11	10.0.7.11
164	POM	NC.AG.COM.Customer_Order_Management	AG.Customer_Order_Management	9.0.8.0	9.0.7.1	10.0.7.

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165	POM	NC.UG.CIM.Product_Inventory	UG.Product_Inventory	9.0.8.0	9.0.8.0	10.0.8.0
166	QueueService	NC.AG.FRW.Queue_Service	AG.Queue_Service	9.0.2.12	9.0.2.12	10.0.2.12
167	rdblight	NC.AG.FRW.RDB_Light	AG.RDB_Light	9.5.6.2	9.5.6.0	10.0.6.0
168	radio-controller-view	NC.UG.Radio_Controller_View	UG.Radio_Controller_View	2.0.0.0	2.0.0.0	10.0.0.0
169	radio-controller-view	NC.AG.Radio_Controller_View	AG.Radio_Controller_View	2.0.0.0	2.0.0.0	10.0.0.0
170	Reconciliation	NC.AG.DR.Reconciliation_Engine	AG.Reconciliation_Engine	8.2.9.28	8.2.9.27	10.0.9.27
171	RDB	NC.AG.FRW.Replicated_Database	AG.Replicated_Database	9.5.6.0	9.5.6.0	10.0.6.0
172	RDB	NC.MG.FRW.Replicated_Database	MG.Replicated_Database	9.5.6.0	9.5.6.0	10.0.6.0
173	Reports	NC.UG.FRW.Reports_Engine	UG.Reports_Engine	10.0.8.10	9.5.8.6	10.0.8.6
174	Reports	NC.AG.FRW.Reports_Engine	AG.Reports_Engine	10.0.8.10	9.5.8.6	10.0.8.6
175	ResourceInventory	NC.UG.RI.Resource_Inventory_Basics	UG.Resource_Inventory_Basics	9.0.7.22	9.0.7.16	10.0.7.16
176	ResourceInventory	NC.UG.RI.Network_Modeling	UG.Network_Modeling	9.0.7.22	9.0.7.16	10.0.7.16
177	ResourceInventory	NC.UG.RI.Templates	UG.Templates	9.0.7.22	9.0.7.16	10.0.7.16
178	ResourceInventory	NC.AG.RI.Resource_Inventory	AG.Resource_Inventory	9.0.7.22	9.0.7.17	10.0.7.17
179	ResourceInventory	NC.AG.RI.Device_Library	AG.Device_Library	9.0.7.22	9.0.7.17	10.0.7.17
180	ResourceI	NC.UG.RI.Archiving	UG.Archiving	9.0.	9.0.	10.

	nventory			7.22	7.17	0.7.17
181	NetworkPlanningEngine	NC.AG.FRW.Rule_Engine	AG.Rule_Engine	8.2.6.3	8.2.6.3	10.0.6.3
182	sdh-circuit-designer	NC.UG.RI.PDH_Circuit_Designer	UG.PDH_Circuit_Designer	9.0.2.0	9.0.2.0	10.0.2.0
183	sdh-circuit-designer	NC.UG.RI.SDH_Circuit_Designer	UG.SDH_Circuit_Designer	9.0.2.0	9.0.2.0	10.0.2.0
184	sdh	NC.UG.RI.SDH-PDH	UG.SDH-PDH	9.0.3.2	9.0.3.2	10.0.3.2
185	sonet-ntwk-view	NC.UG.RI.SONET_Network_View	UG.SONET_Network_View	9.0.1.2	9.0.1.1	10.0.1.1
186	sonet	NC.UG.RI.SONET	UG.SONET	8.2.2.10	8.2.2.10	10.0.2.10
187	SS7_SIGTRAN	NC.UG.RI.SS7_SIGTRAN	UG.SS7_SIGTRAN	8.2.1.3	8.2.1.3	10.0.1.3
188	sales-force-automation	NC.UG.MSM.Sales_Force_Automation	UG.MSM.Sales_Force_Automation	9.0.1.11	9.0.1.11	10.0.1.11
189	Scripting	NC.AG.FRW.Scripting	AG.Scripting	9.5.1.20	9.5.1.20	10.0.1.20
190	Search	NC.UG.FRW.Search	UG.Search	9.3.5.54	9.3.5.50	10.0.5.50
191	Search	NC.AG.FRW.Search	AG.Search	9.3.5.54	9.3.5.50	10.0.5.50
192	SAF	NC.UG.SA.Service_Activation_Framework	UG.Service_Activation_Framework	9.0.6.16	9.0.6.16	10.0.6.16
193	ServiceInventory	NC.UG.SI.Service_Inventory	UG.Service_Inventory	9.0.4.7	9.0.4.6	10.0.4.6
194	SPF	NC.UG.SOM.Service_Order_Management	UG.Service_Order_Management	9.0.10.3	9.0.8.1	10.0.8.1
195	SPF	NC.AG.SOM.Service_Order_Management	AG.Service_Order_Management	9.0.10.3	9.0.8.1	10.0.8.1

196	SPF	NC.UG.SIM.Service_Information_Management	UG.Service_Information_Management	9.0.10.3	9.0.8.1	10.0.8.1
197	SkillManagement	NC.UG.FRW.Skill_Management	UG.Skill_Management	8.2.4.2	8.2.4.2	10.0.4.2
198	specification-catalog-gui	NC.UG.FRW.Specification_Catalog_GUI	UG.Specification_Catalog_GUI	2.0.0.0	1.19.1.0	10.0.1.19
199	specification-catalog-gui	NC.AG.FRW.Specification_Catalog_GUI	AG.Specification_Catalog_GUI	2.0.0.0	1.19.1.0	10.0.1.19
200	SubscriberInventory	NC.UG.SI.Subscriber_Inventory	UG.Subscriber_Inventory	8.0.1.2	8.0.1.2	10.0.1.2
201	TAR	NC.AG.FRW.Task_Assignment_Rules	AG.Task_Assignment_Rules	8.1.2.12	8.1.2.11	10.0.2.11
202	template-based-document-generator	NC.AG.FRW.Template_Based_Document_Generator	AG.Template_Based_Document_Generator	9.0.1.6	9.0.1.6	10.0.1.6
203	template-based-document-generator	NC.UG.FRW.Template_Based_Document_Generator	UG.Template_Based_Document_Generator	9.0.1.6	9.0.1.6	10.0.1.6
204	TBIntegration	NC.UG.FRW.Template_Based_Integration	UG.Template_Based_Integration	8.0.2.17	8.0.2.15	10.0.2.15
205	TBIntegration	NC.AG.FRW.Template_Based_Integration	AG.Template_Based_Integration	8.0.2.17	8.0.2.15	10.0.2.15
206	TextualUI	NC.UG.FRW.Textual_UI	UG.Textual_UI	10.0.8.45	9.0.8.43	10.0.8.43
207	TTM	NC.UG.SPM.Trouble_Ticket_Management	UG.Trouble_Ticket_Management	8.2.3.11	8.2.3.8	10.0.3.8
208	TTM	NC.AG.SPM.Trouble_Ticket_Management	AG.Trouble_Ticket_Management	8.2.3.11	8.2.3.8	10.0.3.8
209	ui-data-sources	NC.AG.FRW.UI_Data_Sources	AG.UI_Data_Sources	10.0.4.2	9.5.4.0	10.0.4.0
210	user-and-grants-managem	NC.AG.FRW.User_and_Grants_Management_UI	AG.User_and_Grants_Management_UI	10.0.1.	9.5.1.3	10.0.1.

	ent-ui			9	1	31
211	user-grants-management	NC.AG.FRW.User_and_Grants_Management	AG.User_and_Grants_Management	10.0.2.6	9.5.2.3	10.0.2.3
212	vpn-view	NC.UG.RI.VPN_View	UG.VPN_View	1.2.3.0	1.2.3.0	10.0.1.2
213	vpn-view	NC.AG.RI.VPN_View	AG.VPN_View	1.2.3.0	1.2.3.0	10.0.1.2
214	voice	NC.UG.RI.Voice	UG.Voice	9.0.3.1	9.0.3.0	10.0.3.0
215	wfm-dashboards	NC.UG.WFM.Dashboards	UG.Dashboards	9.0.2.0	9.0.2.0	10.0.2.0
216	AssignmentTool	NC.UG.WFM.WFM_Assignment_Tool	UG.WFM_Assignment_Tool	9.0.4.0	9.0.4.0	10.0.4.0
217	AssignmentTool	NC.AG.WFM.WFM_Assignment_Tool	AG.WFM_Assignment_Tool	9.0.4.0	9.0.4.0	10.0.4.0
218	WidgetsOOB	NC.UG.FRW.Widgets_Out_Of_Box	UG.Widgets_Out_Of_Box	8.2.4.22	8.2.4.18	10.0.4.18
219	WorkOrderStructure	NC.UG.FRW.Work_Order_Structure	UG.Work_Order_Structure	8.2.4.3	8.2.4.3	10.0.4.3
220	WF	NC.AG.FRW.Workflow	AG.Workflow	9.0.4.42	9.0.4.40	10.0.4.40
221	Xpath	NC.AG.FRW.XPath	AG.XPath	9.5.2.1	9.5.2.0	10.0.2.0
222	xpon-views	NC.UG.RI.xPON_Views	UG.xPON_Views	0.2.5.0	0.2.5.0	10.0.5.0
223	xpon	NC.UG.RI.xPON	UG.xPON	8.2.2.1	8.2.2.1	10.0.2.1
224	Core	NC.AG.FRW.Attribute_Adapters	AG.Attribute_Adapters	10.0.3.9	9.3.6.23	10.0.6.23
225	Core	NC.AG.FRW.Event_Listeners	AG.Event_Listeners	10.0.3.9	9.3.6.23	10.0.6.23

not found	- Required version of component was not found	8.2.3.7	- Required version of document was not found but lower version exists	-	- Document is missing in delivery	
VALIDATION SUCCESSFUL!						

11.5 RBM Releases

12 TW Componentization Project

12.1 Часто задаваемые вопросы:

В: Что значит фраза в mapping table "The component has been removed due to componentization?"

О: Название компонента было удалено из mapping table, документация осталась на своем месте, а именно: в svn, sps3

В: Как я теперь найду компонентизированный файл?

О:Название компонентизированного файла соответствует названию компоненты.

Подробнее, можно посмотреть на странице:

https://bass.netcracker.com/display/CDT/Componentization+Change+Tracker

В: Почему не все версии файлов компонентизируются?

О: Компонент начинает существовать с определенной версии, версия файла должна соответствовать версии компонента. Если компонент начинает существовать с версиии 9.0, а файлы есть 8.5 и 9.0, то компонентизации подвергаются только файлы с версией 9.0

12.2 Компонентизация продуктовой документации

Принимаются следующие базовые принципы:

1. Файл – это технологический контейнер для хранения контента, соответствующего только одному продуктовому компоненту
2. Имя файла – это всегда внутреннее, NetCracker facing, имя продуктового компонента. Имя файла совпадает с именем компонента на Project.
3. Внешнее имя главы или книги, reader facing, обращенное к читателю, это название *хэдинга* внутри файла. Оно может не совпадать с именем файла, которое является технологическим.
4. Скоуп контента внутри файла-контейнера ограничен только функциональным скоупом программного кода компонента. То есть описаны фичи и функции, приносимые в продукт только этим компонентом. Упоминать функции из скоупа других компонентов, например при описании большого юз кейса (user problem), можно, но только убедившись, что такое упоминание *неспецифично* для конкретной версии того компонента. При этом такое упоминание не является фактом документирования другого компонента и у него должен быть свой файл-контейнер.
5. Для деления контента по видам читательской аудитории (User, Admin, Developer, Integrator, Solution Architect) продолжаем использовать также деление на файлы. В этом случае несколько файлов-контейнеров привязаны к одному компоненту и называются одинаково.
6. Файл-контейнер есть, если есть хотя бы один из видов контента выше. Если контента нет (файл пуст), то нет и файла. Например, для системных продуктовых компонентов (таких много в Core), файлов-контейнеров может не быть вообще, так как нет нашей читательской аудитории.

12.3TW Componentization

12.3.1 Часто задаваемые вопросы:

В: Что значит фраза в mapping table "The component has been removed due to componentization?"

О: Название компонента было удалено из mapping table, документация осталась на своем месте, а именно: в svn, sps3

В: Как я теперь найду компонентизированный файл?

О:Название компонентизированного файла соответствует названию компоненты.

Подробнее, можно посмотреть на странице:

https://bass.netcracker.com/display/CDT/Componentization+Change+Tracker

В: Почему не все версии файлов компонентизируются?

О: Компонент начинает существовать с определенной версии, версия файла должна соответствовать версии компонента. Если компонент начинает существовать с версиии 9.0, а файлы есть 8.5 и 9.0, то компонентизации подвергаются только файлы с версией 9.0

12.3.2 Компонентизация продуктовой документации

Принимаются следующие базовые принципы:

1. Файл – это технологический контейнер для хранения контента, соответствующего только одному продуктовому компоненту
2. Имя файла – это всегда внутреннее, NetCracker facing, имя продуктового компонента. Имя файла совпадает с именем компонента на Project.
3. Внешнее имя главы или книги, reader facing, обращенное к читателю, это название *хэдинга* внутри файла. Оно может не совпадать с именем файла, которое является технологическим.
4. Скоуп контента внутри файла-контейнера ограничен только функциональным скоупом программного кода компонента. То есть описаны фичи и функции, приносимые в продукт только этим компонентом. Упоминать функции из скоупа других компонентов, например при описании большого юз кейса (user problem), можно, но только убедившись, что такое упоминание *неспецифично* для конкретной версии того компонента. При этом такое упоминание не является фактом документирования другого компонента и у него должен быть свой файл-контейнер.
5. Для деления контента по видам читательской аудитории (User, Admin, Developer, Integrator, Solution Architect) продолжаем использовать также деление на файлы. В этом случае несколько файлов-контейнеров привязаны к одному компоненту и называются одинаково.
6. Файл-контейнер есть, если есть хотя бы один из видов контента выше. Если контента нет (файл пуст), то нет и файла. Например, для системных продуктовых компонентов (таких много в Core), файлов-контейнеров может не быть вообще, так как нет нашей читательской аудитории.

12.4 Componentization Change Tracker

Instruction

1. Before you begin any TOMS technical writing work, verify that the DOCx file name fully matches a product component found at Project > Navigation > Modules & Components.
2. If no match found, try to find the file under **From – Old File Name** below.
3. If the file *has been* found, do *not* make a new version of the file that equals or greater than **Version Switch**, but port all necessary changes to the new file indicated in **To – New File Name**.

Example 1:

We are asked to reflect product component v.9.5.4.0 change, and the requester pointed to the NC.AG.FRW.Object_Types_Attributes_and_Schemas file.

Solution:

There is no such component *Object Types Attributes and Schemas* in NetCracker product.
But the table below shows that the new container for NC.AG.FRW.Object_Types_Attributes_and_Schemas starting v.9.5.4.0 is the NC.AG.FRW.Attributes_and_Types_Configurator file.
Therefore, instead of creating another **NC.AG.FRW.Object_Types_Attributes_and_Schemas_9.5.4.0** file, make changes in the **NC.AG.FRW.Attributes_and_Types_Configurator_9.5.4.0** file (after spotting the migrated content in it, of course).

Example 2:

We are asked to make changes not only to the lastest version of NC.AG.FRW.Object_Types_Attributes_and_Schemas, but to historical versions as well.

Solution:

For files before Version Switch, do everything as usual. Then, when porting changes up:

- *before* Version Switch—port to old file name
- Version Switch *and* higher versions—port to new file name.

Original File	What Moved	Version Switch	New File
NC.AG.FRW.Object_Model_and_User_Interface_Customization	All	**9.5.4.0**	NC.AG.FRW.**Attributes_and_Types_Configurator_**9.5.4.0
NC.AG.FRW.Object_Types_Attributes_and_Schemas	All	**9.5.4.0**	NC.AG.FRW.**Attributes_and_Types_Configurator_**9.5.4.0
NC.AG.FRW.Attribute_Details_and_Object_Type_Properties	All	**9.5.3.5**	NC.AG.FRW.**Attributes_and_Types_Configurator_**9.5.4.0
NC.AG.FRW.Security_Policies	• Password Content Policy • Password Life Cycle Policy • Password Generate Policy • User Life Cycle Policy	**9.3.2.13**	NC.AG.FRW.**User_and_Grants_Management_**9.5.2.3
NC.AG.FRW.Event_Listeners	• PasswordHistoryListener • PasswordLifecycleListener • UserLifecycleListener	**9.5.3.5**	NC.AG.FRW.**User_and_Grants_Management_**9.5.2.3
NC.AG.FRW.Users_and_Groups	All, except: Password History	**9.5.4.0**	NC.AG.FRW.**User_and_Grants_Management_UI_**9.5.1.6
NC.AG.FRW.Managing_Rights	All, except: • User Grants Report • Extended Security Entry • Grants Cache Mechanism • Grants Modification History • User access History	**9.5.4.0**	NC.AG.FRW.**User_and_Grants_Management_UI_**9.5.1.6
NC.AG.FRW.Managing_Rights	User access History	**9.5.4.0**	NC.AG.FRW.**Audit_Trail_Monitor_**9.5.1.0
System	all, moved all files to a new location	-	NetCracker

Original File	What Moved	Version Switch	New File
Monitoring\NC.UG.SM.System_Monitor			Framework\NC.UG.FRW.System_Monitor
NC.UG.WFM.Workforce_Management	Workforce Inventory	**9.0.1.0**	NC.UG.WFM.**Workforce_Inventory**_9.0.5.0
NC.UG.WFM.Workforce_Management	Work Planner	**9.0.1.0**	NC.UG.WFM.**Work_Planner**_9.0.5.0
NC.UG.WFM.Workforce_Management	Work Order Management	**9.0.1.0**	NC.UG.WFM.**Work_Order_Management**_9.0.5.0
NC.UG.WFM.Workforce_Management	Employee Calendar	**9.0.1.0**	NC.UG.WFM.**Employee_Calendar**_9.0.3.0
NC.UG.WFM.Workforce_Management	Dashboards	**9.0.1.0**	NC.UG.WFM.**Dashboards**_9.0.1.0
NC.UG.WFM.Workforce_Management	Appointment Reservation	**9.0.1.0**	NC.UG.WFM.**Appointment_Reservation**_8.2.2.0
NC.UG.WFM.Workforce_Management	Skill Management	**9.0.1.0**	NC.UG.FRW.**Skill_Management**_8.2.4.2
NC.AG.WFM.Workforce_Management	Workforce Inventory	**9.0.1.0**	NC.AG.WFM.**Workforce_Inventory**_9.0.5.0
NC.AG.WFM.Workforce_Management	Work Planner	**9.0.1.0**	NC.AG.WFM.**Work_Planner**_9.0.5.0
NC.AG.WFM.Workforce_Management	Work Order Management	**9.0.1.0**	NC.AG.WFM.**Work_Order_Management**_9.0.5.0

Original File	What Moved	Version Switch	New File
NC.AG.WFM.Workforce_Management	Dispatcher	**9.0.1.0**	NC.AG.WFM.**Dispatcher_**8.2.4.8
NC.UG.OSP.FTTH	All	**8.2.2.0**	NC.UG.OSP.**OSP_FTTH_**8.2.2.0
NC.UG.OSP.FTTH_Splitting.Graphical_Mode	All	**8.2.2.0**	NC.UG.OSP.**OSP_FTTH_**8.2.2.0
NC.UG.COM.Order_Entry_Wholesale	All	**8.1.5.6**	NC.UG.COM.**Order_Entry**_8.1.5.6
NC.UG.COM.Pricing_Engine	All	**8.1.5.6**	NC.UG.COM.**Order_Entry**_8.1.5.6
NC.AG.OSP.OSP_Graphical_Mode	All	**All**	NC.AG.OSP.**GUI_OSP**
NC.UG.OSP.OSP_Graphical_Mode	All	**All**	NC.UG.OSP.**GUI_OSP**
NC.CG.OSP.OSP_Graphical_Mode	All	**All**	NC.CG.OSP.**GUI_OSP**
NC.AG.FRW.Configuring_X.509_Authentication	All	**9.5.1.29**	NC.AG.FRW.**Authentication_and_Authorization_Framework**_9.5.1.29
NC.AG.FRW.Configuring_Kerberos_Authentication	All	**9.5.1.29**	NC.AG.FRW.**Authentication_and_Authorization_Framework**_9.5.1.29
NC.AG.FRW.Configuring_CAS_Authentication	All	**9.5.1.29**	NC.AG.FRW.**Authentication_and_Authorization_Framework**_9.5.1.29
NC.AG.FRW.Solution_Configuration_Management_Domains	All	**8.2.1.9**	NC.AG.FRW.**Solution_Configuration_Management**_8.2.1.9

Original File	What Moved	Version Switch	New File
NC.UG.FRW.Solution_Configuration_Management_Domains	All	**8.2.1.9**	NC.UG.FRW.**Solution_Configuration_Management**_8.2.1.9
NC.UG.FRW.Dashboards_and_Widgets	All	**All**	NC.UG.FRW.**Widgets_Out_Of_Box**
NC.CG.FRW.Dashboards_and_Widgets	All	**All**	NC.CG.FRW.**Widgets_Out_Of_Box**
NC.AG.DR.Reconciliation_Framework	All	**All**	NC.AG.DR.**Reconciliation_Engine**
NC.UG.DR.Reconciliation_Framework	All	**All**	NC.UG.DR.**Reconciliation_Engine**
NC.UG.OSP.OSP_Textual_UI	All	**All**	NC.UG.OSP.**OSP**
NC.UG.SOM.Resource_Catalog	All	**All**	NC.UG.SOM.**Catalog_Resources**
NC.UG.NDP.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet	All	**All**	NC.UG.NPD.**Design_and_Planning.IP_MPLS_Metro_Enthernet**
NC.UG.NPD.Network_Planning_and_Design.IP_MPLS_Metro_Ethernet_Circuit_Designer	All	**All**	NC.UG.NPD.**Design_and_Planning.IP_MPLS_Metro_Ethernet_Circuit_Designer**
NC.UG.NPD.Network_Planning_and_Design.OSP	All	**All**	NC.UG.NPD.**Design_and_Planning_OSP_Extension**
NC.UG.NPD.Network_Planning_and_Design.Device_View	All	**All**	NC.UG.NPD.**Design_and_Planning.Device_View**
NC.UG.NPD.Network_Planning_and_Design.Floor_Space_Management	All	**All**	NC.UG.NPD.**Design_and_Planning_GUI.Floor_Space_Management**
NC.UG.NPD.Network_Planning_and_Design.Rack_Space_Management	All	**All**	NC.UG.NPD.**Design_and_Planning_GUI.Rack_Space_Management**
NC.AG.NPD.Network_Planning_and_Design.Capacity_Management	All	**All**	NC.AG.NPD.**Design_and_Planning.Capacity_Management**
NC.UG.NPD.Network_Planning_and_Design.Metro_Et	All	**All**	NC.UG.NPD.**Design_and_Planning.Metro_Ethern**

Original File	What Moved	VersionSwitch	New File
hernet_Network_View			**et_Network_View**
NC.UG.NPD.Network_Planning_and_Design.DWDM	All	**All**	NC.UG.NPD.**Design_and_Planning.DWDM**
NC.UG.NPD.Network_Planning_and_Design.Microwave	All	**All**	NC.UG.NPD.**Design_and_Planning.Microwave**
NC.UG.NPD.Network_Planning_and_Design.Mobile_Ran	All	**All**	NC.UG.NPD.**Design_and_Planning.Mobile_Ran**
NC.UG.NPD.Network_Planning_and_Design.MPLS_TP_Network_View	All	**All**	NC.UG.NPD.**Design_and_Planning.MPLS_TP_Network_View**
NC.UG.NPD.Natwork_Planning_and_Design.Path_Management	All	**All**	NC.UG.NPD.**Design_and_Planning.Path_Management**
NC.UG.NPD.Network_Planning_and_Design.SDH-PDH	All	**All**	NC.UG.NPD.**Design_and_Planning.SDH_PDH**
NC.AG.FRW.Integration_Adapter_for_Ericsson_OSS	All	**All**	NC.AG.FRW.**Ericsson OSS Integration**
NC.AG.FRW.Integration_Adapter_for_Ericsson_SOEM	All	**All**	NC.AG.FRW.**Ericsson SOEM Integration**
NC.AG.RI.Geographical_View	All	**All**	NC.AG.RI.**GUI_Inventory**
NC.AG.RI.Graph_Views	All	**All**	NC.AG.RI.**GUI_Inventory**
NC.UG.RI.Geographical_View	All	**All**	NC.UG.RI.**GUI_Inventory**
NC.UG.RI.Network_Modeling_in_Network_Configurator	All	**All**	NC.UG.RI.**GUI_Inventory**
NC.AG.Monitoring_Tool	All	**8.2.1.0**	NC.AG.**NetCracker_Monitoring_and_Diagnostic_Tool**_8.2.1.0
NC.AG.RI.Rack_Space_Management_Graphical_User_Interface	All	**All**	NC.AG.RI.**GUI_Rack_Space_Management**
NC.UG.RI.Rack_Space_Management_Graphical_User_Interface	All	**All**	NC.UG.RI.**GUI_Rack_Space_Management**

Original File	What Moved	VersionSwitch	New File
NC.AG.FRW.3G_Integration_Adapter_for_Huawei_M2000	All	**All**	NC.AG.FRW.**Huawei_M2000_3G _Integration**
NC.AG.FRW.Integration_Adapter_for_Huawei_M2000_Mobile_Core	All	**All**	NC.AG.FRW.**Huawei_M2000_Core_Integration**
NC.AG.FRW.2G_Integration_Adapter_for_Huawei_M2000	All	**All**	NC.AG.FRW.**Huawei_M2000_Integration**
NC.AG.FRW.Integration_Adapter_for_Huawei_T2000	All	**All**	NC.AG.FRW.**Huawei_T2000_Integration**
NC.AG.DR.MTE_Device_Library_Mapping	All	**All**	NC.AG.DR.**MTE.Device_Library_Mapping**
NC.AG.FRW.Multilanguage_Support	All	**9.3.1.0**	NC.AG.FRW.**MUI**
NC.AG.DR.Integration_Adapter_for_NEC_PNMSj	All	**All**	NC.AG.DR.**NEC_PNMSj_Integration**
NC.AG.OPF.OPF_Dashboard_and_Widgets	All	**8.2.1.0**	NC.AG.FRW.**OPF_Dashboards_and_Widgets**_8.2.1.0
NC.UG.RI.Phone_Book_US	All	**All**	NC.UG.RI.**Phone_Book_American_Data_Model**
NC.UG.RI.Phone_Book_EU	All	**All**	NC.UG.RI.**Phone_Book_European_Data_Model**
NC.AG.FRW.Scripting_Framework	All	**All**	NC.AG.FRW.**Scripting**
NC.AG.FRW.Integration_Adapter_for_SIAE_NMS5-UX	All	**All**	NC.AG.FRW.**SIAE_NMS5-UX_Integration**
NC.UG.OPF.Specification_Catalog_Graphical_Mode	All	**All**	NC.UG.OPF.**Specification_Catalog_GUI**
NC.AG.OPF.Specification_Catalog_Graphical_Mode	All	**All**	NC.AG.OPF.**Specification_Catalog_GUI**
NC.UG.RI.SS7_and_SIGTRAN	All	**All**	NC.UG.RI.**SS7_SIGTRAN**
NC.AG.FRW.Template-based_Document_Generati	All	**All**	NC.AG.FRW.**Template_Based_Document_Genera**

Original File	What Moved	VersionSwitch	New File
o			**tor**
NC.UG.FRW.Template-based_Document_Generatio	All	**All**	NC.UG.FRW.**Template_Based_Document_Generator**
NC.UG.RI.VLAN_Planner	All	**8.2.1.3**	NC.UG.RI.**VLAN**_8.2.1.3
NC.UG.RI.xPON_OLT_Network_View	All	**All**	NC.UG.RI.**xPON_Views**
NC.AG.FRW.Configuring_Search_Profiles	All	**All**	NC.AG.FRW.**Search**
NC.AG.OPF.Specification_Catalog_GUI	All	**All**	NC.AG.FRW.**Specification_Catalog_GUI**
NC.UG.OPF.Specification_Catalog_GUI	All	**All**	NC.UG.FRW.**Specification_Catalog_GUI**
NC.AG.OPF.Order_Decomposition_View	All	**All**	NC.AG.FRW.**Order_Decomposition_GUI**
NC.UG.OPF.Order_Decomposition_View	All	**All**	NC.UG.FRW.**Order_Decomposition_GUI**
NC.CG.OPF.Availability_Check	All	**All**	NC.CG.FRW.**Availability_Check**
NC.UG.OPF.OPF_Order_Tree_View	All	**All**	NC.UG.FRW.**OPF_Order_Tree_View**
NC.UG.OPF.Order_Management_Dashboards	All	**All**	NC.UG.FRW.**Order_Management_Dashboards**
NC.CG.OPF.Feasibility_Check	All	**9.0.1.1**	NC.CG.FRW.**Feasibility_Check**_9.0.1.1
NC.AG.OPF.Mapping_Tables	All	**All**	NC.AG.FRW.**OM_Engine**
NC.AG.FRW.Integration Adapter for Alcatel 1353NM-1354RM	All	**All**	NC.AG.FRW.**Alcatel_1353_1354_Integration**
NC.AG.DR.Integration_Adapter_for_Alcatel5620SAM	All	**All**	NC.AG.DR.**Alcatel_5620_SAM_Integration**
NC.UG.RI.Card_and_Devic	All	**All**	NC.UG.RI.**Card_Device_**

Original File	What Moved	VersionSwitch	New File
e_Replacement_Wizard		**l**	**Replacement_Wizard**
NC.AG.RI.Cabling_Wizard_Settings	All	**All**	NC.AG.RI.**Card_Device_Replacement_Wizard**
NC.AG.SPM.Correlation_Engine_for_Mass_Market	All	**All**	NC.AG.SPM.**CIA_Correlation_Engine_for_Mass_Market**
NC.AG.SPM.Planned_Maintenance	All	**All**	NC.AG.SPM.**CIAPlannedMaintenance**
NC.UG.SPM.Planned_Maintenance	All	**All**	NC.UG.SPM.**CIAPlannedMaintenance**
NC.UG.SPM.Service_Incident_Logging	All	**All**	NC.UG.SPM.**CIAServiceIncidentLogging**
NC.AG.SPM.Service_Incident_Logging	All	**All**	NC.AG.SPM.**CIAServiceIncidentLogging**
NC.UG.NPD.Capacity_Planning_Transport_Network	All	**All**	NC.UG.NPD.**Capacity_Planning.Transport_Network**
NC.AG.FRW.Coloring_Configuration_for_GUI_Views	All	**All**	NC.AG.FRW.**GUI_Coloring**
NC.UG.FRW.Diagram_Editor	All	**All**	NC.UG.FRW.**GUI_Diagram_Editor**
NC.UG.FRW.Service_Visualization	All	**All**	NC.UG.FRW.**GUI_Service_Visualization**
NC.AG.FRW.Service_Visualization	All	**All**	NC.AG.FRW.**GUI_Service_Visualization**
NC.UG.FRW.Historical_Data_Storage	All	**All**	NC.UG.FRW.**History_Data_Storage**
NC.AG.FRW.Historical_Data_Storage	All	**All**	NC.AG.FRW.**History_Data_Storage**
NC.MG.FRW.Historical_Data_Storage	All	**All**	NC.MG.FRW.**History_Data_Storage**
NC.AG.DR.Integration_Adapter_for_Nokia_Siemens_Networks_NetAct	All	**All**	NC.AG.DR.**Nokia_NetAct_Integration**
NC.UG.OPF.Order_Decomposition_View	All	**All**	NC.UG.OPF.**Order_Decomposition_GUI**
NC.AG.OPF.Order_Decomp	All	**Al**	NC.AG.OPF.**Order_Deco**

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osition_View		**l**	**mposition_GUI**
NC.AG.FRW.Parameter_Visualization_Configuration_for_GUI_Views	All	**All**	NC.AG.FRW.**Parameters_Visualization**
NC.UG.RI.Power_Management_and_Cooling_Equipment_Graphical_Mode	All	**All**	NC.UG.RI.**Power_Management_and_Cooling**
NC.UG.RI.Power_Management_and_Cooling_Equipment_in_Textual_mode	All	**7.2.1.4**	NC.UG.RI.**Power_Management_and_Cooling**_7.2.1.4
NC.UG.FRW.Work_Orders_and_Work_Items	All	**All**	NC.UG.FRW.**Work_Order_Structure**
NC.AG.FRW.Historical_Data_Storage_OPF_Config	All	**All**	NC.AG.FRW.**HDS.OPF_Config**
NC.AG.FRW.Export_and_Import	All	**All**	NC.AG.**Export_Import**
NC.DG.FRW.OSSJ_Resource_Inventory_API	All	**All**	NC.DG.FRW.**NC_OSSJ_Resource_Inventory_API**
NC.CG.FRW.OSSJ_Resource_Inventory	All	**All**	NC.CG.FRW.**NC_OSSJ_Resource_Inventory_API**
NC.OG.FRW.OSSJ_Resource_Inventory_API	All	**All**	NC.OG.FRW.**NC_OSSJ_Resource_Inventory_API**
NC.DG.FRW.OSSJ_Service_Inventory_API	All	**All**	NC.DG.FRW.**NC_OSSJ_Service_Inventory**
NC.OG.FRW.OSSJ_Service_Inventory_API	All	**All**	NC.OG.FRW.**NC_OSSJ_Service_Inventory**
NC.UG.RI.Floor_Space_Management_Graphical_User_Interface	All	**All**	NC.UG.RI.**GUI_Floor_Space_Management**
NC.AG.RI.Floor_Space_Management_Graphical_User_Interface	All	**All**	NC.AG.RI.**GUI_Floor_Space_Management**
NC.DG.FRW.Data_Objects	All	**All**	NC.DG.FRW.**NC_Data_Objects**
NC.DG.FRW.OSSJ_Base_API	All	**All**	NC.DG.FRW.**NC_OSSJ_Base**
NC.AG.FRW.Queue	All	**Al**	NC.AG.FRW.**Queue_Serv**

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		l	**ice**
NC.DG.FRW.Queue	All	**All**	NC.DG.FRW.**Queue_Service**
NC.AG.FRW.Liferay-based_Portal_OpenLDAP_Configuration	All	**9.0.1.2**	NC.AG.FRW.**Portal_Utils**_9.0.1.2
NC.UG.PIM.Product_Information_Management	All	**9.3.2.1**	NC.UG.PIM.**Product_Catalog**_9.3.2.1
NC.CG.SOM.Service_Order_Management	All	**All**	NC.CG.SOM.**Service_Provisioning_Framework**
NC.UG.SOM.Service_Order_Management	All	**All**	NC.UG.SOM.**Service_Provisioning_Framework**
NC.AG.SOM.Service_Order_Management	All	**All**	NC.AG.SOM.**Service_Provisioning_Framework**
NC.AG.FRW.Rules_Engine_Graphical_Mode	All	**All**	NC.AG.FRW.**GUI_Rule_Engine**
NC.AG.FRW.Rules_Engine	All	**All**	NC.AG.FRW.**Rule_Engine**
NC.UG.RI.HFC_Network	All	**All**	NC.UG.RI.**HFC**
NC.UG.FRW.Network_Configurator	All	**All**	NC.UG.FRW.**GUI_Core**
NC.CG.RI.Floor_Space_Management_GUI.Configuration_Best_Practices	All	**All**	NC.CG.RI.**GUI_Floor_Space_Management**
NC.UG.RI.Floor_Space_Management.Textual_Mode	All	**All**	NC.UG.RI.**Floor_Space_Management**
NC.AG.FRW.Jobs	All	**All**	NC.AG.FRW.**Jobs_Scheduler**
NC.AG.OSP.OSP_Configuring_Cable_Coloring	All	**9.0.9.7**	NC.AG.OSP.**OSP**_9.0.9.7
NC.AG.OSP.OSP_Textual_UI	All	**9.0.9.**	NC.AG.OSP.**OSP**_9.0.9.7

Original File	What Moved	VersionSwitch	New File
		7	
NC.AG.DR.Mediation_Transition.Transformation_Engine	All	**9.3.4.11**	NC.AG.DR.**Mediation_Transition_Engine**_9.3.4.11
NC.AG.DR.Mediation_Transition.Unified_Model_Configuration	All	**9.3.4.11**	NC.AG.DR.**Mediation_Transition_Engine**_9.3.4.11
NC.AG.DR.Mediation_Transition.Validation_Engine	All	**9.3.4.11**	NC.AG.DR.**Mediation_Transition_Engine**_9.3.4.11
NC.UG.NPD.Network_Planning_and_Design.ISP_Cables	All	**9.0.4.5**	NC.UG.NPD.**Design_and_Planning.Resource_Inventory**_9.0.4.5
NC.UG.NPD.Network_Planning_and_Design.Resource_Inventory	All	**9.0.4.5**	NC.UG.NPD.**Design_and_Planning.Resource_Inventory**_9.0.4.5
NC.AG.FRW.Order_Management_Navigation_Tree	All	**8.2.1.0**	NC.AG.FRW.**OM_Navigation_Tree**_8.2.1.0
NC.AG.FRW.Order_Management_Navigation_Tree	All	**9.0.1.0**	NC.AG.FRW.**OM_Navigation_Tree**_8.2.1.1
NC.UG.SIM.Service_Information_Management	Service Catalog	**9.0.9.2**	NC.UG.FRW.**Catalog_Generic**_9.0.1.0
NC.UG.SIM.Service_Information_Management	Service Catalog	**9.0.9.5**	NC.UG.FRW.**Catalog_Generic**_9.0.1.1
NC.UG.SIM.Service_Information_Management	Service Catalog	**9.0.9.6**	NC.UG.FRW.**Catalog_Generic**_9.0.1.3
NC.UG.SIM.Service_Inform	Service Catalog	**9.**	NC.UG.FRW.**Catalog_Ge**

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ation_Management		**0.9.9**	**neric**_9.0.1.5
NC.UG.SIM.Service_Information_Management	Service Catalog	**9.0.9.10**	NC.UG.FRW.**Catalog_Generic**_9.0.2.0
NC.UG.SIM.Service_Information_Management	Characteristics Propagation Tool	**9.0.9.2**	NC.UG.FRW.**OPF_Configuration_UI**_8.2.1.4
NC.UG.RI.Network_Modeling	all, exept • Circuit Bulk Creation • Circuit Bulk Creation from Template • S[ecifying Carriers and Recources in Bulk Mode • Specifying a Carrier in Bulk Mode • Specifying Resources in Bulk Mode • Copying Circuits in Bulk Mode • Editing Structure of Circuits in Bulk Mode • Selecting and Reassign Carriers	**9.0.7.17**	NC.UG.RI.**Resource_Inventory**_9.0.7.17
NC.UG.RI.Resource_Inventory_Basics	All	**9.0.7.17**	NC.UG.RI.**Resource_Inventory**_9.0.7.17
NC.UG.RI.Templates	All	**9.0.7.17**	NC.UG.RI.**Resource_Inventory**_9.0.7.17
NC.AG.FRW.Naming_Conventions	All	**9.5.4.4**	NC.AG.FRW.**Resource_Inventory**_9.0.7.17
NC.AG.FRW.Graphical_Use	All	**9.**	NC.AG.FRW.**GUI_Config**

Original File	What Moved	Version Switch	New File
r_Interface_Policies		**0.1.0**	**uration**_0.1.0.0
NC.AG.FRW.Enterprise_Directories_Integration	All	**9.5.1.27**	NC.AG.FRW.**LDAP**_9.5.1.27
NC.AG.FRW.Application_Server_Configuration_for_LDAP_Integration	All	**All**	NC.AG.**Application_Server-Configuration_for_LDAP_Integration** (Maintenance Guide folder)
NC.AG.SPM.Service_Problem_Management	• Event Management • Configuration Manager	**8.2.3.13**	NC.AG.SPM.**CIA_Event_Management**_8.2.3.1
NC.AG.SPM.Service_Problem_Management	Correlation Engine	**8.2.3.13**	NC.AG.FRW.**Correlation_Engine**_8.0.2.6
NC.AG.SPM.Service_Problem_Management	Trouble Tickets Repository	**8.2.4.0**	NC.AG.SPM.**CIA_Trouble_Ticketing**_8.2.1.6
NC.AG.SPM.Service_Problem_Management	• Event Management • Configuration Manager	**8.2.4.0**	NC.AG.SPM.**CIA_Event_Management**_8.2.3.13
NC.AG.SPM.Service_Problem_Management	Correlation Engine	**8.2.4.0**	NC.AG.FRW.**Correlation_Engine**_8.0.2.12
NC.AG.SPM.Service_Problem_Management	Notifications and Escalations	**8.2.4.0**	NC.AG.SPM.**CIA_Notification_Escalation**_8.2.1.4
NC.AG.SPM.Service_Problem_Management	Trouble Tickets Repository	**9.3.2.1**	NC.AG.SPM.**CIA_Trouble_Ticketing**_9.0.1.13
NC.AG.SPM.Service_Probl	Correlation Engine.Basic Inventory	**9.**	NC.AG.SPM.**Correlation_**

Original File	What Moved	Version Switch	New File
em_Management	Rules	**3.2.1**	**Engine.Basic_Inventory_Rules**_9.3.1.0
NC.UG.SPM.Service_Problem_Management	Event Management	**8.2.3.13**	NC.UG.SPM.**CIA_Event_Management**_8.2.3.1
NC.UG.SPM.Service_Problem_Management	Correlation Engine	**8.2.3.13**	NC.UG.FRW.**Correlation_Engine**_8.0.2.6
NC.UG.SPM.Service_Problem_Management	Trouble Tickets Management	**8.2.4.0**	NC.UG.SPM.**CIA_Trouble_Ticketing**_8.2.1.6
NC.UG.SPM.Service_Problem_Management	Event Management	**8.2.4.0**	NC.UG.SPM.**CIA_Event_Management**_8.2.3.13
NC.UG.SPM.Service_Problem_Management	Correlation Engine	**8.2.4.0**	NC.UG.FRW.**Correlation_Engine**_8.0.2.12
NC.UG.SPM.Service_Problem_Management	Notifications and Escalations	**8.2.4.0**	NC.UG.SPM.**CIA_Notification_Escalation**_8.2.1.4
NC.UG.SPM.Service_Problem_Management	Trouble Tickets Management	**9.3.2.1**	NC.UG.SPM.**CIA_Trouble_Ticketing**_9.0.1.13
NC.UG.SPM.Service_Problem_Management	Service Level Agreement Management	**9.3.2.1**	NC.UG.SQM.**SLA_Management**_9.3.2.3
NC.AD.NPD.Validation_Reports	All	**9.0.7.1**	NC.AG.NPD.**Design_and_Planning_Default_Rules**_8.0.1.3
NC.AG.NPD.Network_Planning_and_Design.Framework	All	**All**	NC.AG.NPD.**Design_and_Planning_Framework**
NC.UG.NPD.Network_Plan	All	**All**	NC.UG.NPD.**Design_and**

Original File	What Moved	Version Switch	New File
ning_and_Design.Framework		**l**	**_Planning_Framework**
NC.UG.RI.Floor_Space_Management.Graphical_Mode	All, exept vsd2ntm.exe	**8.0.1.1**	NC.UG.RI.**GUI_Inventory** (all versions)
NC.UG.RI.Floor_Space_Management.Graphical_Mode	vsd2ntm.exe	**8.0.1.1**	NC.UG.RI.**VSD2NTM_Converting**_1.0.0.0
NC.UG.RI.Network_Modeling	• Circuit Bulk Creation • Circuit Bulk Creation from Template • S[ecifying Carriers and Recources in Bulk Mode • Specifying a Carrier in Bulk Mode • Specifying Resources in Bulk Mode • Copying Circuits in Bulk Mode • Editing Structure of Circuits in Bulk Mode • Selecting and Reassign Carriers	**9.0.1.17**	NC.UG.RI.**Circuit_Bulk_Creation**_9.0.4.3
NC.AG.FRW.Managing_Rights	• Effective Grants: ○ Calculation effective grants on objects ○ Group's grants and user's grants ○ Calculating effective grants in the object tree and in the object type hiererchy ○ Calculating effective grants on parameters ○ Effective Grants for Adminitrator • User access History	**9.5.4.0**	NC.AG.FRW.**Kernel**_9.5.8.0

Original File	What Moved	VersionSwitch	New File
NC.AG.FRW.Event_Listeners	• UniqueListener • ModificationListener • ExternalGeneratorInvokeListener	**9.5.3.5**	NC.AG.FRW.**Kernel**_9.5.8.0
NC.AG.FRW.Event_Listeners	• Event Listener Parameters • Creating Event Listeners • Editing Event Listeners • Deleting Event Listeners • Activating and Deactivating Event Listeners • ReferenceUsageListener • TouchListener • Event Listeners Report • NetCracker Configuration Approaches for Event Listeners	**9.5.3.5**	NC.AG.FRW.**Core_Objects_Operations_Layer**_9.5.3.1
NC.AG.FRW.Event_Listeners	HistoryEventListener	**9.5.3.5**	NC.AG.FRW.**History_Framework**_9.5.2.14
NC.AG.FRW.Event_Listeners	EMailNotifyingListener	**9.5.3.5**	NC.AG.FRW.**Mail_Sender**_9.5.2.13
NC.AG.FRW.Event_Listeners	PipeListener	**9.5.3.5**	NC.AG.FRW.**Workflow**_9.0.4.40
NC.AG.FRW.Event_Listeners	ShortcutTargetListener	**9.5.3.5**	NC.AG.RI.**GUI_Inventory**_16.7.3.0
NC.AG.FRW.Event_Listeners	• ThresholdListener • PlugInInsertionListener • ObjectNamingListener	**9.5.3.5**	NC.AG.RI.**Resource_Inventory**_9.0.7.17

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	• RepositoryNamingConventionListener • PortNamingConventionListener • ChangeResourcesListener • CableConnectorListener • RackListener • PropagateListener • StatusPropagateListener • BackReferenceListener		
NC.AG.FRW.Attribute_Adapters	• Implementation of Attribute Adapters • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateObjectClass() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateDescription() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateName() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateUsedBy() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateParentUsedBy() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateByQuery() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateByQuery2() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateByQuerySingle() • com.netcracker.ejb.core.adapter.GeneralExternalAdapterHome.calculateObjectType() • com.netcracker.ejb.core.adapte	**9.5.3.5**	NC.AG.FRW.**Core_Objects_Operations_Layer**_9.5.3.1

Original File	What Moved	Version Switch	New File
	r.GeneralExternalAdapterHome.calculatePathEx()		
NC.AG.FRW.Attribute_Adapters	• com.netcracker.applications.inventory.resource.adapter.LegacyInventoryAdapter.calculateCircuitAttrsSimple() • com.netcracker.applications.inventory.resource.adapter.LegacyInventoryAdapter.calculateSlotAttr() • com.netcracker.applications.inventory.resource.adapter.LegacyInventoryAdapter.calculateCircuitAttrs() • com.netcracker.applications.inventory.resource.adapter.LegacyInventoryAdapter.calculatePortAttrs()	**9.5.3.5**	NC.AG.RI.**Resource_Inventory**_9.0.7.17
NC.CG.NPD.Network_Planning_and_Design.Lifecycle_Rules	All	**All**	NC.CG.NPD.**Design_and_Planning_Default_Rules**
NC.DG.FRW.ICOMS_ESA	• Entity and Service Adapter: Functional Area Overview • Customer Order Management • Error Handling • Document References	**9.3.1.1**	NC.IG.CIM.**ICOMS_Entity_and_Service_Adapter.CIHM_Extension**_9.3.1.1
NC.DG.FRW.ICOMS_ESA	• Entity and Service Adapter: Functional Overview • Order Management • Back Synchronization • Error Handling • Document References	**9.3.1.1**	NC.IG.COM.**ICOMS_Entity_and_Service_Adapter.BOE_Extension**_9.3.1.1
NC.AG.COM.Customer_Ord	• Product Orders	**9.0.**	NC.AG.COM.**Product_Or**

Original File	What Moved	Version Switch	New File
er_Management	• OM MetaModel • In-Memory Product Orders Naming	**8.0**	**der_Management**_9.0.8.0
NC.AG.COM.Customer_Order_Management	• Common Orders • Order Decomposition • Flow Comosition	**9.0.8.0**	NC.AG.FRW.**Order_Processing_Framework**_9.0.8.0
NC.AG.COM.Customer_Order_Management	Order LifeCycle	**9.0.8.0**	NC.AG.FRW.**Life_Cycle_Manager**_8.0.1.4
NC.AG.COM.Customer_Order_Management	Composite Order LifeCycle	**9.0.8.0**	NC.AG.FRW.**OPF_Manager**_9.0.2.14
NC.UG.COM.Customer_Order_Management	• Product Order Types • Product Order Processing • Creating and Configuring Orders • Parameters of Product Orders and Common Orders • Modifying Product Orders and Common Orders • Applying Product Orders • In-flight Modifying Product Orders and Common Orders • In-flight Cancelling Product Orders and Common Orders • Removing Product Orders and Common Orders	**9.0.8.0**	NC.UG.COM.**Product_Order_Management**_9.0.8.0
NC.UG.COM.Customer_Order_Management	• Common Orders • Order Decomposition • Creating Processes • Starting Processes • managing Process Tasks from	**9.0.8.0**	NC.UG.FRW.**Order_Processing_Framework**_9.0.8.0

Original File	What Moved	Version Switch	New File
	Order Page • Common Order Processing		
NC.UG.COM.Customer_Order_Management	Composite Orders	**9.0.8.0**	NC.UG.FRW.**OPF_Manager**_9.0.2.14
NC.UG.COM.Customer_Order_Management	Viewing Dependent Orders	**9.0.8.0**	NC.UG.FRW.**Order_Decomposition_GUI** (all versions)
NC.CG.COM.Customer_Order_Management	• Regular Product Order Processing • Pending Product Order Processing • Product Orders Management Configuration • COM API	**9.0.8.0**	NC.CG.COM.**Product_Order_Management**_9.0.8.0
NC.CG.COM.Customer_Order_Management	• Order Processing Framework Realization • Order Object Model Configuration • Configuraing Decomposition • Configuring Propagation • Configuring Process Orchestrator Processes • Dependency Builder	**9.0.8.0**	NC.CG.FRW.**Order_Processing_Framework**_9.0.8.0
NC.CG.COM.Customer_Order_Management	Configuring Order Management MetaModel	**9.0.8.0**	NC.CG.FRW.**OM_Engine**_9.0.7.9
NC.CG.COM.Customer_Order_Management	Configuring Order Lifecycle	**9.0.8.0**	NC.CG.FRW.**Life_Cycle_Manager**_8.0.1.4
NC.CG.COM.Customer_Or	Tasks States	**9.0.**	NC.CG.FRW.**Process_Or**

Original File	What Moved	Version Switch	New File
der_Management		**8.0**	**chestrator**_9.0.3.9
NC.CG.COM.Customer_Order_Management	• Configuring Catalog • Product Catalog Configuring	**9.0.8.0**	NC.CG.PIM.**Product_Catalog**_9.3.2.1
NC.AG.FRW.Security_Policies	• Authentication Policy ○ Policy Providers ○ SSO Policy Provider ○ Text Password Login Provider ○ Login as NT Policy Provider ○ Failover Authentication Policy Provider • Authorization Policy • Service-based authorization policy provider	**9.5.2.14**	NC.AG.FRW.**Authentication_and_Authorization_Framework** (all versions)
NC.DG.FRW.ESA_Custom_Scenarios	All	**9.3.1.1**	NC.DG.FRW.**ICOMS_Entity_and_Service_Adapter**_9.3.1.1
NC.AG.FRW.ICOMS_Integration_Services(BSO)	All	**All**	NC.AG.CIM.ICOMS_**Integration_Services(BSO)**
NC.IG.FRW.ICOMS_Integration_Services(BSO)(AccountManagement)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(AccountManagement)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Adjustment)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Adjustment)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Alerts)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Alerts)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Collections)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Collections)

Original File	What Moved	VersionSwitch	New File
NC.IG.FRW.ICOMS_Integration_Services(BSO)(CustomerManagement)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(CustomerManagement)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Deposits)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Deposits)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Equipment)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)(**Equipment)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Ledger)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Ledger)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(ObjectModel)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(ObjectModel)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Offers)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Offers)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Orders)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Orders)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(PaymentInstruments)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(PaymentInstruments)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Payments)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Payments)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(PPVandVOD)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(PPVandVOD)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Questionnaires)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Questionnaires)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(ServiceBundle)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(ServiceBundle)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(ServiceConfiguration)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(ServiceConfiguration)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(Service	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(Ser

Original File	What Moved	VersionSwitch	New File
Location)		**l**	viceLocation)
NC.IG.FRW.ICOMS_Integration_Services(BSO)(TroubleTickets)	All	**All**	NC.IG.CIM.ICOMS_**Integration_Services(BSO)**(TroubleTickets)
NC.IG.FRW.ICOMS_Integration_Services(BSO)	All	**All**	NC.IG.CIM.**ICOMS_Integration_Services(BSO)**
NC.IG.FRW.ICOMS_Integration_Services(BSO)(PricingDiscounts)	All	**All**	NC.IG.CIM.**ICOMS_Integration_Services(BSO)**(PricingDiscounts)
NC.AG.FRW.Security_Policies	Policy Framework	**9.5.2.14**	NC.AG.FRW.**Policy_Framework**_9.5.2.14
NC.UG.COM.Residential_Order_Entry_ITERATION12	All	**9.3.1.12**	NC.UG.COM.**Residential_Order_Entry**_9.0.1.4
NC.UG.COM.Residential-Order_Entry_ITERATION13	All	**9.3.1.13**	deleted. was a copy of NC.UG.COM.Residential_Order_Entry_9.0.1.4
NC.AG.RI.Spatial_Data_Manager	All	**All**	NC.AG.FRW.**Spatial_Data_Manager**
NC.AG.SPM.OSSJ_Fault_Management_Integration	All	**All**	NC.AG.FRW.**OSSJ_Fault_Management_Integration**
NC.AG.DR.Mediation_Expect	All	**All**	NC.AG.FRW.**Mediation_Expect**
NC.AG.DR.Parallel_Script_Executor	All	**All**	NC.AG.FRW.**Parallel_Script_Executor**
NC.AG.FRW.Ericsson_OSS_Integration	All	**All**	NC.AG.DR.**Ericsson_OSS_Integration**
NC.AG.FRW.Ericsson_SOEM_Integration	All	**All**	NC.AG.DR.**Ericsson_SOEM_Integration**
NC.AG.FRW.SIAE_NMS5_UX.Integration	All	**All**	NC.AG.DR.**SIAE_NMS5_UX.Integration**
NC.UG.MSM.Market_Segmentation	All	**All**	NC.UG.CIM.**Market_Segmentation**
NC.CG.DR.SNMP_Hardwar	All	**All**	NC.CG.DR.**Discovery_S**

Original File	What Moved	Version Switch	New File
e_Discovery		**l**	**NMP_Hardware**
NC.CG.RTF.DB_Management	All	**All**	NC.CG.RTF.**RTF_DB_Management**
NC.CG.RTF.JMS_Management	All	**All**	NC.CG.RTF.**RTF_JMS_Management**
NC.CG.RTF.KPI_Management	All	**All**	NC.CG.RTF.**RTF_KPI_Management**
NC.CG.RTF.Runtime	All	**All**	NC.CG.RTF.**RTF_Runtime**
NC.MG.RTF.Runtime	All	**All**	NC.MG.RTF.**RTF_Runtime**
NC.CG.RTF.Time_Management	All	**All**	NC.CG.RTF.**RTF_Time_Management**
NC.AG.RTF.Mediation_DataFlow_RTF_Integration	• DataFlow Configuration ○ Creating DataFlow Configuration in NetCracker User Interface ○ Creating DataFlow Configuration in Text Editor • DataFlow Execution ○ Executing DataFlow JMX ○ Executing DataFlow by Auto Loading • Status • DataFlow Log Center Support ○ Datasource Configuration ○ Logger Configuration	**9.3.4.17**	NC.AG.FRW.**Mediation_DataFlow**
NC.AG.RTF.Mediation_DataFlow_RTF_Integration	Executing DataFlow form RTF Component	**9.3.4.7**	NC.AG.RTF.**DataFlow_RTF_Interface**_9.5.2.0
NC.AG.CBM.Billing_Activation_and_Information_Provid	All	**All**	NC.AG.FRW.**Billing_Activation_and_Information**

Original File	What Moved	Version Switch	New File
er			**_Provider**
NC.IG.CBM.Billing_Activation_and_Information_Provider	All	**All**	NC.IG.FRW.**Billing_Activation_and_Information_Provider**
NC.UG.CBM.BIlling_Activation_and_Information_Provider	All	**All**	NC.UG.FRW.**Billing_Activation_and_Information_Provider**
NC.UG.CBM.Biling_Activation_and_Information_Provider_Partner_Desktop	All	**All**	NC.UG.PM.**Billing_Activation_and_Information_Provider_Partner_Desktop**
NC.UG.NPD.Device_Connectivity_Wizard	All	**All**	NC.UG.NPD.**Design_and_Planning.Device_Connectivity_Wizard**
NC.AG.FRW.Administrative_Tools	All	**9.5.4.4**	NC.Administrator_Guide_9.5
NC.AG.FRW.Administrative_Tools	All	**9.5.4.0**	deleted
NC.AG.FRW.Administrative_Tools	All	**9.5.3.34**	NC.Administrator_Guide_9.4
NC.AG.FRW.Administrative_Tools	All	**9.3.3.24**	NC.Administrator_Guide_9.3.1
NC.AG.FRW.Administrative_Tools	All	**9.3.3.23**	NC.Administrator_Guide_9.3
NC.AG.FRW.Administrative_Tools	All	**9.0.8.23**	NC.Administrator_Guide_9.0
NC.AG.FRW.Administrative_Tools	All	**8.2.3.14**	NC.Administrator_Guide_8.2

Original File	What Moved	Version Switch	New File
NC.CG.COM.Residential_Order_Entry	All	**9.3.1.0**	NC.CG.COM.**Residential_Order_Entry**_9.0.1.14
NC.UG.RI.Network_Switching_Subsystem	All	**All**	NC.UG.RI.**NSS**
NC.UG.NPD.Network_Switching_Subsystem	All	**9.0.1.0**	NC.UG.NPD.**Design_and_Planning.NSS_9.0.1.0**
NC.UG.NPD.Network_Switching_Subsystem	All	**9.0.0.1**	deleted
NC.AG.FRW.OAuth_Authentication	All	**9.5.2.0**	NC.AG.FRW.**Authentication_and_Authorization_Framework**
NC.MG.FRW.Liferay-based_Portal	All	**All**	NC.MG.FRW.**Portal_Utils**
NC.CG.FRW.Liferay-based_Portal	All	**All**	NC.CG.FRW.**Portal_Utils**
NC.AG.RI.Device_Library	All	**9.0.7.23**	NC.AG.RI.**Resource_Inventory**_9.0.7.23
NC.UG.CIM.Customer_Information_Management	Order Management Navigation Tree	**All**	NC.AG.FRW.OM_Navigation_Tree_8.2.1.1
NC.UG.CIM.Customer_Information_Management	Customer accounts	**All**	NC.UG.COM.Business_Order_Entry_8.2.3.15

12.5 Documents to components mapping

Revision History

12.5.1 Mapping

This page introduces the schema for mapping documents from the NetCracker Documentation hierarchy to the NetCracker product component list.

Technically this mapping information is used on the Online Help generation stage and on the Documentation generation stage of the system build process. Therefore, the page contents should be consistent with the XML files describing the mapping info for Release Engineering purposes.

For some documents a special remark is added declaring whether the document is also ready for the Online Help system (Yes) or not (blank field).

The schema is given in the table below.

Note The document filenames are given without version info and *.docx extension.

If a document is associated to several components, the asterisk character is used.

Component name/ file name	**Component home/ Description**	**Online Help**	**Document path(s)**	**Document name(s)**	**Document description /SPS link**
Attributes & Types Configurator *AdminTool.xml*	Home link	Yes	NetCracker Framework\NetCracker Framework for Administrators	NC.AG.FRW.Administrative_Tools NC.AG.FRW.Naming_Conventions NC.AG.FRW.Attributes_and_Types_Configurator	SPS link
MG *MG.xml*		No	Developer's Guide	NC.MG.Maintenance_Guide NC.AG.Password_Encryption. NC.AG.Enabling_HTTP_over_SSL_in_Cambridge **Note** This is a quasi-component.	
Online Help System *Help.xml*		Yes			
RAC *RAC.xml*		No	Maintenance Guide	Oracle_RAC_Notes **Note** This is a quasi-component.	
Release *Release.xml*		No	General Release Information	NC.AG.FRW.NetCracker_License_Administrator NC.AG.NC_Directory NC.AG.Notes_on_Security NC.AG.Security_Recommendations **Note** This is a quasi-component.	
SDH Circuit Designer *sdh-circuit-*		Yes	Resource Inventory\Technology Components	NC.UG.RI.SDH_Circuit_Designer NC.UG.RI.PDH_Circuit_Designer	

Component name/ file name	Component home/ Description	Online Help	Document path(s)	Document name(s)	Document description /SPS link
designer.xml					
Third-Party Tools *ThirdPartyTools.xml*		No	General Release Information	Third-Party_Products_Configuration_Requirements Supported_Software_Configurations **Note** This is a quasi-component.	

13 Product Project Checklists

13.1 TF_CIHM

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

13.2 HTML_GEO_RO2

https://bass.netcracker.com/pages/viewpage.action?pageId=408707089

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [ ] Yes
- [x] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [ ] No

7. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.3 RI_DM_SN

https://bass.netcracker.com/pages/viewpage.action?pageId=406257698

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No
- [ ]

13.4 BAMINIT

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What's New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.5 RDB_NG4

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What's New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No
- [ ]

13.6 TF_ROE

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.7

https://bass.netcracker.com/pages/viewpage.action?pageId=420095046

1. What's New заметка написана и соответствует шаблону и требованиям SG?

- [x] Да
- [ ] Нет

2. Ссылка на What' New страницу прикреплена через {JIRA} макрос к тикету, на который комитились работы?

- [x] Да
- [ ] Нет

3. Style Guide compliance check проведен? Дан фидбек писателю (в свободной форме) по его знанию SG?

- [x] Да
- [ ] Нет

4. В Confluence присутствуют все те версии продуктовых компонентов в которых закрылся проект?

- [x] Да
- [ ] Нет

5. Факт наличия описания фич в документации проверен по traceability матрице (если есть заполненная traceability матрица)?

- [ ] Да
- [x] Нет

6. Все PDF выложены на SPS3 > Corporate > Product Documentation?

- [x] Да
- [ ] Нет

13.8 SL_CTUI

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.9 MED_COMP

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.10 HGV_DP_RO

https://bass.netcracker.com/pages/viewpage.action?pageId=420095039

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [ ] Yes
- [x] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.11 MSUP

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

13.12 MDU

English

1. Does the What’s New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG

knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

13.13 OE_RBMI

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and

thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

13.14 DS.CRMLT

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked for completeness and thoroughness by using traceability matrix?

- [x] Yes
- [ ] No

6. Are all PDFs uploaded to SPS3?

- [x] Yes
- [ ] No

13.15 MDTP

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all PDFs uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.16 T-SDN

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [x] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.17 ABS

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.18 OPF_CV

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.19 ORDER_TRK

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No
- [ ]

13.20 NC.PROD.BSS_MIG_UPG1

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes

- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.21 JPG_ENH

https://bass.netcracker.com/pages/viewpage.action?pageId=427105569

13.21.1 1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

13.21.2 2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

13.21.3 3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

13.21.4 4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

13.21.5 5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

13.21.6 6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

13.21.7 7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

13.21.8 8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.21.9 9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.22 JPG_45

https://bass.netcracker.com/pages/viewpage.action?pageId=450871821

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.23 JPG_67

https://bass.netcracker.com/pages/viewpage.action?pageId=450871810

13.23.1 1. Does the What's New note exist and comply with the template and SG guidelines?

- [ ] Yes
- [ ] No

13.23.2 2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

13.23.3 3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

13.23.4 4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

13.23.5 5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

13.23.6 6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

13.23.7 7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [ ] Yes
- [ ] No

13.23.8 8. Are all unresolved comments resolved for every product component space?

- [ ] Yes
- [ ] No

13.23.9 9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.24 JPG_89

https://bass.netcracker.com/pages/viewpage.action?pageId=450871829

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.25 JPG_1011

https://bass.netcracker.com/pages/viewpage.action?pageId=467213958

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes

- [ ] No

13.26 HGV_AR

https://bass.netcracker.com/pages/viewpage.action?pageId=450871846

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.27 NAAS

English (Russian below)

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [ ] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against the list of CRs (they all are listed in the project WBS)?

- [ ] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [ ] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

9. English grammar and style is checked (Adam Bramhall)

- [x] Yes
- [ ] No

13.28 TSDN (SDN/NFV)

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [x] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes

- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [x] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No

13.29 EvCPE 2.0

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [x] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [ ] Yes
- [x] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes
- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is

there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [x] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [x] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [ ] Yes
- [x] No

13.30 Cloud SaaS

English

1. Does the What's New note exist and comply with the template and SG guidelines?

- [ ] Yes
- [ ] No

2. Has the Confluence commits JIRA ticket(s) been specified via a {JIRA} macro on the What' New page?

- [ ] Yes
- [ ] No

3. Has Style Guide compliance check been performed? Was the SG knowledge and usage feedback provided to the writer?

- [x] Yes
- [ ] No

4. Do all final product component versions exist in Confluence?

- [x] Yes

- [ ] No

5. Has feature write-ups been checked against traceability matrix (or is there a completed traceability matrix)?

- [x] Yes
- [ ] No

6. Do all new added pages in Confluence have Netcracker application context string specified?

- [ ] Yes
- [ ] No

7. Are all URLs (.url) uploaded to SPS3 > Corporate > Product Documentation?

- [ ] Yes
- [ ] No

8. Are all unresolved comments resolved for every product component space?

- [x] Yes
- [ ] No
- [ ]

14 Lessons Learned

14.1 From Accounts

14.1.1 MTelekom (MKT)

15 Servers

15.1 Server Specifications

Customer Training Servers

Netcracker Application (aka TOMS): **devapp054**

RAM: **96 Gb**

HDD (RAID10): **550 Gb**

Netcracker Database (aka TOMS): **db044**

RAM: **192 Gb**

HDD (RAID10): **3,300 Gb**

RBM Host: **devapp187**

RBM DB: **db187**

Career Development's Hardware

NetCracker Application: devapp120

NetCracker Database: db082

RBM Host: devapp177

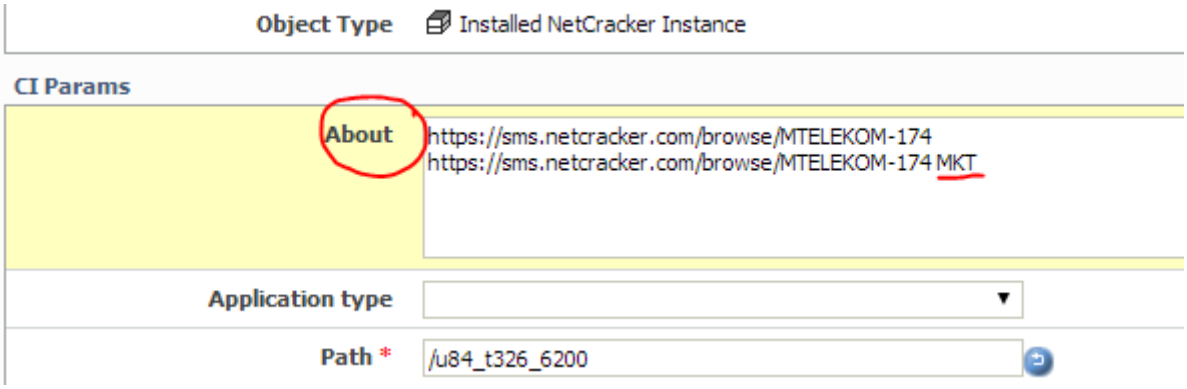
RBM DB: db172

15.2 Server About Field

RU

15.2.1 Поле About

Для того, чтобы быстро определить какой активности или тикету принадлежит установленный инстанс, необходимо пользоваться полем **About**. Поле заполняется в заявке NMS, и затем хранится на объекте Inbstalled NetCracker Instance, установленном инстансе, в ERP. Поле используется, например, для того, чтобы в любой момент можно было быстро принять решение, хранить или удалять инстанс.



Внимание!

Для того, чтобы при установке нового сервера IT Deployment автоматически проставил в поле About ссылку на тикет тренинга, ее необходимо указать в заявке на установку в поле **Preferable Instance Name**.

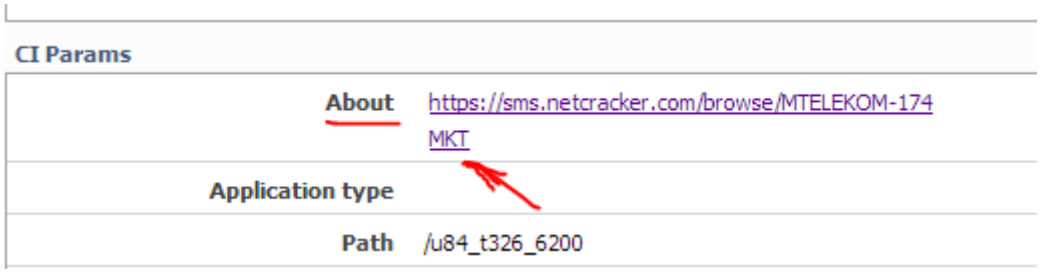
Пример:

```
Preferable Instance Name: _174_
https://sms.netcracker.com/browse/MTELELKOM-174
```

15.2.1.1 Логика работы поля

Поле **About** – это текстовое многострочное поле, текст в котором обрабатывается следующим образом:

1. В поле указываются одна или несколько гиперссылок, например, на тикеты в SMS, PSUP, TMS, или ссылки на SPS3, BASS, SVN.
2. Гиперссылка должна идти первой в строке.
3. Можно указывать несколько гиперссылок в несколько строк, по одной в строке.
4. По желанию, после гиперссылки через пробел можно указать ее отображаемое имя. В этом случае результат выглядит следующим образом:



15.3 GP Codes for Servers on devapp054

Below are the GP codes that should be used for any operations (create, delete, update, etc) with the servers. NC 9.0 environment is taken as an example.

OOB NC Environments NCU 9.0			
SERVER TYPE	*ADDRESS*	*TICKET*	*GP CODE*
Production (etalon)	**devapp054:6300**	SMSCT-164 - Authenticate to see issue details	NC.SMS.NCU
Development (test)	**devapp054:6350**	SMSCT-164 - Authenticate to see issue details	NC.SMS.NCU
Customer Environments (that are used for the external trainings)			
SERVER TYPE	*ADDRESS*	*TICKET*	*GP CODE*
Any Customer Environment copy	devapp054:*port*	*project ticket*	External Project GP Code, or training project GP code
Any Production (oob) Environment copy	devapp054:*port*	*project ticket*	External Project GP Code, or training project GP code

15.4 RBM Training Environment

Terminal Server

RBM is a client-server application. When there is a big distance (across the Atlantic, for example) between the location of the client machine and the location of the server with the APP and DB, latency between input and output reaches several seconds, which makes application almost impossible to work with, at the very least - frustrating. In order to avoid that you need to connect to terminal machine via Remote Desctop Connection (standard Windows app), and run the RBM client application from the terminal, which is located in the same place, as the training DBs (Moscow).

Before you can use the terminal for the trianing, you need to publish it by contacting HelpDesk via e-mail. You need to know the dates of the training and the list of customer's public IP addresses.

There are 2 terminals:

- Moscow 10.101.7.52
- Cincinnati 10.101.255.85

Please use the following example: "We need to use the training_terminal for the customer trainng delivery. We will connect to the terminal via RDP protocol. Please publish it for the *dates* for the following IP addresses: *addresses*. Internal IP addes is 10.101.7.52."

After that make sure the connection is working from the customer network, because tcp/3389 port may be resticted on their network. In that case you will not be able to reach the training terminal. To fix that, contact the customer with the following request: "For the RBM training we need to use the terminal machine via RDP. Would you kindly add exception for tcp/3389

port?".

After that you should be able to use the terminal for the training with the following actions:

1. Run the **Remote Desctop Connection** application.
2. In the **Computer** field, type the address of the terminal and click **Connect**.
    - If you are in the NC office or using VPN, you can enter the name "training_terminal" or internal IP address "10.101.7.52".
    - If you are onsite and using customer network, use the public IP address. Port is not needed, it defauls to 3389.
3. There might be a window that warnes you about something regarding security keys. Do not worry and proceed further.
4. In the next window you need to enter the credentials to gain acces to the training terminal. List of user names and passwords is below.
    - **Note** Username should be entered with the domain, for example "netcracker\User09".
5. Run the necessary RBM application from the **Start** menu, you may find the credentials for the database below.

Code Block 1 All user accounts on training_terminal

```
User01 / K73N2vaI
User02 / UTbc4Zsn
User03 / gTC4nAyQ
User04 / Bfj4DdlF
User05 / uVv7uZtI
User06 / JyTXn87i
User07 / wdkKx4gV
User08 / iJvHGD3C
User09 / yf3nHabk
User10 / fA5JrBzb
User11 / V1yhuCuV
User12 / RN7cpSfR
User13 / tEIwDrY6
User14 / dPRw5cvM
User15 / yacP8CHP
User51 / Rfvgtg456
User52 / Wsdcfr452
User53 / Fgvtrg541
User54 / Dfrvbgt43
User55 / Cvfrrfe34
```

Database Connection String

(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = db187.netcracker.com)(PORT = 1524))) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = T01RB804)))

Code Block 2 All RBM database SIDs

```
T01RB804
T02RB804
T03RB804
T04RB804
T05RB804
T06RB804
T07RB804
T08RB804
T09RB804
T10RB804
T11RB804
T12RB804
```

Database Login/Password

geneva_admin/geneva_admin (all lowercase)

Refreshing RBM 8.0.4 Database

IT DEPLOYMENT (**Evgeny Belov**, **Leonid Kupriyanov**) should use the zipped SIDs stored in **/u02/oradata** on server db187.

Backup reference RBM 8.0.4 training dump is stored in **\\ftp\ftp\Depts\SMS\CTE**

For anyy RBM-server related question refer to Evgeny Belov (IT Deployment) and CC Pavel Lapaev (Training Dpt).

15.4.1 READ THIS FIRST!

https://bass.netcracker.com/display/IT/Save+Configuration+RBM+server Save Configuration RBM server, and

https://bass.netcracker.com/display/IT/RBM+Cloning+via+SID+and+files+copy RBM Cloning via SID and files copy

Table of contents:

1. RBM 7.0 RU
2. RBM 7.0 EN
3. RBM 8.0 (work in progress)

15.4.2 RBM 7.0 RU

15.4.2.1 Создание Нового Инстанса

Создайте заявку на https://erp.netcracker.com/solutions/erp/orderParams.jsp?isTmp=0

Укажите в поле **Comments** список компонентов к установке, пример конфигурации на devapp187:

- RBM 7.0.2
- ECA 7.0.2

- PF 5.0.9
- UTILITIES 6.0.3.2

Список компонентов к установке в основном зависит от операционной системы. Некоторые компоненты опциональны, например, расширение TAP3 или zip файл для RBM/AM интеграции. Информация обо всех возможных компонентах доступна в документации *Rating and Billing Manager Installation,* глава "Installation Files for Unix Operating Systems", ссылка.

Для клиентских тренингов рекомендуется использовать следующие сервера:

Application Server: devapp187
https://erp.netcracker.com/ncobject.jsp?id=9138298264013261015
DB Server: db187 https://erp.netcracker.com/ncobject.jsp?id=9137987694613597317

Пример заявки:
https://erp.netcracker.com/ncobject.jsp?id=9141259767313422563&return=/desktop.jsp

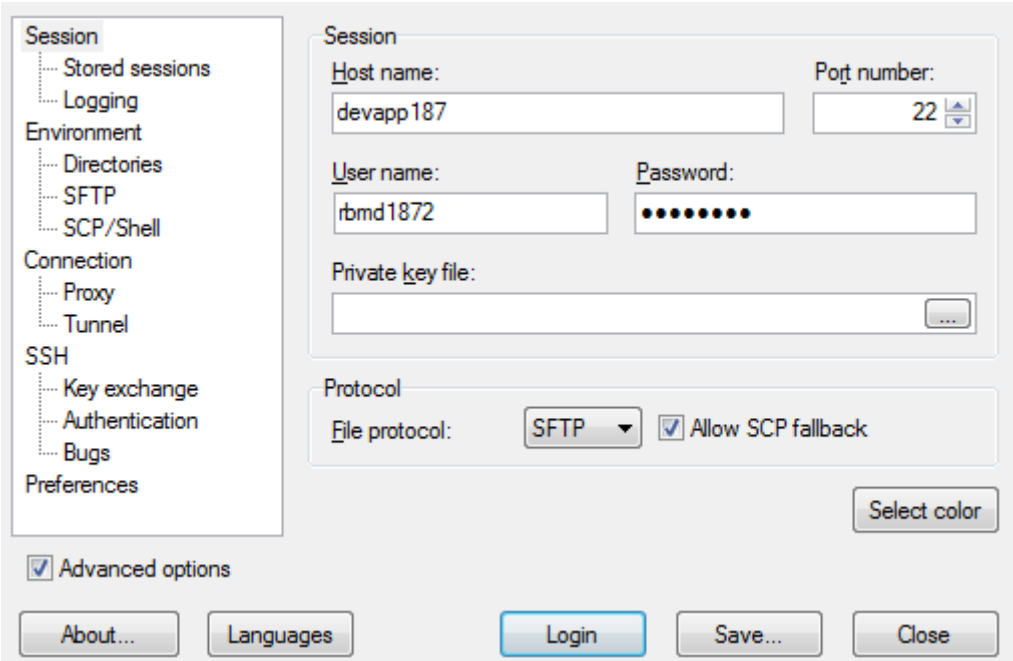
В комментариях к выполненной заявке вы получите необходимые данные для дальнейшей настройки инстанса, важное подчеркнуто:

RBM7.0.2:
Unix box access: username/psw = rbmd1872/rbmd1872
Infinys_root = /u02/netcracker/rbm/rbmd1872/infinys_root
Database:
host: db187.netcracker.com
port: 1521
user: geneva_admin
password: geneva_admin
SID: RBMD1872
weblogic:
user wlsadmin
password wlsadmin123
console link: http://devapp187.netcracker.com:7220/console
TM ports: 7222, 7223
Dconfig port: 7221
java_home dir="/u01/app/java/jdk170_06”
wl_home="/u01/app/weblogic/mw1036/wlserver103"

15.4.2.2 Подготовка Файлов с Данными для Инстанса

После того, как инстанс поднят, подключитесь к нему с помощью программы **WinSCP** или ее аналогов. Используйте следующие параметры:

Host name	Application server из заявки
Port number	Оставьте дефолтное значение
User name	Unix box access из заявки
Password	Unix box access из заявки



Примечание: на момент написания статьи, IT при создании инстанса дают логин и пароль, совпадающие с SID базы данных инстанса. Эта практика позволяет автоматизировать процесс настройки сервера, потому что скрипты автоматом подхватывают эти значения.

Зайдите в папку u02/netcracker/RBM/RBM/tools/RBM_702. Проверьте наличие следующих файлов:

1. CW_RB702.dmp
2. Day2Day_RB702.dmp
3. disable.sql
4. dropallsequences.sql
5. enable.sql
6. infinys.env
7. permissions.sql
8. refreshOne
9. refreshOneCW
10. saved_sequences.sql
11. truncate.sql
12. users.sql
13. working_RBM702.tar

При необходимости, создайте эту папку и подгрузите туда эти файлы. Контактные лица, к которым можно обратиться за файлами: Andrew MacLennan <andrew.maclennan@netcracker.com>; Pavel Lapayev <pavel.lapayev@NetCracker.com>; Natalia Tarasenko <natalia.tarasenko@NetCracker.com>; Anna Bolshakova bolshakova@NetCracker.com

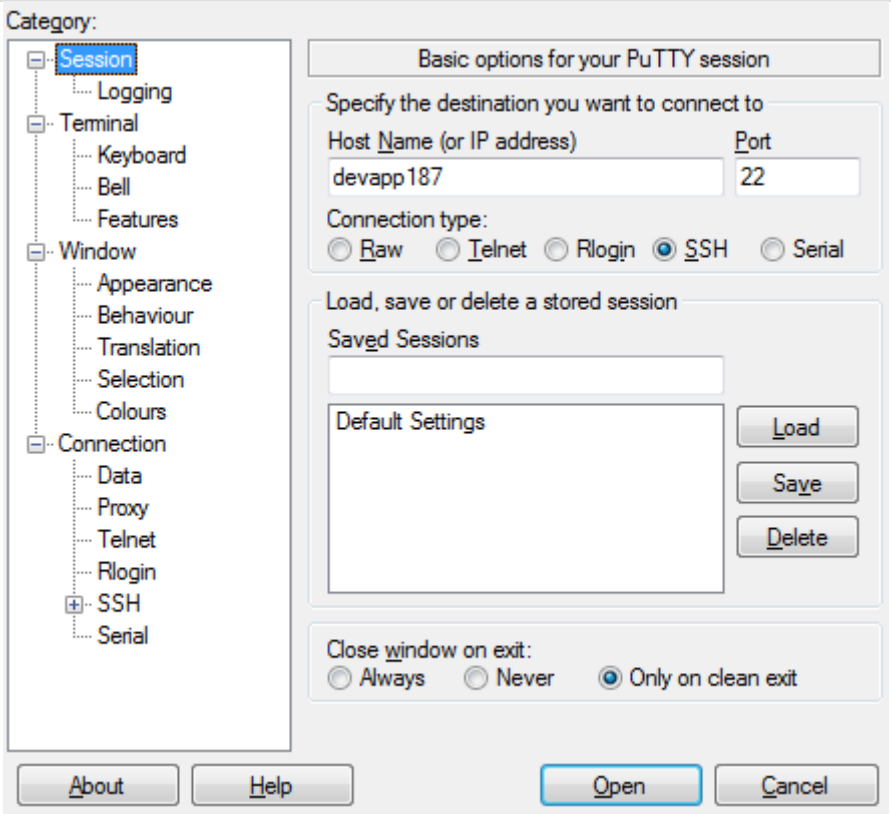
Файлы с дампом тренинг сэмпла и скриптами для RMB7 лежат в \\ftp\ftp\Depts\SMS\CTE\RBM data\RBM7 data.7z.

15.4.2.3 Запуск Скрипта refreshOne

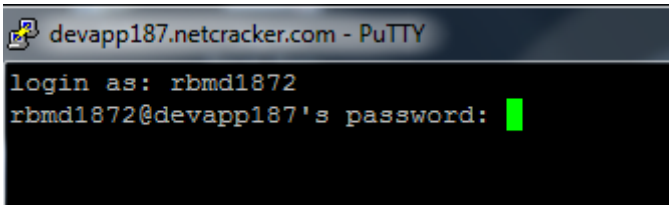
Инстанс создан, данные загружены. Необходимо обновить базу данных дефолтного инстанса данными, загруженными на сервер.

Подключитесь к серверу с помощью программы **PuTTY** или ее аналогов. Используйте следующие параметры:

Host Name	Application server из заявки
Port	Оставьте дефолтное значение

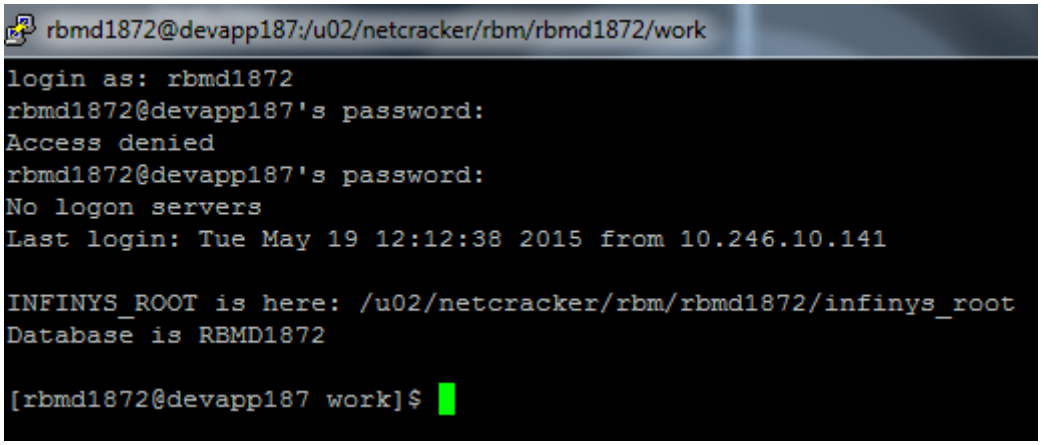


В открывшемся окне **PuTTY** введите юзера и пароль на основании данных из заявки, строка Unix box access



При вводе пароля на экране ничего не отображается. Это нормально, PuTTY таким образом прячет от злоумышленников количество символов в пароле.

Успешный логин.



Вам нужно зайти в папку с данными для обновления сервера:
u02/netcracker/RBM/RBM/tools/RBM_702

Список полезных команд:

pwd	Показать текущую директорию
ls	Показать список файлов и папок в текущей директории
cd ..	Шаг вверх по иерархии папок
cd *имя папки*	Перейти в папку *имя папки* из этой директории

```
INFINYS_ROOT is here: /u02/netcracker/rbm/rbmd1872/infinys_root
Database is RBMD1872

[rbmd1872@devapp187 work]$ pwd
/u02/netcracker/rbm/rbmd1872/work
[rbmd1872@devapp187 work]$ cd ..
[rbmd1872@devapp187 rbmd1872]$ cd ..
[rbmd1872@devapp187 rbm]$ cd tools
[rbmd1872@devapp187 tools]$ cd RBM_702
[rbmd1872@devapp187 RBM_702]$ ls
702_Imported_from612_and_cleaned_up.sql  LOGS
702.par                                  mf
api                                      oradiag_T08RB612
bill                                     permissions.sql
bunyan4.exe                              platform.cfg
CDT                                      PLSQL Developer.7z
CW_RB702.dmp                             PPET
CW_RB702.dmp.new                         RB612.log
Day2Day_RB702.dmp                        RB702.log
Day2Day_RB702.dmp.backup                 refresh_all
Day2Day_RB702.dmp.bak                    refreshOne
Day2Day_RB702.dmp.old                    refreshOneCW
DConfigAgent.45814.07010109              reports
DConfigAgent.59042.07010114              saveallsequences.sql
DConfigAgent.60429.14061215              saved_sequences.sql
disable.sql                              saved_sequences.sql.bak
dlf                                      templates
dropallsequences.sql                     TMP
enable.sql                               truncate.sql
export                                   tutorial
import                                   users.sql
infinys.env                              working_RBM702.tar
infinys.env.old
[rbmd1872@devapp187 RBM_702]$
```

Введите команду " **. infinys.env**". Эта команда помогает системе понять, в какой директории лежат данные для обновления инстанса.

```
[rbmd1872@devapp187 RBM_702]$  . infinys.env
Now sourcing infinys.env
[rbmd1872@devapp187 RBM_702]$
```

Введите команду "**./refreshOne**". Эта команда запускает скрипт обновления.

```
Now sourcing infinys.env
[rbmd1872@devapp187 RBM_702]$ ./refreshOne

Now entering database to disable triggers and truncating the data
```

Система обновляет инстанс, подождите около минуты.

Примечание: каким образом система понимает, данные какого инстанса надо обновить, если файлы для обновления лежат в папке, не привязанной ни к одному из них? Будет обновлен тот инстанс, под SID которого вы зашли на сервер через **PuTTY**. Поэтому важно, чтобы IT и дальше давали пользователям логины, совпадающие с SID инстанса.

Обновление завершено успешно:

```
tutorial/events/events_rop_5/event_subtype_2.1.3
tutorial/events/events_rop_5/event_subtype_2.1.4
tutorial/events/events_rop_5/event_subtype_1.1.2
[rbmd1872@devapp187 RBM 702]$
```

15.4.2.4 Процесс DConfigAgent

Для корректной работы системы необходимо убедиться, что запущен процесс **DConfigAgent**.

Введите команду "**ps -ef | grep DC**". Эта команда покажет вам все работающие процессы с описанием DC.

```
[rbmd1872@devapp187 RBM_702]$ ps -ef | grep DC
T19RB702  8786     1  0  2014 ?        00:11:26 DConfigAgent
T04RB702  8964     1  0  2014 ?        00:11:30 DConfigAgent
T11RB702 16573     1  0  2014 ?        00:09:33 DConfigAgent
T06RB702 25752     1  0  2014 ?        00:11:29 DConfigAgent
T05RB702 25770     1  0  2014 ?        00:11:17 DConfigAgent
T03RB702 26009     1  0  2014 ?        00:11:37 DConfigAgent
T02RB702 26202     1  0  2014 ?        00:11:27 DConfigAgent
T09RB702 31771     1  0  2014 ?        00:09:49 DConfigAgent
T08RB702 31772     1  0  2014 ?        00:09:47 DConfigAgent
T00RB702 31773     1  0  2014 ?        00:09:55 DConfigAgent
T07RB702 31816     1  0  2014 ?        00:09:45 DConfigAgent
rbmd1871 32165     1  0 May18 ?        00:00:04 DConfigAgent
rbmd1872 45888 45708  0 17:29 pts/14   00:00:00 grep DC
T12RB702 45945     1  0  2014 ?        00:09:42 DConfigAgent
rbmd1872 47539     1  0 Apr23 ?        00:00:00 DConfigAgent RBMD1872
[rbmd1872@devapp187 RBM 702]$
```

В таблице найдите строку, которая начинается с вашего SID. На скриншоте она последняя в списке результатов поиска.

Если DConfigAgent не запущен, введите команду "**DConfigAgent**". Убедитесь, что процесс запустился с помощью команды "**ps -ef | grep DC**".

15.4.2.5 Процесс TaskMaster

Для корректной работы сервера **всегда** необходимо перезапускать процесс TaskMaster, даже если он уже запущен.

Введите команду "**ps -ef | grep TM**". Эта команда покажет вам все работающие процессы с описанием TM.

```
[rbmd1872@devapp187 RBM_702]$ ps -ef | grep TM
T04RB702  8972     1  0  2014 ?        01:15:38 TM -u geneva_admin -p geneva_admin -s T04RB702
rbmd1871 15842     1  0 Apr15 ?        00:14:37 TM -u geneva_admin -p geneva_admin -s RBMD1871
T11RB702 16576     1  0  2014 ?        01:02:59 TM -u geneva_admin -p geneva_admin -s T11RB702
T05RB702 25749     1  0  2014 ?        01:18:30 TM -u geneva_admin -p geneva_admin -s T05RB702
T03RB702 26030     1  0  2014 ?        01:17:48 TM -u geneva_admin -p geneva_admin -s T03RB702
T02RB702 26226     1  0  2014 ?        01:14:57 TM -u geneva_admin -p geneva_admin -s T02RB702
T00RB702 31783     1  0  2014 ?        01:04:20 TM -u geneva_admin -p geneva_admin -s T00RB702
rbmd1871 32340     1  0 May18 ?        00:00:26 TM -u geneva_admin -p geneva_admin -s rbmd1871
rbmd1872 43131     1  0 12:21 ?        00:00:05 TM -u geneva_admin -p geneva_admin -s rbmd1872
rbmd1872 45919 45708  0 17:33 pts/14   00:00:00 grep TM
T12RB702 45965     1  0  2014 ?        01:04:24 TM -u geneva_admin -p geneva_admin -s T12RB702
T09RB702 47141     1  0  2014 ?        01:04:08 TM -u geneva_admin -p geneva_admin -s T09RB702
T08RB702 47170     1  0  2014 ?        01:04:16 TM -u geneva_admin -p geneva_admin -s T08RB702
[rbmd1872@devapp187 RBM 702]$
```

В таблице найдите строку, которая начинается с вашего SID. На скриншоте она девятая в списке результатов поиска. Значение, идущее после SID, это номер процесса TaskMaster. Вам необходимо его перезапустить.

Введите команду "**kill -9 ID**", где ID - ID процесса TaskMaster по вашему SID. Эта команда остановит указанный процесс.

Чтобы запустить TaskMaster, введите команду "**TM -u geneva_admin -p geneva_admin -s SID &**", где SID - ваш SID. Эта команда запускает процесс TaskMaster с помощью логина и пароля geneva_admin (см. заявку) для инстанса с указанным SID. Амперсанд в конце означает, что процесс продолжит свою работу после того, как вы закроете PuTTY.

```
[rbmd1872@devapp187 RBM_702]$ TM -u geneva_admin -p geneva_admin -s RBMD1872 &
[1] 45964
[rbmd1872@devapp187 RBM_702]$
```

Убедитесь, что процесс запущен. Введите команду "**ps -ef | grep TM**".

```
[rbmd1872@devapp187 RBM_702]$ ps -ef | grep TM
T04RB702  8972     1  0  2014 ?        01:15:38 TM -u geneva_admin -p geneva_admin -s T04RB702
rbmd1871 15842     1  0 Apr15 ?        00:14:37 TM -u geneva_admin -p geneva_admin -s RBMD1871
T11RB702 16576     1  0  2014 ?        01:02:59 TM -u geneva_admin -p geneva_admin -s T11RB702
T05RB702 25749     1  0  2014 ?        01:18:30 TM -u geneva_admin -p geneva_admin -s T05RB702
T03RB702 26030     1  0  2014 ?        01:17:48 TM -u geneva_admin -p geneva_admin -s T03RB702
T02RB702 26226     1  0  2014 ?        01:14:57 TM -u geneva_admin -p geneva_admin -s T02RB702
T00RB702 31783     1  0  2014 ?        01:04:20 TM -u geneva_admin -p geneva_admin -s T00RB702
rbmd1871 32340     1  0 May18 ?        00:00:27 TM -u geneva_admin -p geneva_admin -s rbmd1871
rbmd1872 45964 45708  0 17:39 pts/14   00:00:00 TM -u geneva_admin -p geneva_admin -s RBMD1872
T12RB702 45965     1  0  2014 ?        01:04:24 TM -u geneva_admin -p geneva_admin -s T12RB702
rbmd1872 45975 45708  0 17:40 pts/14   00:00:00 grep TM
T09RB702 47141     1  0  2014 ?        01:04:08 TM -u geneva_admin -p geneva_admin -s T09RB702
T08RB702 47170     1  0  2014 ?        01:04:17 TM -u geneva_admin -p geneva_admin -s T08RB702
[rbmd1872@devapp187 RBM_702]$
```

15.4.3 RBM 7.0 EN

15.4.3.1 Request New Instance

Create an order https://erp.netcracker.com/solutions/erp/orderParams.jsp?isTmp=0

In **Comments** field specify list of components to install, sample configuration from devapp187:

- RBM 7.0.2
- ECA 7.0.2
- PF 5.0.9
- UTILITIES 6.0.3.2

List of components to install mostly depends on operating system. Some componenta are optional, for example extention TAP3 or zip file for RBM/AM integration.For more information on the components, refer to *Rating and Billing Manager Installation, chapter* "Installation Files for Unix Operating Systems", link.

For client trainings use the recommended servers:

Application Server: devapp187
https://erp.netcracker.com/ncobject.jsp?id=9138298264013261015
DB Server: db187 https://erp.netcracker.com/ncobject.jsp?id=9137987694613597317

Order example:
https://erp.netcracker.com/ncobject.jsp?id=9141259767313422563&return=/desktop.jsp

After the order is fulfilled, note the comment by the IT, important parts are underlined:

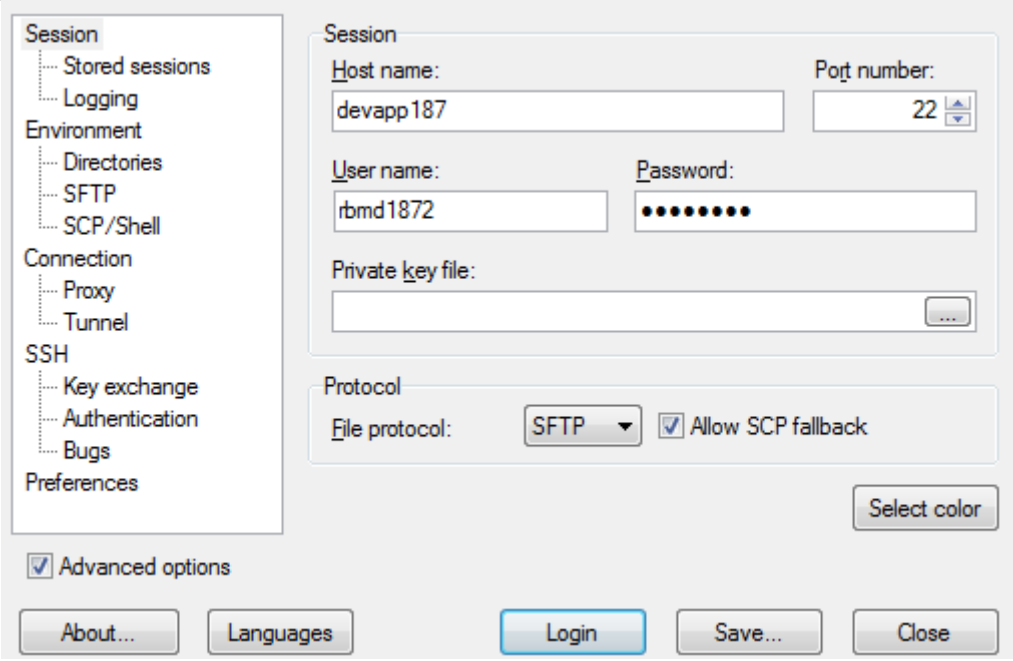
RBM7.0.2:
Unix box access: username/psw = rbmd1872/rbmd1872
Infinys_root = /u02/netcracker/rbm/rbmd1872/infinys_root
Database:
host: db187.netcracker.com
port: 1521
user: geneva_admin
password: geneva_admin
SID: RBMD1872
weblogic:
user wlsadmin

password wlsadmin123
console link: http://devapp187.netcracker.com:7220/console
TM ports: 7222, 7223
Dconfig port: 7221
java_home dir="/u01/app/java/jdk170_06”
wl_home="/u01/app/weblogic/mw1036/wlserver103"

15.4.3.2 Prepare Files for New Instance

Connect to the new instance via **WinSCP** or similar software. Use the following credentials:

Host name	Application server from the order
Port number	Default value
User name	Unix box access from the order
Password	Unix box access from the order



Note: when this article was created, IT was giving login and password credentials identical to database SID in the instance. This is convinient for fully automated process of instance refresh, because refresh scripts automatically use the SID for some values.

Go to u02/netcracker/RBM/RBM/tools/RBM_702. Check if the following files are present:

1. CW_RB702.dmp
2. Day2Day_RB702.dmp
3. disable.sql
4. dropallsequences.sql
5. enable.sql
6. infinys.env
7. permissions.sql
8. refreshOne
9. refreshOneCW
10. saved_sequences.sql
11. truncate.sql

12. users.sql
13. working_RBM702.tar

If necessary, create the folder and upload the files. To obtain the files, refer to: Andrew MacLennan <andrew.maclennan@netcracker.com>; Pavel Lapayev <pavel.lapayev@NetCracker.com>; Natalia Tarasenko <natalia.tarasenko@NetCracker.com>; Anna Bolshakova bolshakova@NetCracker.com

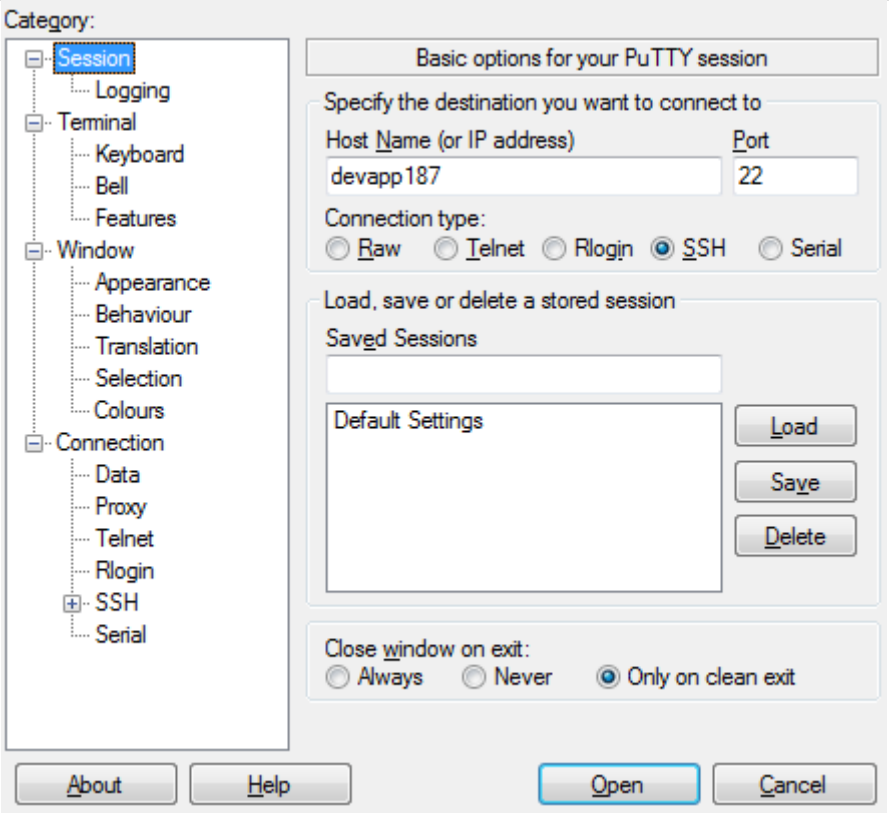
The training sample dump and scripts for RBM7 are located in \\ftp\ftp\Depts\SMS\CTE\RBM data\RBM7 data.7z.

15.4.3.3 Run Script refreshOne

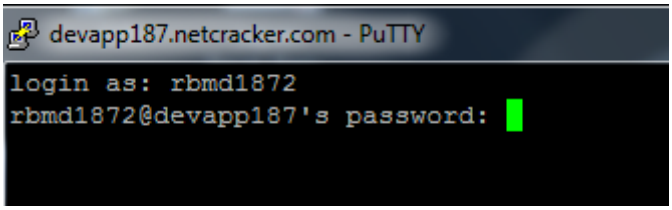
Instance is created, data is uploaded. You need to refresh the database with the training data.

Connect to the server via PuTTY or simisal software. Use the following credentials:

Host Name	Application server from the order
Port	Default value

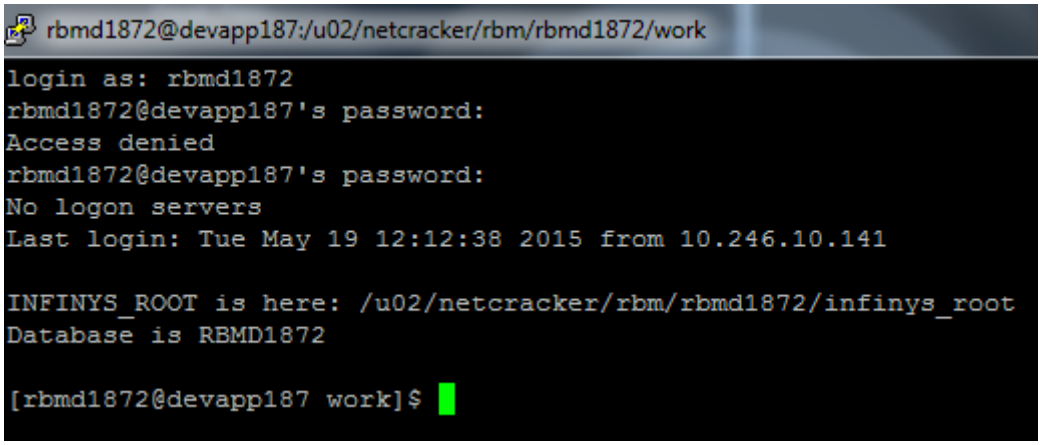


In opened **PuTTY** window input the user credential from the Unix box access live from the order.



Don't be alarmed when the password is not displayed at all. This way **PuTTY** hides the lenght of the password.

Successful login.



Go to folder with the training data: u02/netcracker/RBM/RBM/tools/RBM_702

Useful comands:

pwd	Show current directory
ls	Show list of files and folders in the current directory
cd ..	Go one step up the hierarchy of directiries
cd *folder name*	Go to *folder name* from the current directiry

```
INFINYS_ROOT is here: /u02/netcracker/rbm/rbmd1872/infinys_root
Database is RBMD1872

[rbmd1872@devapp187 work]$ pwd
/u02/netcracker/rbm/rbmd1872/work
[rbmd1872@devapp187 work]$ cd ..
[rbmd1872@devapp187 rbmd1872]$ cd ..
[rbmd1872@devapp187 rbm]$ cd tools
[rbmd1872@devapp187 tools]$ cd RBM_702
[rbmd1872@devapp187 RBM_702]$ ls
702_Imported_from612_and_cleaned_up.sql  LOGS
702.par                                  mf
api                                      oradiag_T08RB612
bill                                     permissions.sql
bunyan4.exe                              platform.cfg
CDT                                      PLSQL Developer.7z
CW_RB702.dmp                             PPET
CW_RB702.dmp.new                         RB612.log
Day2Day_RB702.dmp                        RB702.log
Day2Day_RB702.dmp.backup                 refresh_all
Day2Day_RB702.dmp.bak                    refreshOne
Day2Day_RB702.dmp.old                    refreshOneCW
DConfigAgent.45814.07010109              reports
DConfigAgent.59042.07010114              saveallsequences.sql
DConfigAgent.60429.14061215              saved_sequences.sql
disable.sql                              saved_sequences.sql.bak
dlf                                      templates
dropallsequences.sql                     TMP
enable.sql                               truncate.sql
export                                   tutorial
import                                   users.sql
infinys.env                              working_RBM702.tar
infinys.env.old
[rbmd1872@devapp187 RBM_702]$
```

Input "**. infinys.env**". This command tells the system where to look for the files to refresh the instance.

```
[rbmd1872@devapp187 RBM_702]$  . infinys.env
Now sourcing infinys.env
[rbmd1872@devapp187 RBM_702]$
```

Input "**./refreshOne**". This command initiates the refresh process.

```
Now sourcing infinys.env
[rbmd1872@devapp187 RBM_702]$ ./refreshOne

Now entering database to disable triggers and truncating the data
```

The refresh is started. Wait approximately 1 minute.

Note: How the systed decided, which instance to update, when we are rnning the script from the directory which is not directly related to any instance? The system will refresh the instance with the same SID, as the one you used to login to the server. This is why it is important to keep the policy of naming the users according the the SID of the instance.

Refresh is completed.

```
tutorial/events/events_rop_5/event_subtype_2.1.3
tutorial/events/events_rop_5/event_subtype_2.1.4
tutorial/events/events_rop_5/event_subtype_1.1.2
[rbmd1872@devapp187 RBM 702]$
```

15.4.3.4 DConfigAgent Process

To make sure that the system works properly, you need to check if the DConfigAgent process is running.

Input "**ps -ef | grep DC**". This command shows all running processes with the DC in description.

```
[rbmd1872@devapp187 RBM_702]$ ps -ef | grep DC
T19RB702  8786     1  0  2014 ?        00:11:26 DConfigAgent
T04RB702  8964     1  0  2014 ?        00:11:30 DConfigAgent
T11RB702 16573     1  0  2014 ?        00:09:33 DConfigAgent
T06RB702 25752     1  0  2014 ?        00:11:29 DConfigAgent
T05RB702 25770     1  0  2014 ?        00:11:17 DConfigAgent
T03RB702 26009     1  0  2014 ?        00:11:37 DConfigAgent
T02RB702 26202     1  0  2014 ?        00:11:27 DConfigAgent
T09RB702 31771     1  0  2014 ?        00:09:49 DConfigAgent
T08RB702 31772     1  0  2014 ?        00:09:47 DConfigAgent
T00RB702 31773     1  0  2014 ?        00:09:55 DConfigAgent
T07RB702 31816     1  0  2014 ?        00:09:45 DConfigAgent
rbmd1871 32165     1  0 May18 ?        00:00:04 DConfigAgent
rbmd1872 45888 45708  0 17:29 pts/14   00:00:00 grep DC
T12RB702 45945     1  0  2014 ?        00:09:42 DConfigAgent
rbmd1872 47539     1  0 Apr23 ?        00:00:00 DConfigAgent RBMD1872
[rbmd1872@devapp187 RBM 702]$
```

In the results table locate the line that start with your SID. On the screenshot it is the last one.

If the DConfigAgent process is not running, input "**DConfigAgent**". Make sure that the process is running after that, via command "**ps -ef | grep DC**".

15.4.3.5 TaskMaster Process

To make sure that the instance works properly, you **always** have to restart the TaskMaster, even if it is running already.

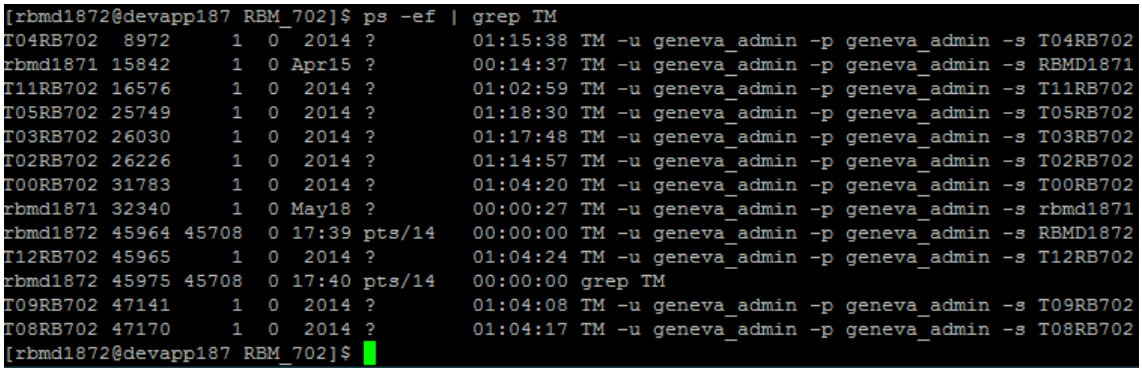
Input "**ps -ef | grep TM**". This command shows all runnig processes with the TM in desdcription.

```
[rbmd1872@devapp187 RBM_702]$ ps -ef | grep TM
T04RB702  8972     1  0  2014 ?        01:15:38 TM -u geneva_admin -p geneva_admin -s T04RB702
rbmd1871 15842     1  0 Apr15 ?        00:14:37 TM -u geneva_admin -p geneva_admin -s RBMD1871
T11RB702 16576     1  0  2014 ?        01:02:59 TM -u geneva_admin -p geneva_admin -s T11RB702
T05RB702 25749     1  0  2014 ?        01:18:30 TM -u geneva_admin -p geneva_admin -s T05RB702
T03RB702 26030     1  0  2014 ?        01:17:48 TM -u geneva_admin -p geneva_admin -s T03RB702
T02RB702 26226     1  0  2014 ?        01:14:57 TM -u geneva_admin -p geneva_admin -s T02RB702
T00RB702 31783     1  0  2014 ?        01:04:20 TM -u geneva_admin -p geneva_admin -s T00RB702
rbmd1871 32340     1  0 May18 ?        00:00:26 TM -u geneva_admin -p geneva_admin -s rbmd1871
rbmd1872 43131     1  0 12:21 ?        00:00:05 TM -u geneva_admin -p geneva_admin -s rbmd1872
rbmd1872 45919 45708  0 17:33 pts/14   00:00:00 grep TM
T12RB702 45965     1  0  2014 ?        01:04:24 TM -u geneva_admin -p geneva_admin -s T12RB702
T09RB702 47141     1  0  2014 ?        01:04:08 TM -u geneva_admin -p geneva_admin -s T09RB702
T08RB702 47170     1  0  2014 ?        01:04:16 TM -u geneva_admin -p geneva_admin -s T08RB702
[rbmd1872@devapp187 RBM 702]$
```

In the resu;ts table locate the line that starts with your SID. On the screenshot it is ninth one in the results table. Value after the SID is the ID of the TaskMaster process. You need to restart it. The ampersand at the ennd of the command means that the process will be runningafter you close PuTTY.

```
[rbmd1872@devapp187 RBM_702]$ TM -u geneva_admin -p geneva_admin -s RBMD1872 &
[1] 45964
[rbmd1872@devapp187 RBM 702]$
```

Make sure that the process is running. Input "**ps -ef | grep TM**".



15.4.3.6 Разворот RBM инстанса для тренинга RBM 8.0 (work in progress)

Чтобы развернуть инстанс RBM, создайте заявку на erp.netcracker.com и укажите в поле **Comments** список компонентов к установке.

Ниже приведены примеры конфигураций на devapp054 (RBM 7) и devapp187 (RBM 8)

- Для RBM 7:
  - RBM 7.0.2
  - ECA 7.0.2
  - PF 5.0.9
  - UTILITIES 6.0.3.2
- Для RBM 8:
  - RBM 8.0.2
  - PF 6.0.1
  - ECA 8.0.2
  - UTILITIES 6.0.3.9

Примечание: Системное требование для установки РБМ 8.0 - ОС Red Hat Enterprise Linux версии 6.4 и выше.

Список компонентов к установке в основном зависит от операционной системы. Некоторые компоненты опциональны, например расширение TAP3 или zip файл для RBM/AM интеграции. Информация обо всех возможных компонентах доступна в документации *Rating and Billing Manager Installation,* глава "Installation Files for Unix Operating Systems", ссылка.

Для RBM 7.0 используйте:

Application Server: devapp187
https://erp.netcracker.com/ncobject.jsp?id=9138298264013261015
DB Server: db187 https://erp.netcracker.com/ncobject.jsp?id=9137987694613597317

Пример заявки для 7.0
https://erp.netcracker.com/ncobject.jsp?id=9141259767313422563&return=/desktop.jsp

15.4.3.6.1 Подготовка файлов с данными для сервера

После того, как инстанс поднят, загрузите на него набор скриптов и дамп с данными, необходимые для тренинговых курсов. Файлы следует загрузить в папку tools в директории infinys_root. Пример файлов находится здесь: tools.zip

Следующие файлы необходимы для настройки инстанса:

- *.dmp – содержит копию данных снятых с существующего инстанса и использующихся как пререквизиты для тренинговых курсов (данные для таблиц RBM).

TODO: определить скоуп данных необходимых для тренингов в качестве пререквизитов.

- disable.sql

- enable.sql
- truncate.sql
- GPARAMS.sql – содержит список системных параметров и их значений необходимых для тренингов
- refreshOne.sql – применяет вышестоящие скрипты, отвечает за импорт данных из dmp файла.

Выполните следующие шаги:

1. Откройте файл GPARAMS.sql в режиме редактирования (например, с помощью Notepad++).
2. Удостоверьтесь, что значение параметра TMhostMachineName указывает на нужный хост (на котором развернут инстанс).
3. Проверьте наличие папки "bin" в директории /inifinys_root/RB на сервере и корректность пути на папку "bin" в параметре TMimageDir в файле GPARAMS.sql. Если необходимо, создайте соответствующую папку на сервере.
4. Проверьте наличие папки "eventlog" в директории /inifinys_root/LOGs на сервере и корректность пути на папку "eventlog" в параметре SYSlogFileRootDir в файле GPARAMS.sql. Если необходимо, создайте соответствующую папку на сервере.
5. Сохраните изменения в файле GPARAMS.sql.

15.4.3.6.2 Загрузка данных на сервер и запуск скрипта refreshOne

Чтобы загрузить скрипты и дамп с данными на сервер и запустить скрипт refreshOne:

1. Зайдите на сервер как пользователь db owner (например, с помощью WinSCP, PuTTY). Логин и пароль вы можете найти в комментариях к ордеру на erp, строка Unit box access.
2. Зайдите в папку infinys_root (пример пути: /u02/netcracker/rbm/rbmd0541/infinys_root, где rbmd0541 это Oracle_SID вашего инстанса). Путь к папке infinys_root вы можете найти в комментариях к ордеру на erp.
3. Зайдите в папку tools в директории infinys_root.
4. Загрузите в нее дамп с данными и файлы скриптов для RBM тренинга.
5. Чтобы запустить скрипт refreshOne, выполните команду: ./refreshOne (команда ссылается на одноименный скрипт).
   Примечание: Для прогона скрипта необходимо иметь RW на права на файл refreshOne.sql. Для выдачи прав выполните команду: chmod 744 refreshOne
6. Чтобы проверить, успешно ли выполнено обновление данных после выполнение скрипта, подключитесь к базе данных через приложение SQL Developper и сравните значение системных параметров в таблице GPARAMS со значениями данных параметров в исходном файле GPARAMS.sql.
7. Если обновление таблиц выполнено успешно, необходимо перезапустить процесс Task Master.

Примечание: Чтобы проверить, какие пользователи RBM доступны, а также, чтобы создать дополнительных пользователей, зайдите в приложение RB Configuration как дефолтный пользователь, логин/пароль security/security.

TODO: Добавить шаги по перезапуску Task Master. На данный момент выполняем перезапуск с помощью команд kill -9 <ID процесса>, TM -u geneva_admin -p geneva_admin -s <Oracle SID>.

15.4.3.7 Deploying RBM instance for RBM training

To deploy an RBM instance, create a request on erp.netcracker.com and specify the list of installation files(required components) needed for installation in the **Comments** field.

Note: Two examples of currently used configurations on devapp054(RBM7) and devapp187(RBM8)

- For RBM 7:
    - RBM 7.0.2
    - ECA 7.0.2
    - PF 5.0.9
    - UTILITIES 6.0.3.2
- For RBM 8:
    - RBM 8.0.2
    - PF 6.0.1
    - ECA 8.0.2
    - UTILITIES 6.0.3.9

Note: In order to install RBM 8.0, Red Hat Linux of version 6.4 and higher is required on the server.

The list of installation files depends mostly on the operating system. Some components are optional, for example TAP3 extension or a zip file for RBM to AM integration. For information on all possible installation files, refer to *Rating and Billing Manager Installation,* section "Installation Files for Unix Operating Systems". Link.

15.4.3.8 Preparing data for a new instance

Once the instance is provided, load a set of scripts and dmp data required for training courses to the "tools" folder in the infinys_root directory. See the example of the zip archive: tools.zip

The following files are required for instance configuration:

- *.dmp file containing a copy of data from an exising instance used as prerequisites (data for RBM tables) for RBM courses
- disable.sql
- enable.sql
- truncate.sql
- GPARAMS.sql - contains the list of system parameters and thier values required for training courses.
- refreshOne.sql - executes the scripts listed above and imports the data from *.dmp file.

Do the following:

1. Open the file GPARAMS.sql in the editing mode (for example, using Notepad++).
2. Make sure that the value of the TMhostMachineName parameter indicates the necessary host on which the instance is deployed.
3. Make sure that the folder "bin" is present in the directory /inifinys_root/RB on the server and the vlaue of the TMimageDir parameter in GPARAMS.sql indicates the correct path to this folder. If necessary, create the folder "bin" on the server.
4. Make sure that the folder "eventlog" is present in the directory /inifinys_root/LOGs on the server and the SYSlogFileRootDir parameter in GPARAMS.sql indicates the correct path to this folder. If necessary, create the folder "eventlog" on the server.
5. Apply the changes in GPARAMS.sql.

15.4.3.8.1 Loading data to server and runing the refreshOne script

To load the training data and scripts and run the rerfreshOne script:

1. Log in as db owner user to the server (using WinSCP, PuTTY, for instance). User credentials should be provided in the comment of the order on erp by IT Depl group("Unit box access" line).
2. Go to infinys_root directory (example: /u02/netcracker/rmb/rmd0541/infinys_root, where "rbmd0541" is Oracle_SID assigned for the instance). The infinys_root directory should be provided in the comment of the order on erp by IT Depl group.
3. Go to "tools" folder in the infinys_root directory.
4. Upload the dmp and sql files for RBM training.
   The script refreshOne executes all above mentioned sql scripts and performs the import of the data from the *.dmp file.
5. To run the refreshOne script, execute the command: ./refreshOne
   Note: The command refers to the name of the corresponding sql file: refreshOne.sql).
6. To check whether the script was executed successfully, log in to the database using SQL Developper and compare the values of system parameters in GPARAMS table with the values of these parameters win the source file GPARAMS.sql
7. Restart the system process Task Master.

Note: In order to check which users are avialabe in RBM and create more if necessary, log in to the RB Configuration app as the default security user: username: securty, password: security.

15.4.3.9 Server refresh for RBM training

Once someone has gone through the training courses, the environment they used will need to be refreshed in the following way:

1. Log in as T19RB702 through SSH (using PuTTY, for instance).
2. Go to the /u02/netcracker/rbm/tools/RBM_702 directory:

```
cd /u02/netcracker/rbm/tools/RBM_702
```

3. Run the refresh script:

```
./refreshOne
```

Environment used for the training: devapp177 or devapp187.

15.4.4 RBM 9.0 EN

The training sample dump and scripts for RBM9 are located in \\ftp\ftp\Depts\SMS\CTE\RBM data\.

Known issues:

1. When you try to run System Monitor, you get the following error: "Task Master connection failed - could not find IP address of host 'pt01-rbm90.novalocal'."
   Solution: add line "10.101.255.83 pt01-rbm90.novalocal" to file C:\Windows\System32\drivers\etc\hosts. Ip is the IP of your instance, second part can be taken from the error message itself.

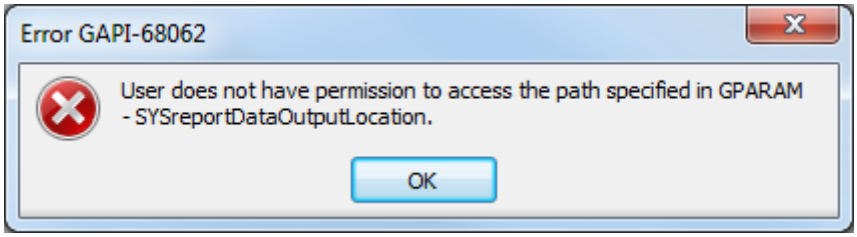
15.4.5 RBM - Known Issues with Cloud Instances

Problem: Cannot run reports from RBM UI.

Code:Error GAPI-68062

Description: User does not have permission to access the path specified in GPARAM - SYSreportDataOutputLocation.

Screenshot:



Solution

Source - Justin Ian Parker <justin.parker@netcracker.com>

on the app server- source infinys.env file then do:

cd $INFINYS_ROOT/RB/schema/roles

sqlplus sys/sys as sysdba

create or replace directory REPORTS_DIR as '/u02/netcracker/rbm/rb901t01/work/reports';

@reportprivs GENEVA_ADMIN REPORTS_DIR

On the remote desktop I was using the G: drive was not mapped therefore I also mapped G: to be //10.101.255.94/rb901t01

15.5 Release Training Environment

- **TOMS 10.3.1 Training Environment**
  - **Iter 14**
  - **Iter 13**
  - **Iter 15**

- **TOMS 10.1.1 Training Environment**
  - **New (iter 17)**
  - **Old (iter 11)**

- **TOMS 10.0 Training Environment**
- **TOMS 9.4.2 Training Environment**
- **TOMS 9.0 Training Environment**
- **TOMS 8.2 Training Environment**
- **RBM Environment**
- **Telefonica product gap server**
- **MANO servers**
- **Training [NC.SMS.NCU] tenant**
- **TOMS Training Environment rules**

Note

For description on how to work with environments/ handle issues, see Training Environments.

15.5.1 TOMS 10.3.1 Training Environment

15.5.1.1 Iter 14

Server #1 http://devapp054.netcracker.com:6910 (connected with RBM)

15.5.1.2 Iter 13

Server #1 http://devapp054.netcracker.com:6815 (connected with RBM)

15.5.1.3 Iter 15

Server #2 http://devapp054.netcracker.com:6400

Server #1 10.106.11.26:<port> Snapshot <SnapshotName> (under installation process). Order Order #000150509 - https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=91479123556131314 39 .

15.5.2 TOMS 10.1.1 Training Environment

15.5.2.1 New (iter 17)

Development server#1 (for courses: BAM, SQM, CBM, CPM, SPM, RDB Light, SFA, WFM, COM, PNM (US) http://devapp054.netcracker.com:6460
Development server#2 (for courses: SOM, PIM, SI, SIM, CIM, NP&D, RDB, HDS, PNM (Europe) http://devapp054.netcracker.com:6375

15.5.2.2 Old (iter 11)

http://devapp054.netcracker.com:6444/ - server#1;
http://devapp054.netcracker.com:6325/ - server#2. For online help; **do not use**.

15.5.3 TOMS 10.0 Training Environment

http://devapp054.netcracker.com:6308/ - server#1
http://devapp054.netcracker.com:6367/ - server#2

15.5.4 TOMS 9.4.2 Training Environment

Production server #1 http://devapp054.netcracker.com:6332/
Production server #2 http://devapp054.netcracker.com:6430/

Development server#1 (copy of server #1) http://devapp054.netcracker.com:6312/
Development server#2 (copy of server #2) http://devapp054.netcracker.com:6333/

15.5.5 TOMS 9.0 Training Environment

Development server http://devapp054.netcracker.com:6350/
Production server http://devapp054.netcracker.com:6300/

15.5.6 TOMS 8.2 Training Environment

Server was removed.
Backup in folder \\ftp\ftp\Corp\Documentation_Internal Product Trainings\Trainings 8.2\6340\new\

15.5.7 RBM Environment

New RBM Environment: INTITDPLEM-924 - Spaces for RBM needed RESOLVED

Decommissioned:
devapp398cn https://erp.netcracker.com/ncobject.jsp?id=9142842979413840463
db528cn https://erp.netcracker.com/ncobject.jsp?id=9144181229913567538

15.5.8 Telefonica product gap server

http://devapp054.netcracker.com:6365/ - connected with RBM server infinys_root: /u02/netcracker/rbm/rd398a3/infinys_root (Application Server: devapp398cn.netcracker.com). NC version 9.5, pseudo - 10.0. The following components included: BAIP, ROE, Loyalty Management, Campaign Management, Product Offering Catalog, Catalog UI, BOE (dependencies), xOE, CIHM, SFA, Product Lifecycle Management, SCM, Partner Management, Asset Management.

15.5.9 MANO servers

MANO 7.1 server http://devapp582.netcracker.com:4000/

15.5.10 Training [NC.SMS.NCU] tenant

SDNPOCIT-5194 - Training [NC.SMS.NCU] Create tenant CLOSED

15.5.11 TOMS Training Environment rules

see TOMS Environment

15.6 Specifying the external server's name in the NC Directory (to practice in opening NC pages in Excel using the Navigation menu)

In case of external training when the NetCracker server is published to the whole Internet or a number of IP-addresses, the below described steps should be performed prior demonstrating the Open in Excel functionality from the **Navigation** menu.

The Open in Excel functionality is used in the NC Environment training module. To establish the appropriate path for integration with Excel it is necessary to specify the published server's name in the NC Directory, so trainees may practice in opening the NetCracker pages in Excel using the **Navigation** menu.

To specify the published server's name in the NC Directory, do the following:

1. Log on to the system as a user with administrative rights (for example, "sysadm", "Administrator").2. In the browser's address bar, after the training server's name and port, add the "/tools/db150.jsp" string and press ENTER.

2. The entire training server URL in this case is as follows:
http://*server_name:port*/tools/db150.jsp.

The **DB Access** tab is displayed.

3. In the SQL query field, type the following:

"update nc_directory

set

"KEY" = 'netcracker.url',

"VALUE" = 'http://*external_server_name:port*',

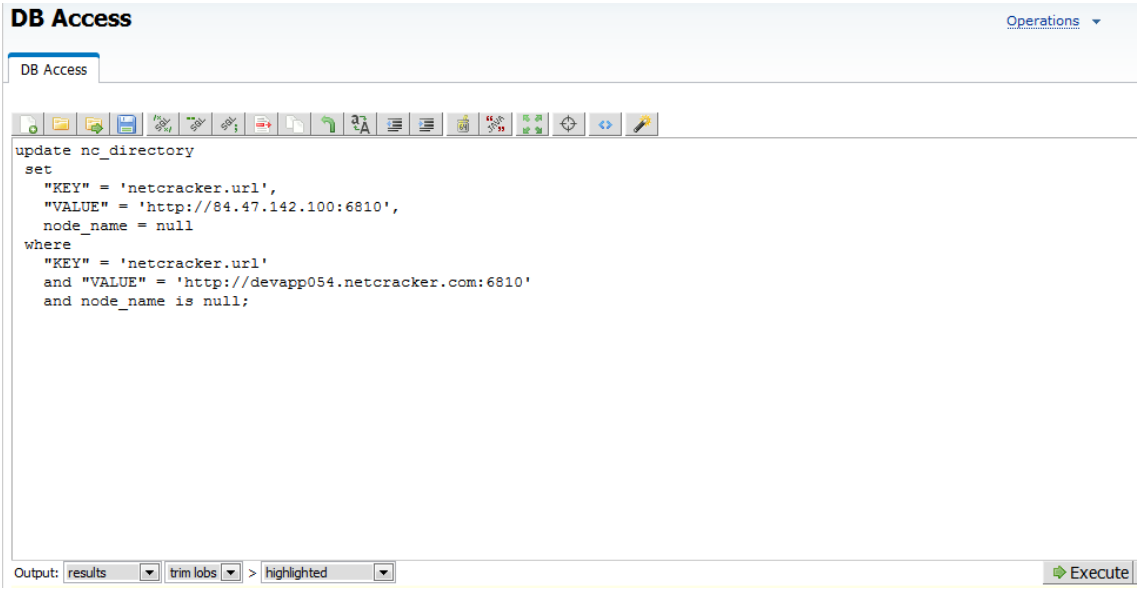
node_name = null

where

"KEY" = 'netcracker.url'

and "VALUE" = 'http://*internal_server_name:port*'

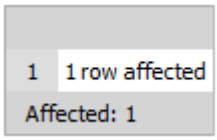
and node_name is null;".



4. Click **Execute**.

To make sure that the SQL query is executed, do the following:

5. Note that there is a message at the bottom of the page indicating that the row was affected.

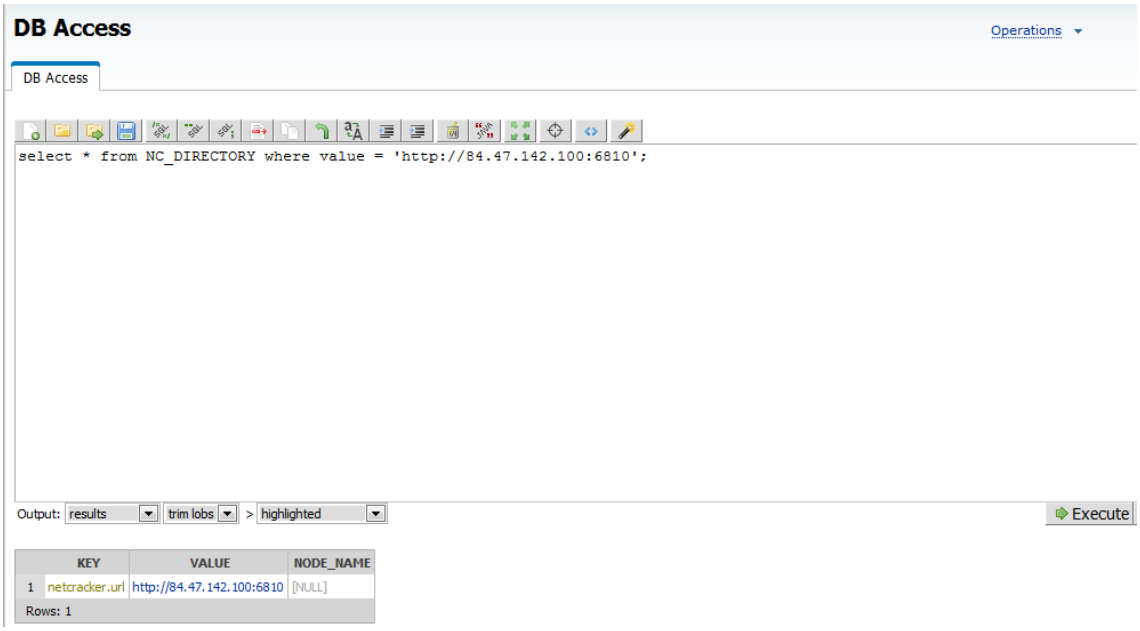


6. In the SQL query field, type the following:

"select * from NC_DIRECTORY where value = 'http://*external_server_name:port*'".

7. Click **Execute**.

8. Make sure that there is the necessary row found.



15.7 Publishing RBM Servers

Requirements and settings for Clientless VPN

1. Recommend to use **Internet Explorer9** or **10** to avoid issues with connection and screen resolution;
2. Use default settings of browser with changes below (Press Alt -> Tools -> Internet options -> Advanced -> Reset);
3. Add ***https://ras02.netcracker.com*** to **Trusted sites** (Press Alt -> Tools -> Internet options -> Security -> Trusted sites -> Sites -> copy&paste https://ras02.netcracker.com and press Add);
4. Change privacy level to **Low** (Press Alt -> Tools -> Internet options -> Privacy -> change level to Low -> OK).

15.7.1 No firewall

15.7.2 Firewall

Yes.

Everything is working properly now.

Thank you,

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: HelpDesk
Date: Monday, 11 May 2015 18:17
To: Andrew MacLennan
Cc: Andrey Denesh, 'Rose Strubel'
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Dear Andrew,

I understand now everything works?

Oleh Tymoshenko | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Andrey,

Just to let you know, everything is all set up now.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: Andrey Denesh
Date: Monday, 11 May 2015 10:10
To: HelpDesk, Andrew MacLennan
Cc: 'Rose Strubel'
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Dear IT,

Please help publish the server ASAP.

The training starts on May 13 and we need to have capability to test the access before the training.

Thanks,

Andrey

Andrey Denesh | Documentation and Training | Office: +7 (495) 926-9347 x1941 | Mobile: +1 (781) 786-1537 |--www.NetCracker.com--
Proven Partner to Communications Service Providers

From: Andrew MacLennan <andrew.maclennan@NetCracker.com>
Date: воскресенье, 10 мая 2015 г., 1:40
To: IT Group <hd@netcracker.com>
Cc: Andrey Denesh <denesh@netcracker.com>, Rose A Strubel <rose.strubel@NetCracker.com>
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hi Denis,

Thanks for the update but I must ask why this needs to be approved by Roman when it was already set up for just this purpose and why we weren't told that further approval would be required when the request was first submitted. All that was asked for initially was PM approval which has already been provided.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7799 691 773 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: HelpDesk
Date: Saturday, 9 May 2015 21:35
To: Andrew MacLennan
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hello Andrew,

We requested approve for works below from Roman Smirnov. We will keep you posted.

Best regards,
Denis Zolotovitckii | IT Group | ext. 777 | www.NetCracker.com

Proven Partner to Communications Service Providers

Category : General

Description :

Nothing needs to be opened externally on those servers. They need to be accessible from the Windows terminal server. The Windows terminal server needs to be accessible via RDP but then it should only be able to access devapp187 and db187, not the entire NC network. As of February, we didn't do the rdp access directly but via web access as explained in the e-mmail attached previously.

It was set up so that we wouldn't need to open ports for things like ssh and dba access externally as theses are required for RBM configuration and operations.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7799 691 773 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: HelpDesk
Date: Saturday, 9 May 2015 18:21
To: Andrew MacLennan
Cc: Andrey Denesh, 'Rose Strubel'
Subject: RE: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hello.

Andrew, could you please clarify what you want to open ports on servers: devapp187 and db187

Thanks.

Roman Muravev | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

I understand that. That is why this Windows terminal server and servers devapp187 and db187 were set up last year specifically to allow internal access for delivery of RBM training on site.

The method for accessing had to be changed earlier this year but if some further change has happened then I once again ask why we were not informed and why it wasn't raised was this request was first submitted. The request is quite clear and there was no indication from IT that it would be a problem until after close of business yesterday.

I have attached the e-mail thread related to the setup of this in February so that if anything is unclear it can be used as a reference to do the same thing now.

Regards,

Andrew

From: IT Group [mailto:hd@netcracker.com]
Sent: 09 May 2015 15:27
To: Andrew MacLennan
Cc: Andrey Denesh; Rose A Strubel
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hello.

Andrew, according to available information: "**Note**. Access to the *internal sites* from the whole Internet via control ports (ssh, telnet, rdp, etc.) cannot be opened."

http://infocracker.netcracker.com/eng/ITServiceCatalog/SitePages/Home.aspx#url=External-access-to-resources.aspx

Roman Muravev | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Denis,

This server was specifically set up last year to allow us to have remote access for the purpose of delivering on site RBM training with full hands on exercises.

We have done this on several occasions as recently as this February.

Has there been some change that we were not informed of and if so why was this not raised by IT when the request was first submitted?

Regards,

Andrew

From: IT Group <hd@netcracker.com>
Date: Friday, 8 May 2015 22:54
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Dear Andrew,
Publication our internal resource to internet with a lot of local accounts is not secure.
If you need only view function we can advise you (and of course help, show "how to" if you need) WebEx meeting tool where you can veiw your materials and Intercall 3787 for voice teleconference.

If you need to some interactive actions, we need mini buisness justification from you why exactly you need it. We will sent it to Roman Smirnov for approve. And only after approve we will start works for server preparation. It will take some time too.

I understand the importance. The progress now depends on how faster you can provide your desision. We are working 24/7 but sometimes we have "heavy" shifts and can't react fast.

Best regards,
Denis Zolotovitskiy | IT Group | ext. 777 | www.NetCracker.com

Proven Partner to Communications Service Providers

Request ID : 633459
Requester : Andrew MacLennan
E-mail : andrew.maclennan@netcracker.com
https://sd.netcracker.com/WorkOrder.do?woMode=viewWO&woID=633459 .

========== Forwarded Mail ==========
Message ID : <21415076.35011423499072618.JavaMail.SD$@umail.netcracker.com>
Sent Date : Mon, 9 Feb 2015 19:24:32 +0300
From : hd@netcracker.com
Sender MailID : hd@netcracker.com
Reply To : hd@netcracker.com
To : andrew.maclennan@netcracker.com
Subject : Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site
---------- Contents ----------

Andrew

Yes, sorry for my mistake , please use the existing users on server (user01, user02 ...)

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Olga,

I was able to get access but it took some work to get the right browser and security settings. I'm not sure how easy it will be to get a lot of people connected this way.

The userids you sent work for the vpn portion but don't seem to be on the server itself. I was able to login using the existing users on the server but this is a fairly complicated process having multiple logins and passwords.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Monday, 9 February 2015 13:32
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Subject: Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Andrew,

look at this, please:

Open in Internet Explorer the URL: https://ras02.netcracker.com/rdp/rbm
and enter user's login and password.

Then you'll see link to server "Terminal Server - 10.101.7.52". Click on this link and click to button "Connect".

Click on the icon of your User and enter password.
Check this access, please.

Browser can ask you to run some plugins, click to "YES" - this is normal question

Thank you for your time!

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Olga,

I will get a list of e-mail addresses but there are already a set of generic users set up on the Terminal Server for this purpose.

Again I ask why we cannot use the procedure that was set up for exactly this purpose.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Monday, 9 February 2015 09:25
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Cc: Andrey Denesh <denesh@NetCracker.com>, IT Group <hd@netcracker.com>, Sergey Ovchinnikov <Ovchinnikov@netcracker.com>
Subject: Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Could you send me list of e-mails those people, and who will connect to server from NC team?

Thank you for your time.

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Olga,

There will probably be different people each day this week but this should be the list for today.

Zawadzka Aleksandra; Orłowski Andrzej; Nguyen Dinh Chinh; Wądołowski Grzegorz; Bajor Izabela; Nowosielska Paulina; Frąckiewicz Paweł; Kurowski Jacek; Podolecka Ewa; Kalinowska Joanna DN; Kobus Adam; Lesiak Paweł; Bogdanowicz Lilla; Gawryła Hanna

May I ask what has changed in the security policy and when it changed?

More importantly, why when this request was first submitted were we not told?

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Monday, 9 February 2015 08:06
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Cc: Andrey Denesh <denesh@NetCracker.com>, IT Group <hd@netcracker.com>, Sergey Ovchinnikov <Ovchinnikov@netcracker.com>
Subject: Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Andrew,

Please,
Send me list of people who will connect to server.
I must create accounts for them. And it will be a connection by browser, not by AnyConnect
Regards,
Olga Lupovskaya

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

This server was set up along with an application server and db server on a separate VLAN so that it could be published. It is not even accessible directly via VPN.

It was published previously on at least two occasions last year.

What has changed?

This request was first submitted a month ago. If there was a problem with security policy why was it never mentioned?

Regards,

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Monday, 9 February 2015 07:09
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Subject: Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Hello Andrew,

At present time we can't publish this server - VPN access only, according to the security policy.

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hello,

What jus the progress on this request?

Regards,

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Friday, 6 February 2015 11:48
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Cc: IT Group <hd@netcracker.com>
Subject: Re: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Hi Andrew,

Do you used program Cysco AnyConnect anytime? When you use Cisco AnyConnect you can use RDP access to computer in NC network. When you use multiply VPN access to NC network , you can connect to NC network on many computers at one time. You can install this client on training computers and grant access to NC network for these computers by RDP.

regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Olga,

I am not sure what you mean by the multiple VPN access.

Can you explain this to me.

In the past we have published the server to a public IP address. That is why it was set up to be isolated from the rest of the NC network except for the RBM training server.

Regards,

Andrew

From: IT Group <hd@netcracker.com>
Date: Friday, 6 February 2015 10:55
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Subject: FW: Remote Access To RBM Training Server from T-Mobile Poland Client Site

Andrew,

For connection on server you can use the multiple VPN access. Could you use this type of access for TMPL training?

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi Jadwiga,

I had to resubmit the remote access request for the TMPL training.

Could you please approve it.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: IT Group <hd@netcracker.com>
Date: Thursday, 5 February 2015 13:24

To: Andrew MacLennan <andrew.maclennan@netcracker.com>, Rao Venkata Subba Rambhatla <subbarao.rv@NetCracker.com>
Subject: Remote Access To RBM Training Server from T-Mbile Poland Client Site

Hello Mr. MacLennan,

We can't open access without Jadwiga's approve, or TM - Rao Venkata Subba Rambhatla can approve it.

Hello Mr. Subba Rambhatla,
could you approve this access?

Regards,

Olga Lupovskaya | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description : Previously Submitted Request for this 578873 show as closed without ever having been completed.

The GP code is DT.IM.TMPL.BAAS.

We require rdp access to the training_terminal server on port 3389 for delivery of client training week of 9th February.

The internal IP address is 10.101.7.52 and it has previously been published to the external address 84.47.142.115.

A request has been made to TMPL for their IP address but if access could be opened up without restriction for February 9th then we can add the address restriction from the 10th - 13th.

Request ID : 578873
Requester : Andrew MacLennan
E-mail : andrew.maclennan@netcracker.com
https://sd.netcracker.com/WorkOrder.do?woMode=viewWO&woID=578873 .

Hi
Please try to add ras address to compatibility list via below instruction:
http://winaero.com/blog/how-to-enable-compatibility-view-in-internet-explorer-11-ie11/

Thank you,

Alexey Bublienko | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Could we also try removing the IP address restriction on the RDP connection? It would only need to be available until the endo of tomorrow and we may be able to get access to it via a different network if the restriction is gone.

Regards,

Andrew

From: IT Group <hd@netcracker.com>
Date: Thursday, 21 May 2015 12:18
To: Andrew MacLennan <andrew.maclennan@netcracker.com>
Cc: Andrey Denesh <denesh@NetCracker.com>, 'Rose Strubel' <rose.strubel@netcracker.com>, Thijs Riemersma <thijs.riemersma@NetCracker.com>
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training

Colleagues,

You should use IE 8 or higher to connect to https://ras02.netcracker.com/rdp/rbm

Viktor Zhupikov | IT Group | ext. 777 | www.NetCracker.com

Proven Partner to Communications Service Providers

Still no luck with Active X but we are attempting to get the port opened up on this end. It is a training facility rather than a DT office where people are using their own computers so it is all a bit complicated.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: HelpDesk
Date: Wednesday, 20 May 2015 20:41
To: 'Rose Strubel'
Cc: Andrew MacLennan, Andrey Denesh, HelpDesk, Thijs Riemersma
Subject: RE: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hi,

What browser do they use? Please try to run RDP in Internet Explorer using ActiveX.

thanks.

Damir Sungatov | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

They are using desktops in a training room, not laptops. Not sure if there is a difference here. The computers are running Windows 7 but I don't think that would impact anything.

From: IT Group [mailto:hd@netcracker.com]
Sent: Wednesday, May 20, 2015 7:04 PM
To: Andrew MacLennan
Cc: Andrey Denesh; HelpDesk; Rose A Strubel; Thijs Riemersma
Subject: Re: [Request ID ##633459##] Remote Access For Delivery of DT Training
Hi Andrew,

We have check it from our side and resolution was ok, 1366x768 for laptop. Can you please send me a screenshot of this? Is this porblem the same for all clients?

thanks.

Damir Sungatov | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

We were eventually able to get all the users connected but the java client seems to be max out at 640x480 which is not close to high enough to support the RBM applications.

Is there a solution for this? If not we'll need to change the port number or something.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

Hi Andrew, Thijs,

We have created users for access to clientless VPN for accessing training via web browser, as it was previously. They were sent via separate mail to Thijs, as PM of project.

You can use the same link https://ras02.netcracker.com/rdp/rbm.

Can you please check the access and let us know if you have any issues or questions.

thanks.

Damir Sungatov | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Andrew,

Yes, we can, and do so. But it will take little more time.
Is there list of persons who will be on the training remained the same?
Please specify the name of the responsible manager from NetCracker.
We also need an approval of TM / PM Project to create accounts.

Oleh Tymoshenko | IT Group | ext. 777 | www.NetCracker.com

Proven Partner to Communications Service Providers

Category : General

Description :

Alternatively, in February we had access set up via http where users were created temporarily to login to https://ras02.netcracker.com/rdp/rbm. From there access to the just terminal server has been configured.

Would it be possible to do this again? When I access that and login as myself the terminal server access is still available.

Regards,

Andrew

Andrew MacLennan | Senior Technical Trainer | +44 7772 462 139 |-www.NetCracker.com--

Proven Partner to Communications Service Providers

From: HelpDesk
Date: Wednesday, 20 May 2015 09:57
To: Andrew MacLennan
Cc: Thijs Riemersma, Andrey Denesh, 'Rose Strubel'
Subject: RE: [Request ID ##633459##] Remote Access For Delivery of DT Training

Hello Andrew,

We have published this server 10.101.7.52 to the internet. Please use this address for connection via RDP outside the NC network: 84.47.142.115:39674 .

Please note the following:
1. I think you noticed a non-standard extrenal port - 39674. This is done for security. After connecting this address and port it will be re-directed to 10.101.7.52:3389 inside NC.
2. This address is available only from 217.86.168.50 (inside NC this port is closed).
3. The server will be available outside till 17:00 EST, on May, 22th
4. No VPN required for access.
5. List of local users - the same.

Please check, If you have any questions or issues please us know.

Oleh Tymoshenko | IT Group | ext. 777 | www.NetCracker.com
Proven Partner to Communications Service Providers

Category : General

Description :

Hi,

External IP from the training room is 217.86.168.50

Cheers

Thijs

15.8 Training Servers Management Guide

- Introduction: What is this all about
- Tasks to be Accomplished
- Solution Types
- Implemented Projects and Deployed Servers
- Useful Links
- TSM Glossary

15.8.1 Introduction: What is this all about

Complementing the activities taken by the Customer Documentation and Training (CDT) department whose staff should fully support product delivery through:

- the design of documentation and release training courses
- the provision of documentation sets (releasing the documentation files and Online Help).

But there is also Training Servers Management (TSM) as an assisting part aimed to support the Release Training Environment. That environment should be constituted by a variety of dedicated servers (instances) created in the cloud by TSM Manager and configured for the requesting trainers.

This Guide is a TSM reference point and it provides instructions for TSM Managers.

Team Interoperability

To accomplish the jobs, TSM Manager should cooperate with the following departments:

In cooperation with	Jobs
Release Engineering Group (Release_RE_Group)	out-of-the-box (OOB) assemblies
Dedicated RE (Georgy Kozlov)	a custom patch integration custom patch integration
IT Deployment	global server-related issues, migration
NC Installations Support Sector	IT Engineer
CDC (Career Development Center) group	provide the required information to CDC groups, fix the OOB server issues. Contacts: Aleksei Pakhomov.
TDM (Training Delivery Managers)	see Servers management instructions for TDMs

15.8.2 Tasks to be Accomplished

The following tasks are typical (links to use cases are given below):

Tasks	Use cases
Create etalon server instances to deploy: versioning,	Create an instance of new NC version

Tasks	Use cases
iterating etc. as a mainstream.	
Update old instances (fix the arising issues)	Fix the issues on instances
Link TOMS and RBM servers	Link TOMS to RBM
Update old instances (add some objects to the imports patch)	Add zips to custom patch
Support total servers' migration to the cloud (communicating with IT Deployment)	Manage the resources, Server migration to the Cloud
React to the incoming automatic alerts	Prolong servers lifetime and clean up the space
Resolve server issues (communicating with IT Deployment)	Fix the issues on hardware servers, Manage server files
CDT/CDC Requests satisfaction	Preparing the server for training delivery/development

15.8.3 Solution Types

When a server is requested it means that a complete product solution suite should be deployed as the server for the particular project. Typical are the following solutions/projects:

- TOMS Environment (Telecom Operations and Management Solutions)
- RBM (Rating and Billing Manager) in DMZ (DeMilitarized Zone)
- RBM for TOMS
- MANO Platform

15.8.4 Implemented Projects and Deployed Servers

Implemented OOB projects are listed at https://**sps3**.netcracker.com/corporates/NetCrackerProductReleaseTrainings//NetCracker%20Product%20Release%20Trainings/Forms/AllItems.aspx .

The referencing samples of supporting servers in use (Etalons) and training environment rules are specified here:

- https://**bass**.netcracker.com/display/CDT/Release+Training+Environment
- https://**bass**.netcracker.com/display/CDT/RBM+Training+Environment.

15.8.5 Useful Links

This TMS Guide:

- https://**bass**.netcracker.com/display/CDT/Training+Servers+Management+Guide

Configurations:

- https://**bass**.netcracker.com/display/CDT/TOMS
- https://**bass**.netcracker.com/display/CDT/RBM+configurations

Server Creation Instructions:

- https://**bass**.netcracker.com/display/RnD/Recommended+NC+Iteration+for+New+Product+Projects+and+CR

- https://**bass**.netcracker.com/display/JPG/Create+and+configure+RBM9

Training Environment (current servers):

- https://**bass**.netcracker.com/display/CDT/Release+Training+Environment
- https://**bass**.netcracker.com/display/CDT/RBM+Training+Environment ---- возможно устарело

- https://**erp**.netcracker.com/ncobject.jsp?id=9128088445213250054
  NMS > Netcracker > devapps054
- https://**erp**.netcracker.com/ncobject.jsp?id=9128097675413279848
  NMS > Netcracker > devapps054 > TOMS_home1
- https://**erp**.netcracker.com/ncobject.jsp?id=9141068442413572465
  NMS > Netcracker > devapps054 > RBM Home
- https://**erp**.netcracker.com/ncobject.jsp?id=9141068442413572466
  NMS > Netcracker > devapps054 > RBM Home > rbmd0541

- NetCracker User Training Catalog
- NetCracker Developer Training Catalog
- Modules and Components on **project** resource
- PSUP Components List on **BASS** resource.

15.8.6 TSM Glossary

15.8.7 TSM Glossary

Let's strictly define basic terms for our effective communications.

Term	Description	Example
Hardware server (database server, application server, cloud server) / Environment / Space	Hardware resources: physical entity	Application server devapp054, Database server db044,
Tenant	CDT dedicated Space in the Cloud	Tenant NC.SMS.NCU
Server / instance	Logical entity. A dedicated server part with software installed (based on application server)	u32_t321_6400
Server URL	Server link	http://devapp054.netcracker.com:6400
Database schema	A dedicated server part with database deployed (based on database server)	U32_T321_6400
SID	System Identifier applied to a particular entity within the database	DBG115

Term	Description	Example
TDM	Training delivery manager; manages the instances used for the customer traiings.	
TSM	Training servers manager; mailtains the oob instances/hardware servers.	
CDC	Career Development Center	
CDT	Customer Documentation and Training	
ERP	Enterprise Resources Planning system	
Netcracker Components to be installed	(TOMS 10.3)	
Generic		
PBA*	Phone book America	
PBE**	Phone book Europe	
miniAM / miniAM_hotfix	mini All Modules	
AM	All Modules	
BOE*	Business order entry	
SFA*	Sales force automation	
BAIP*	Billing Activation and Information Provider	
HDS*	Historical data storage	
MINIbam*		
CIA*		
BAM*	Business activity monitoring	
OMD*		
TTM*	Trouble ticket management	
GWT_Linkage		
NCU_9.4_12.zip		
RDB**	Replicated database	
OFF_STP**		
DPE**	Design and planning	

Notes:
*) To be installed on Server #1

**) To be installed on Server #2

Non-asterisked = on both Servers

15.8.8 Server-Related Object Model

15.8.8.1 Servers structure

The universe of Netcracker dedicated servers can be described in object terms created in Netcracker ERP System.

Server-Related Object Model: Non-Cloud

NMS

NetCracker

Application Servers Hardware

devapp054 - **Application Server**

TOMS_home1 - **Application Home**

u32_d54_6300 - **Installed Netcracker Instance**

http://devapp054.netcracker.com:6300	/u32_d54_6300	NC.SMS.NCU	Sep 30, 2017	U32_D54_6300@DBG115_1523_db044.netcracker.com

RBM home - **RBM Home**

rbmmd0541 - **RBM Instance**

DB Servers Hardware

db044 - **Database Server**

ora102 - Oracle Product Installation

ora112 - **Oracle Product Installation**

DBG115 - **Oracle Database Instance (SID)**

U32_D54_6300 - **Database Schema**

ora12.1.0.2se2 - Oracle Product Installation

Server-Related Object Model: Cloud

Cloud - IaaS cloud01

Tenant - Training [NC.SMS.NCU]

IP

15.8.8.2 Servers parameters

Note that the application server is characterised by WebLogic and Java versions; database server is characterised by Oracle version.

Cloud IP incorporates both application and db servers and is characterised by WebLogic, Java and Oracle versions.

Also, the physical location parameter is sometimes very important for instances work (e.g., TOMS and RBM servers to be connected can't be located in different places). Note that all dedicated devapp/db servers are located in Moscow, while tenant server is currently located in Cincinnati.

15.8.9 Training Environment types

Training Environment can be set up depending on the Solution Type:

- TOMS Environment
- RBM Configurations
- MANO Environment
- Others

15.8.9.1 TOMS Environment

TOMS is the most common OOB servers type.

For all the NC versions, 4 servers should be deployed:

- Production Server #1
- Development Server #1
- Production Server #2
- Development Server #2.

Here is - why.

15.8.9.1.1 Production vs. development servers

TOMS servers can be divided into:

- Production (**prod**, etalon) server - used for taking copies.
- Development (**dev**, test) server - has the same configuration as production server. Used for testing and developing OOB courses.

Common is the following workflow:

1. Deploy **prod** and **dev** servers of the same configuration.
2. Test training exercises on **dev** server.
3. In case some issues occur, get a fix and install it on **dev** server (see use case)
4. Test the issue, make sure it works.
5. Install fix on **prod** server.

15.8.9.1.2 Servers configuration

Due to incompatibility of some of installed NC components (see Installation sequence 10.2.3/10.3), TOMS servers are divided to:

- Server #1 ("big" server) - all, including BAM, SQM, CBM, CPM, SPM, RDB Light, SFA, WFM, COM, PNM (US), excluding courses from Server #2.
- Server #2 ("small" server) - only SOM, PIM, SI, SIM, CIM, NP&D, RDB, HDS, PNM (Europe).

I.e., all the courses should be developed/delivered on Server #1, except for **SOM** **PIM** **SI** **SIM** **NP&D** **RDB** **HDS** **PNM/EUR** **CIM** courses.

Patches to be installed for training couurses

Server #1	Server #2
Generic	
PBA	PBE
miniAM	
miniAM_hotfix	
AM	
BOE	RDB
SFA	OPF_STP
BAIP	DPE
HDS	
CIA	
BAM	
OMD	
TTM	
GWT_Linkage	
NCU_9.4_12.ZIP	

15.8.9.1.3 Hardware servers to install TOMS

Application server and DB server are needed in a pair for TOMS installation:

- Application server to be used - devapp054 (with required parameters depending on WebLogic and Java version)
- Db server to be used - db044 or db664 (depending on the requiredOracle version).

Name	Address
devapp054	https://erp.netcracker.com/common/uobject.jsp?tab=_Physical+Server&object=9128088445213250054
db664	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9145996657813913844
db044	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9127990633213026679

OR: Cloud server is needed defined by all the above parameters.

Note: If deployed in a cloud Tenant NC.SMS.NCU, an assigned IP object will include both Application server and DB server.

See also:

- Hardware parameters to install TOMS - see Recommended NC Iteration for New Product Projects and CR.
- Particular TOMS instances with the assigned ports are described in Release Training Environment section.

15.8.9.1.4 Linking TOMS to RBM

All the servers #1 should be connected to RBM.

See:

- RBM configurations description
- Link TOMS to RBM use case.

15.8.9.1.5 Security

Commonly, any devapp server is accessible using `sysadm` /`netcracker` as login/password.

Currently, there is an exclusion for http://devapp054.netcracker.com:6333): the standard password for `Administrator` and for `sysadm` is changed to "`netcracker1`".

15.8.9.1.6 Release Issue Tracker

To keep track on the issues recoverable on the servers, the tickets created to fix bugs etc. are registered for quick reference in the specific directory: http://bass/display/InfoTM/Release+Issue+Tracker.

15.8.9.2 RBM Configurations

RBM servers are usually described as:

Infinys_root : /u02/netcracker/rbm/rb790a1/infinys_root
Tnsping : (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = db777.netcracker.com)(PORT = 1523)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = RB790A1)))
ECA url : http://devapp790:8020/eca-webservices/services ---------- ECAUSER/ecaeca1@
Weblogic console : http://devapp790:8020/console ---------- wlsadmin/wlsadmin123
Database user : geneva_admin/geneva_admin

15.8.9.2.1 Case A: RBM for TOMS

These are RBM servers that are to be connected to TOMS servers #1. Dedicated hardware servers or cloud server can be used for RBM installation.

15.8.9.2.1.1 Hardware servers required to install RBM

	RBM 8.0.4	RBM 9.0.4	RBM v 9.0.4 RC6
Dedicated Application and DB servers	devapp789, db776	devapp790, db777	Linux 11g and 12c packages in below location: `/irb/candidate/rc/rb/9.0/RB_9.0.4.RC4/full`
Hardware parameters	• RHEL: 6.4 • Oracle: 11.2.0.3 • Weblogic : 10.3.6	• RHEL: 7.2 • Oracle: 12.1.0.2 • Weblogic : 12.1.3	• PF : 6.0.4 • Java : 1.8 • Web logic : 12.1.3.0 • Jboss : jboss-eap-6.1.0 • Oracle : 12.1.0.2.SE, 11.2.0.3.SE • Utilities : 6.0.3.13

	RBM 8.0.4	RBM 9.0.4	RBM v 9.0.4 RC6
	• Java: 1.7	• Java: 1.8	• Server : camvl21 (RHEL7) **Note:** This RC contains change in OS: RHEL7/JDK 1.8/ WINDOWS 10 & 7 PC builds for GUI.
Info on HW parameters - from	*Petr Mitin*	*Petr Mitin*	*Mikhail Ignatev* order example: https://erp.netcracker.com/ncobject.jsp?id=9146756077813553848

For information refer to INTITDPLEM-924 - Spaces for RBM needed RESOLVED .

Links for App/DB servers

RBM for TOMS	Link
devapp789	https://erp.netcracker.com/common/uobject.jsp?tab=_Physical+Server&object=9147437686413887420
db776	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9147437635113886759
devapp790	https://erp.netcracker.com/common/uobject.jsp?tab=_Physical+Server&object=9147437321413882344
db777	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9147437635113886776

15.8.9.2.1.2 RBM Installation

On how to install RBM server for TOMS, see How to Create an Instance (RBM for TOMS) section.

15.8.9.2.1.3 TOMS-to-RBM connection procedure

1. Create TOMS server, see How to Create/Update an Instance (TOMS)
2. Create RBM server How to Create an Instance (RBM for TOMS)
3. Link TOMS and RBM servers Link TOMS to RBM

15.8.9.2.2 Case B: RBM in DMZ zone

These are servers for pure-RBM training. Dedicated hardware servers or cloud server can be used for RBM installation.

For information on servers creation, see How to Create an Instance (RBM in DMZ).

Currently devapp187 and db187 is used.

RBM in DMZ	Link
devapp187	https://erp.netcracker.com/common/uobject.jsp?tab=_Installed+Instances&object=9140974984613200338
db187	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9137987694613597317

Contacts: Evgeniy Belov, Aleksandr Rozhnov, Pavel Lapaev, Rose A Strubel.

15.8.9.2.2.1 RBM Installation

On how to install RBM server in DMZ, see How to Create an Instance (RBM in DMZ).

See also: RBM Training Environment

15.8.9.3 MANO Environment

The hardware and its parameters for MANO servers see in INTITDPLEM-502 - Provide servers for MANO RESOLVED

Server name	Link
devapp582	https://erp.netcracker.com/common/uobject.jsp?tab=_Physical+Server&object=9145434108813774191
db625	https://erp.netcracker.com/common/uobject.jsp?tab=_Oracle+DB+Instances&object=9145434108813774227

The only instance we have is MANO 7.1 http://devapp582.netcracker.com:4000/.

Contacts: Alexander Ilyenko, Dmitry Golubev, Ivan Pushchin (questions on server installation).

Contacts from CDT team: Sergei G. Kolesnikov, Evgeniy Osintsev.

15.8.9.4 Others

Collection management (CM) server (addition to RBM server), i.e., CM doesn't work without RBM (rating and billing man-t)

Contacts: Evgeniy Belov, Hima Bindu Kuntla, Swarna Nyalakanti, RBM DPL Support Group <RBMDPLSupportGroup@NetCracker.com>.

15.8.10 Courses vs. Netcracker Components

Any training course relates to a certain Netcracker component (as a rule, matched as one-to-one).

On Production vs. Development servers see TOMS Environment page.

See all the **courses** listed on *BASS* here: https://bass.netcracker.com/pages/viewpage.action?spaceKey=NCPTC&title=NetCracker+Product+Training+Catalog (covering User Training and Developer Training). We will need, however, the User Training part.

See PSUP **components** listed on *BASS* here: https://bass.netcracker.com/pages/viewpage.action?spaceKey=ProdS&title=PSUP+Components+List. This list should be synchronized with the below list on this page.

See the **components** listed on *project* resource here: https://project.netcracker.com/common/uobject.jsp?tab=_Product+Components&object=3102935343013925105
(accessible through https://project.netcracker.com, *Navigation* > *Modules and Components* menu).

***) Preliminary Notes:**

- For each course *Generic*, *AM* and *miniAM* patches are unconditionally required, above some particular specified in *Patches to install* column below.

- On the contents of patches you can be consulted with *NetCracker_9.4.1.system.configuration.xlsx* file (now available for version 9.4.1 system configuration only but can be requested from RE_Release_Group).

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
1	Fault & Performance Management	**F&PM**	?	
1	MANO Resource Orchestrator	**MRO**	MANO Resource Orchestration REST Client ?	
1	VNF Management	**VNF**	VNF Management REST Client ?	
1	Service Quality Monitoring	**SQMM**	Service Quality Monitoring	
1	Traffic Flow Analyzer	**TFA**	?	
1	RDB Light	**RDBL**	RDB light	
2	Product Catalog	**PIM**	Product Catalog	OPF_STP_<NC_Iter>.zip
2	Service Inventory	**SI**	Service Inventory	OPF_STP_<NC_Iter>.zip
2	Customer Information Management	**CIM**	Customer Information Management	OPF_STP_<NC_Iter>.zip
1	Task Assignment Rules	**TAR**	Task Assignment Rules	
1	Discovery & Reconciliation	**D&R**	Reconciliation Engine	
1	Process Orchestrator for Administrators	**POADM**	Process Orchestrator	
1	Customer Order Management	**COM**		
2	Service Order Management	**SOM**		OPF_STP_<NC_Iter>.zip
1	NetCracker Environment	**NCENV**		
1	Offering Catalog Configuration	**OCC**	Product Offering Catalog ?	
1	Solution Configuration Management	**SCM**	Solution Configuration Management	

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
1	NetCracker Application Administrator	**AADM**		
1	Asset Management	**ASM**	Asset Management	
2	Service Catalog	**SIM**		
1	Configuration Workshop	**RBMCW**		
1	Mediation DataFlow	**MDF**	Mediation DataFlow	
1	Customer Self-Service Portal Administration	**CSS**	Self-Service Portal	
1	Customer Problem Management	**CPM**	Customer Impact Analysis Trouble Ticket Management	CIA, TTM
1	Customer Billing Management	**CBM**	Business Order Entry Billing Activation and Information Provider	BOE, BAIP
1	Collections Manager	**COLLECTIONS**		
1	Configuration Management	**CM**		
1	Workforce Management	**WFM**	WFM.Workforce inventory?	
1	Outside Plant	**OSP**	OSP	
1	IP Planner	**IPP**	IP Planner	
1	Real Time Convergent Charging Overview	**RBMRTCO**		
1	Customer Configuration Management	**RBMCCM**		
1	Rating Plan Configuration & Maintenance	**RBMRCM**		
1	Reconciliation Framework	**RECFW**		
2	Historical Data Storage	**HDS**		HDS
1	Historical Data Storage for Developers	**HDSDEV**		
1	Modeling xDSL in Resource Inventory	**XDSL**		

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
1	Device Library	DL		
1	Marketing & Sales Management	M&SM		
1	Service Quality Management	SQM		
1	Service Problem Management for Advanced Users	SPMADV		CIA, TTM
1	Service Problem Management	SPM		CIA, TTM
1	Service Activation	SA		
1	Product Lifecycle Management	PLM		
1	Partner Management	PM		
1	Network Platforms			
1	Knowledge Management			
1	HR Management			
1	Financial Analytics			
1	Administrative Services			
1	Customer Problem Management for Advanced Users	CPMADV		CIA, TTM
1	System Administrator Course	SYSADM		
2	Network Planning & Design	NP&D		DPE
1	Modeling Microwave Links in Resource Inventory	MWLINKS		
1	Dashboards and Widgets	D&W		
1	Modeling SDH/PDH in Resource Inventory	SDH/PDH		
1	Modeling IP/MPLS/ME in Resource Inventory	IP/MPLS/ME		
1	Solution Configuration Management for End Users	SCM		
1	Modeling Voice Solutions	VOICE		

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
1	Floor and Rack Space Management	FSM/RSM		
1	Modeling WDM/DWDM in Resource Inventory	DWDM		
1	Resource Inventory	RI		
1	Business Activity Monitoring	BAM		miniBAM, BAM
1	Phone Number Management	PNM		PBA (Phone book America)
1	Customer SLA / QoS Management			
1	Subscriber Inventory			
1	Device Management			
2	Replicated Database	RDB	Replicated Database	RDB
1	M2M Cloud			
1	SaaS/PaaS/DaaS/IaaS			
1	Service Delivery Platform			
1	Introduction to NetCracker Course			
1	Train-the-Trainer Sample Course			
1	Configuring Outside Plant	OSPCONF		
1	Mobile Backhaul			
1	Resource Activation			
1	Active Mediation System Administration			
1	Modeling HFC in Resource Inventory	HFC		
1	Modeling Mobile RAN Network in Resource Inventory	RAN		
1	Modeling Mobile Core Network (NSS) in Resource Inventory	MCORE		
1	Modeling L2TP in Resource Inventory	L2TP		
1	Modeling PBT in	PBT		

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
	Resource Inventory			
1	Modeling xPON in Resource Inventory	XPON		
1	Customer Self-Service Management for Developers			
1	Home Network			
1	NetCracker Database	NCDB		
1	Workflow I	WFI		
1	Workflow II	WFII		
1	Active Mediation	AMM		
1	Active Mediation Development Toolkit	AMMDEV		
1	NetCracker Integration Capabilities	INT		
1	Data Center Inventory Training	DCI		
1	Modeling Frame Relay in Resource Inventory	FR		
1	NetCracker Developer	NCDEV		
1	NetCracker Framework	NCFW		
1	Report Development for NetCracker Application Developers	REPORTS		
1	Process Orchestrator for Developers	PODEV		
1	Modeling ATM in Resource Inventory	ATM		
1	Contract Management for Advanced Users	CMANADV		
1	Service Activation Framework	SAF		
1	Service Visualization	SV		
1	Rating Operations	RBMROP		
1	Introduction to Integration Tools	RBMIIT		
1	Event Definition	RBMED		

Server № used	Course name (by User Training Catalog)	Course label	Component name (by Project catalog)	Patches to install *
1	Data Model	RBMDM		
1	Advanced Event & Rate Plan Configuration	RBMAED		
1	Advanced Customer Concept	RBMACC		
1	Real Time Promotions Overview	RBMPRO		
1	Products and Pricing	RBMPP		
1	Policy Control and Data Charging	RBMNPC		
1	Online Rating & Charging Solution Overview	RBMPOV		
1	Finance	RBMFIN		
1	Discount Configuration	RBMDIS		
1	Day to Day Operations	RBMDTD		
1	Billing Operations			
1	Sales Force Automation		Sales Force Automation	SFA

15.8.11 Servers management instructions for TDMs

Below are useful links with instructions on actions to be accomplished by TDMs (training delivery managers) and TSMs (training server managers):

- TDM-TSM interaction when requesting an instance for training delivery/development: Preparing the server for training delivery/development
- How to take an instance copy: see **Order on instance creation** in Create common and generic orders and How to create an instance in the cloud (working with snapshots).
  Note: when creating an instance, add TDM name to the **Instance Owners List** parameter in order to receive notifications concerning this instance:



- Resources management: see Server migration to the Cloud

15.8.12 Commanding Tools

For taking actions to support Training Server Management, for transparent communications the following tools can be used:

- Orders
- Tickets

15.8.12.1 Orders

Orders are the Netcracker ERP system objects created to initiate the request for solution deployment on the server (to create a Netcracker instance).

15.8.12.1.1 Order types

Orders can be of 2 types distinguished by creation style:

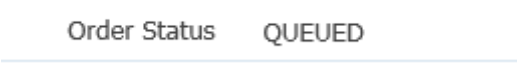
- Common type order
- Generic type order.

	Purpose	Launched From link	How To Link
Common orders	to create/update TOMS servers	https://erp.netcracker.com/common/uobject.jsp?tab=_Installed+Instances&object=9128097675413279848	Create common and generic orders
Generic orders	to create/update cloud servers, RBM servers **Note:** In generic orders, only Description populating is needed.	https://erp.netcracker.com/common/uobject.jsp?tab=_Active+Orders&object=9124421603213260750 (https://erp.netcracker.com > **Navigation > IT DPL OTS** > "NetCracker Corp").	

15.8.12.1.2 Order status

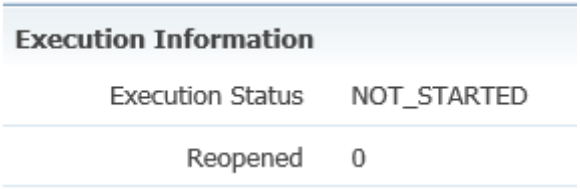
Once created, order is getting **Order Status** with the possible values:

- SUBMITTED - the order is just created
- WAIT_FOR_APPROVAL - in case the order is submitted not by the resources owner, approval is needed
- QUEUED - order is approved and waiting for assignment
- ASSIGNED - a person (from IT Deployment group) is assigned to execute the order
- CLOSED - the order is completed.



Once assigned, order is getting **Execution Status** with the possible values:

- NOT_STARTED
- IN_PROGRESS
- COMPLETE.



Execution Information	
Execution Status	NOT_STARTED
Reopened	0

Ordrer status/Execution status are displayed anytime within the order form.

Order examples:

- https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9147845919013136294
- https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9147117171813146945.

15.8.12.2 Tickets

Tickets are the standard means of business communication across the company in JIRA environment.

Tickets are the objects created to fix any server-related issues assignable to a defined group.

When related to OOB servers a ticket can be created by CDC group and assigned to CDT group.

Note: To fix OOB issues the **NC.SMS.NCU** Project Code should be used.

Examples:

- PSUPTW-2904 - Unable to create Event listner CLOSED
- SDNPOCIT-5194
- see use case: Fix the issues on instances

The own tickets can be also created by TSM Manager and assigned to another particular group.

15.8.13 Use cases

Typical use cases are described below:

- Create an instance of new NC version
- Preparing the server for training delivery/development
- Add zips to custom patch
- Fix the issues on instances
- Fix the issues on hardware servers
- Link TOMS to RBM
- Manage the resources
- Prolong servers lifetime and clean up the space
- Server migration to the Cloud

15.8.13.1 Create an instance of new NC version

In case CDT (or in minor cases - CDC) asks for a server of new version (in the current case - TOMS), do the following:

1. Write an e-mail to Release_RE_Group to inquire, whether the NC version is available and ready for use. Take the information on installation folder and installation sequence.
2. Proceed to create new installation order on ERP (see How to Create/Update an Instance (TOMS)).

3. As the instance is created, add it to the list here https://bass.netcracker.com/pages/viewpage.action?spaceKey=CDT&title=Release+Training+Environment.

Notes: This request should be stated in advance (about one week) before the assumed execution date. It should take this time to process the request.

For non-TOMS instances refer to corresponding instructions under Create an instance.

15.8.13.2 Preparing the server for training delivery/development

15.8.13.2.1 Server for training delivery

In this case TDM is requesting the instance to execute a certain course in certain dates with certain NC version - all defined in the Courses vs. Netcracker Components list.

Take the following steps:

1. Provide TDM with the valid ***Etalon*** server address (by e-mail or whatever). You should decide on Server#1 or #2, based on NC version and the required courses (see TOMS Environment).
   Note that in some cases, two servers will be needed (if some courses can't be held on a single instance).
2. Make sure that TDM has taken a training server as a copy from Etalon (get notified on the respective order created by TDM with the Project code). For information how to take a copy, see Create common and generic orders.
3. TSM should approve the mentioned order (approve application and db resources).
   Note: orders with project code only (**not NC.SMS.NCU**) should be approved!
4. If any error occurs using the copied server, help fixing. See Fix the issues on instances.
5. Publish the server to enable the training delivery. AI: TDM
6. Remove the server if it's not going to be used anymore. AI: TDM

Timing: about 10 days before the training date.

Note: this procedure is similar for CDC requests for a server. In this case, you provide the appropriate servers + training materials from the sps3 folder.

15.8.13.2.2 Server for training update/development

In this case TDM is requesting the instance to update or develop with certain NC version - all defined in the Courses vs. Netcracker Components list.

Take the following steps:

1. Provide TDM with the valid ***Development*** server address (by e-mail or whatever). You should decide on Server#1 or #2, based on NC version and the required courses (see TOMS Environment).
2. The course developer should work on this server.
3. If any error occurs using the copied server, help fixing. See Fix the issues on instances.

15.8.13.2.3 Example

For example, training on NC 9.4 with NC Environment and COM courses needed.

These two courses can be executed in Server #1 (see TOMS Environment).

Therefore, you provide etalon server #1 of 9.4.2 version, that is http://devapp054.netcracker.com:6332.

Then perform steps 2-4.

15.8.13.3 Add zips to custom patch

Custom patch includes the objects needed to accomplish some training exercises. Custom patch should be installed to all the TOMS servers.

In case some object should be added to the custom patch (requested by a training developer), do the following:

1. Get a zip file with required object (use the export import functionality: **Navigation**> **Administrative tools**> **Export/Import Sessions**). AI: requester or TSM. As a result, you should have a **zip_file_name**.zip file. There may be several zip files in case there are several objects to be added.
2. Create a ticket on REDNT, example: REDNT-451 - Update patch with imports COMPLETED. Ask Georgiy Kozlov (dedicated RE) to take the ticket.
   In ticket description, specify:

   Добавьте, пожалуйста, в сборку \\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\ импорты в аттаче.
   В import.xml прописать:
   <ITEM name="**zip_file_name**.zip" type="file"></ITEM>
   <ITEM name="**zip_file_name1**.zip" type="file"></ITEM> **(if there are several import files)**
3. RE should provide the patch (like \\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\NCU_9.4_11.ZIP).
4. Install patches to all the TOMS servers by creating INSTANCE_UPDATE order (see Updating instance in How to Create/Update an Instance (TOMS))

Contacts: Georgiy Kozlov, Release Engineering Group <ReleaseEngineeringGroup2@NetCracker.com>.

15.8.13.4 Fix the issues on instances

In this case a request comes from CDT or CDC (either as email message or JIRA ticket) describing an issue found on an instance that blocks some training exercise, do the following:

1. Create a ticket to the certain group defined by the affected product component. (AI: TSM or the ticket reporter) See Create a Ticket. Use **Project Code** = NC.SMS.NCU.
2. Get the fix from the team. For example **PSUPMED-10401**, the following components versions should be updated to resolve the issue:

   Mediation DataFlow to 9.3.4.26 ifx 38
   Mediation Common to 9.3.4.27 fix 24
   DataFlow Platform API 9.0.1.9 fix 4
   TBI - 8.0.23 fix 1
   DataFlow WS - 9.3.1.20 fix 3
3. Contact the Release_RE_Group to assemble the patch with these fixes (by e-mail).
4. RE group should take the required versions to a new patch or provide the existing patch with these versions incorporated. The patch example: *\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_AM_15_hotfix07.zip*.
5. Update the server by installing the patch to the dev server (initiate INSTANCE_UPDATE order, see Create common and generic orders).
6. Check if the problem is solved (test the server). If the issue's resolved, go further. If the issue's reproduced, report it to the ticket created at step 1.
7. Install the patch to the etalon server.
   Note: Prod/dev servers should always be updated with patches from RE only, not by some hack or workaround. Workarounds may be applied only to the training servers issues that should be fixed ASAP. The resolutions may be: add a patch to the instance by using a boiler, update a single component (without using a patch), running a script on server, etc.

15.8.13.4.1 Examples:

Example 1: JIRA ticket issued from CDC: **PSUPTW-2904 - Unable to create Event listner** CLOSED

Steps:

1. Create a ticket to the certain group defined by the affected product component - in https://bass.netcracker.com/pages/viewpage.action?spaceKey=ProdS&title=PSUP+Components+List .
   Use:

- Project Code: **NC.SMS.NCU**.
- AI: TSM Manager or the one who found the bug. <- **????**

Example 2:

1. Get a message:

RE: 10.3 OOB server

Elena Khazekova

Sent: Вт 30.05.2017 17:43
To: Anna Bolshakova; Sergey Trusenkov
Cc: Anastasiya Roor



И шаги

login to system>open any RI project> click Operations menu> click IP Planner

Эти новые кнопки должны быть по ссылке:
http://devapp054.netcracker.com:6400/common/uobject.jsp?tab=_Private+IPv6+Ranges&object=9131768764313871778

Best regards,
Elena Khazekova | Training Delivery Manager
Netcracker Technology
+7 (495) 926 9347| ext. 32322 | office
elena.khazekova | skype

Focused forward
Netcracker
Connect with us:

From: Elena Khazekova
Sent: Tuesday, May 30, 2017 5:38 PM
To: Anna Bolshakova; Sergey Trusenkov
Cc: Anastasiya Roor
Subject: RE: 10.3 OOB server

Подробности:
Согласна продукту в 10.3 добавляются новые виды IP ranges часть 3 Data Model:

https://sps3.netcracker.com/corporates/ProductDocumentation/_layouts/15/WopiFrame2.aspx?sourcedoc=/corporates/ProductDocumentation/IM/IP%20Planner.%20Extended%20Ranges%20Model/Functional%20Design%20Specification/9.0.1/NC.FDS.RI.IP_Planner.Extended_Ranges_Model_9.0.1_1.doc&action=default
У нас на сервере (IT15) их нет.

Best regards,

2. Compare the doc view...

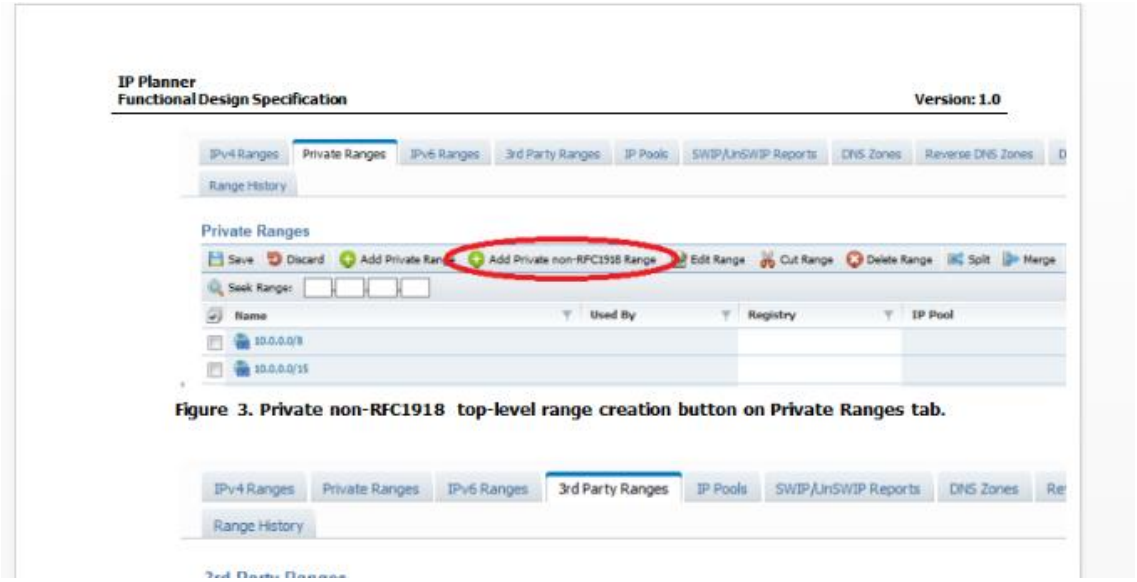
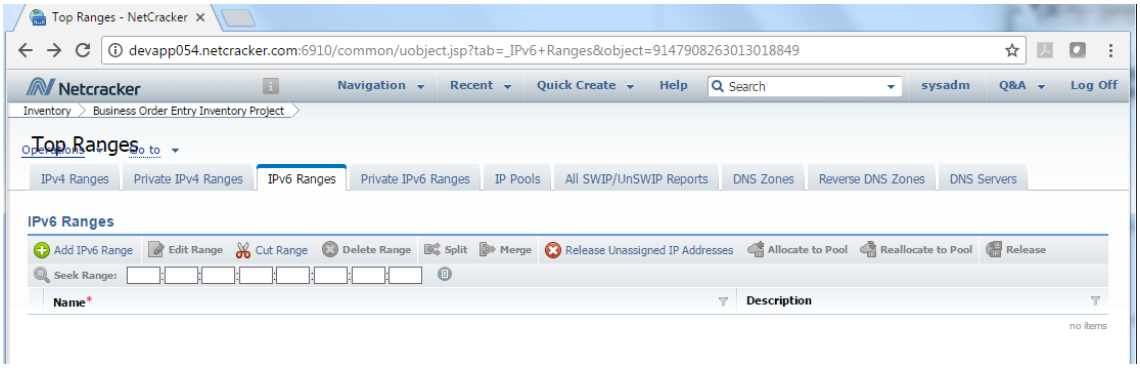
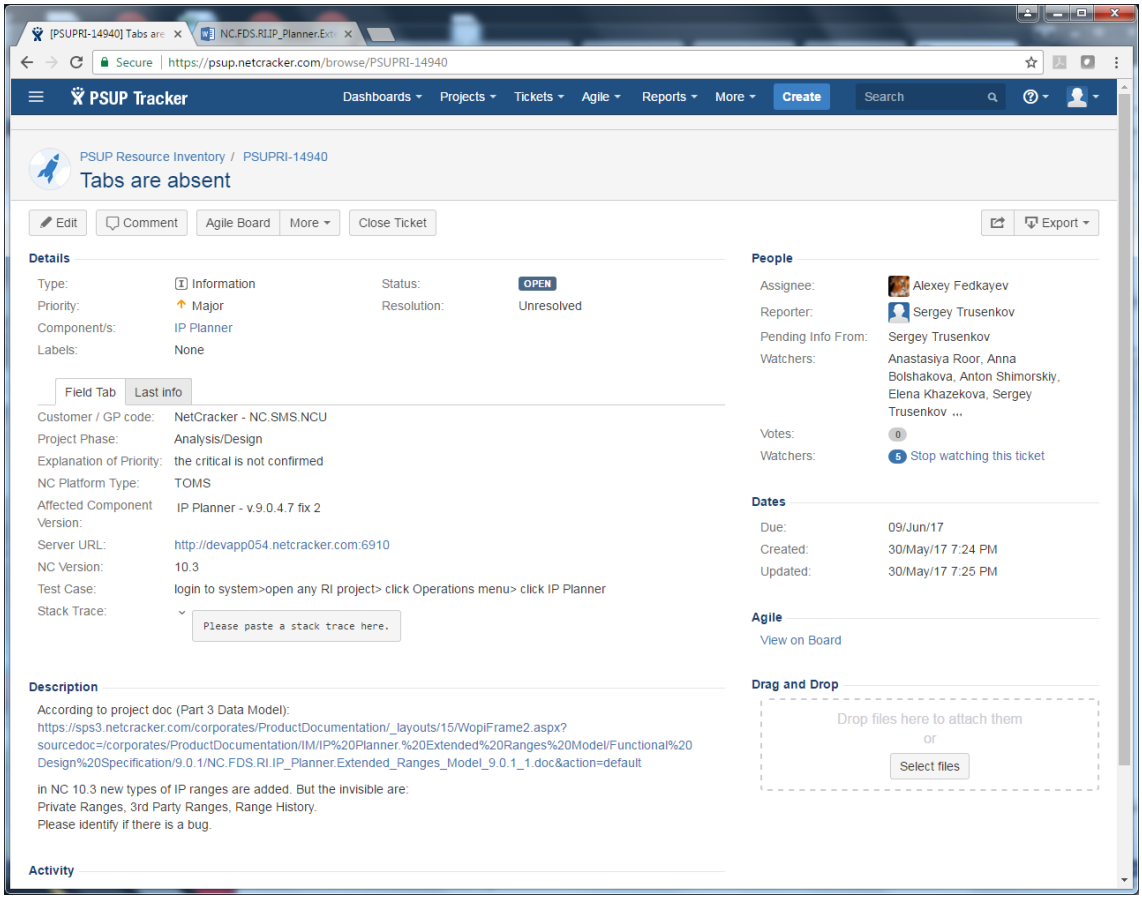


Figure 3. Private non-RFC1918 top-level range creation button on Private Ranges tab.

to the server view:



3. Create JIRA ticket for Resource Inventory Team: **PSUPRI-14940 - Tabs are absent** CLOSED



Note: Assignee will be defined automatically.

15.8.13.5 Fix the issues on hardware servers

In case the issues take place on devapp/db servers/tenant servers, most of them can be handled with help of IT Deployment Group.

Cases examples:

15.8.13.5.1 Lack of free space

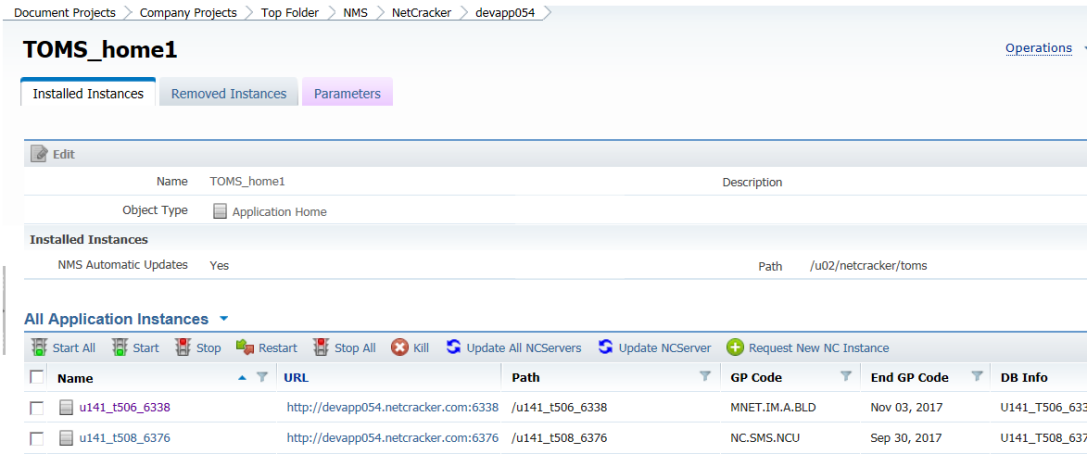
If there's not enough free space on devapp/db (it's usually resulting in servers working slow and inability to create more servers), there are the following solutions to this:

1. Check if there is enough % of free space (see Prolong servers lifetime and clean up the space).
2. Create a mail to *Documentation and Training CIS Group <DocumentationandTrainingCISGroup@NetCracker.com>* asking to remove the unused servers from devapp (create orders on removal, see **Order on instance removal** in Create common and generic orders).
3. Request a space increase on the required devapp/db, see Manage the resources.

15.8.13.5.2 Servers are not added to erp

There's sometimes a case when instance is created but not added to the corresponding erp page. In this case:

1. Write an e-mail to IT Deployment asking to add the string, for example, to TOMS_home1



Code for the activity NC.SMS.NCU.

2. Make sure a deployer has added the required data to erp page.

15.8.13.6 Link TOMS to RBM

15.8.13.6.1 Get the required TOMS and RBM instances versions

First, you should create TOMS and RBM instances. Please note the following rules:

1. TOMS should be "big" server (Server #1). See TOMS Environment.
2. TOMS and RBM servers versions should match:
   TOMS *10.1, 10.2, 10.3, 10.4* match to ***RBM*** *8.0.4*
   TOMS *10.5* matches to ***RBM*** *9.0.4 RC6*
   Note: this information came from Alexander Gorokhov (Release_RE_Group).
3. Several TOMS servers can be connected to one RBM server.
4. TOMS and RBM servers should have the same location (note that Tenant NC.SMS.NCU is located in Cincinnati, all the devapp and db servers are located in Moscow).

15.8.13.6.2 Link TOMS and RBM (for TOMS 10.5)

You should have TOMS 10.5 (see How to Create/Update an Instance (TOMS)) and RBM 9.0.4 RC6 (see How to Create an Instance (RBM for TOMS)).

1. Create a generic order and specify the required parameters:

   Product type = RBM
   GP Code = NC.SMS.NCU
   End time constraint = DD (e.g., tomorrow)
   Comment = perform TOMS-RBM connection. TOMS server: <specify TOMS server>, RBM server: <specify RBM server>
   Order example:
   https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9147471504613230047
2. Configure the catalog.
3. Install patches on TOMS.

Note: for more information, see the mail "RE TOMS-RBM configuration" attached to the current page.

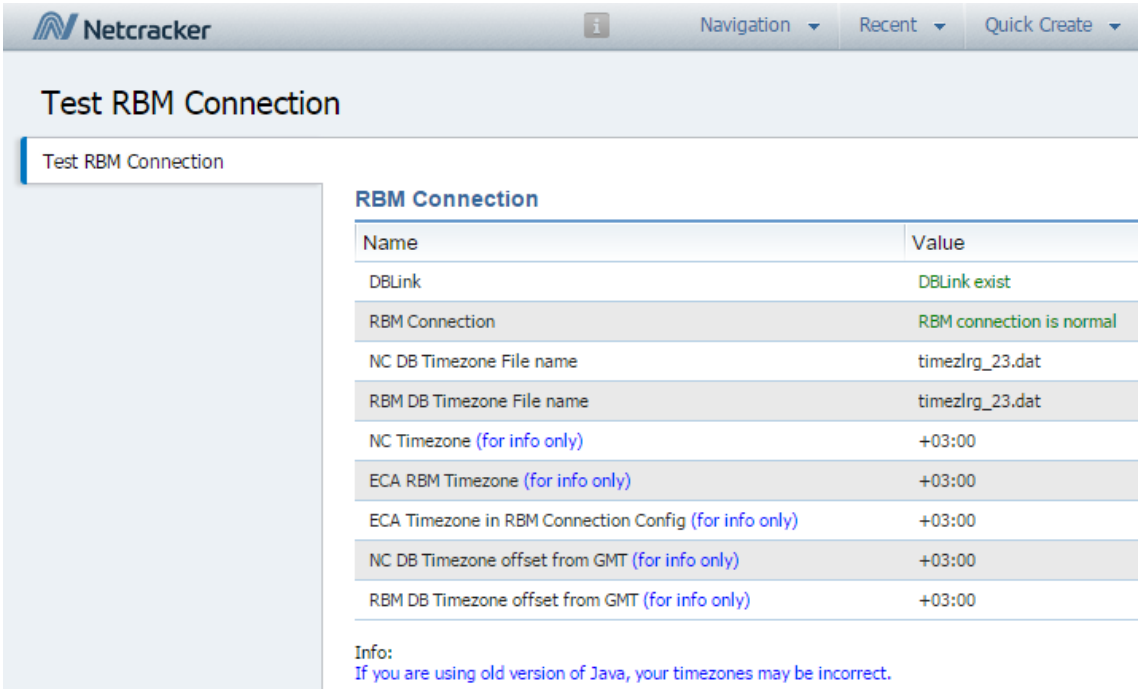
For information on steps 2-3, please refer to Mikhail Ignatev, Release_RE_Group.

15.8.13.6.3 How to check if connection is successfully done

Currently there's a link: TOMS - RBM working for TOMS 10.3.1
http://devapp054.netcracker.com:6315/ and http://devapp054.netcracker.com:6910/ with RBM rb790a1 on devapp790.

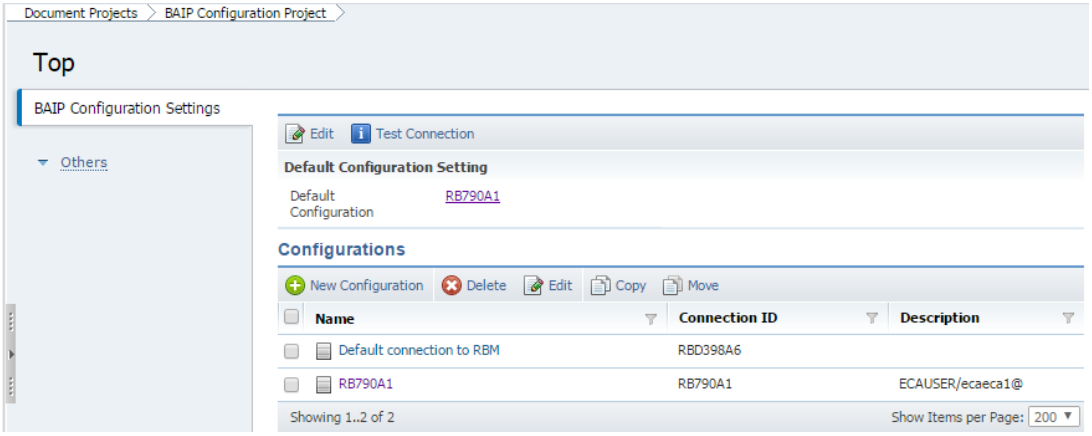
Current state: there are unresolved errors (see the mail "RE Конфигурация каталога." attached).

To check if the connection works fine, add "/baip/jsp/testConnection.jsp" after the server port, for example: http://devapp054.netcracker.com:6815/baip/jsp/testConnection.jsp



To check what RDB server is connected to TOMS server, do the following:

1. Navigate to TOMS server, e.g. http://devapp054.netcracker.com:6815
2. Navigation > Documents.
3. Click "BAIP Configuration Project". Check the **Default Configuration** parameter - the RBM server name is specified there.



Note that clicking **Test Connection** gives the same result as "/baip/jsp/testConnection.jsp" described above.

15.8.13.6.4 How the process was initiated previously (for TOMS 10.3.1 and lower)

To connect TOMS and RBM servers, do the following:

1. Request TOMS-RBM connection: create a generic order and specify the required parameters:

Product type = RBM
GP Code = NC.SMS.NCU
End time constraint = DD (e.g., tomorrow)
Comment = perform TOMS-RBM connection. TOMS server: <specify TOMS server>, RBM server: <specify RBM server>
Order example:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9147471504613230047

2. Synchronize the catalog data. It can be done in two ways (see below).

15.8.13.6.4.1 Synchronize catalog data - case 1

By performing steps described in "E2E Flow ScreenShots For Telenet Demo" document (see the attachment). Contact: Viktor Tolmachev.

15.8.13.6.4.2 Synchronize catalog data - case 2

By installing patches to RBM server and TOMS server (the catalog data were used from "Конфигурация каталога M-net Test OPC1" excel file - see the attachment). The TOMS and RBM catalog data is already synchromized and placed into patches. You should do the following:

1. Create a generic order to install the following patch to RBM server:
   \\ftp\ftp\Corp\Product\Projects\NC.PROD.BSS.ALL\RBM\RBM_Test_Data\rbm_dataload_autoinstaller_rev9002 (Don't use - For Sales).zip
   IN:
   \\ftp\ftp\Corp\Product\Projects\NC.PROD.BSS.ALL\RBM\RBM_Test_Data\Installation_Notes_rbm_dataload_autoinstaller
2. Create order to install the following patch to TOMS server (the patch is attached to the current page):
   crm-product-sample-patch_10.3.1.1_fix1-SNAPSHOT_rev0000_autoinstaller(1)
   IN: just unpack the archive and launch install.sh.

Contacts: Alexey Mandryuk, Aliaksandr Zharkou, Yevhen Fedorenko.

15.8.13.6.4.3 TOMS 10.2 - RBM for GTD Chile

Also TOMS 10.2 and RBM were connected but there are still errors (see the mail attached "RE installation error"). The servers were installed for GTD Chile training.

TOMS http://devapp054.netcracker.com:6412/, RBM RD789A2.

Contacts: Aleksandr Godin, Aleksandr Balandin.

15.8.13.7 Manage the resources

TSM should manage the hardware dedicated to the CDT department for trainings delivery/development (application, database, cloud servers).

To request a space, you should always know the following parameters:

- CPUs count (how many instances is to be installed to this hardware)
- Hardware required parameters (this often includes Oracle, Weblogic, Java, RHEL, etc. versions)
- Required hardware size (RAM, etc.)
- The hardware lifetime (normally, till the GP code expiration time)

15.8.13.7.1 Request space increase

15.8.13.7.1.1 In devapp/db

To request space increase to the existing resources or provide new resources ***not*** in tenant (request for devapp/db):

1. Create ticket like INTITDPLEM-502 - Provide servers for MANO RESOLVED with all the required information provided (see above). Code: NC.SMS.NCU.
2. Cost should be calculated. AI: will be assigned within the ticket
3. The cost should be approved by PM (approver: Andrei Denesh)
4. The server should be provided (or space increase should be performed) by the ticket assignee.
5. The ticket should be closed/resolved.

Contacts: Sergey Galaktionov, Sergey Ovchinnikov.

15.8.13.7.1.2 In tenant

To request space increase to the existing resources or provide new resources in cloud tenant:

1. Create ticket like DEVOPSIT-954 - extend parameters of nc.sms.ncu tenant CLOSED or SDNPOCIT-5194 - Training [NC.SMS.NCU] Create tenant CLOSED AI: TSM or Vitaly Arefiev.
2. Cost should be calculated. AI: will be assigned within the ticket
3. The cost should be approved by PM (approver: Andrei Denesh)
4. The server should be provided (or space increase should be performed) by the ticket assignee.
5. The ticket should be closed/resolved.

Contacts: Vitaly Arefiev.

15.8.13.7.2 Request space move

There are cases when some resouces should be allocated while another ones should be released (for example, physical location of hardware should be changed). See INTITDPLEM-924 - Spaces for RBM needed RESOLVED for example.

15.8.13.7.3 Request IP in tenant

Before installing the server in tenant, you should request IP. To do it, perform the following steps:

1. Write a mail to Vitaly Arefiev specifying VM(s) number, hardware parameters, space needed (if you don't know, how much space will be used, the standard size will be taken - RAM 8Gb, ...)
2. Vitaly Arefiev should provide the IP to be used for servers deployment.

For example:

Two TOMS servers needed with the following parameters:

Oracle	12.1.0.2.0
WebLogic	12.1.3
Java	8u102 (64bit)

IPs dedicated:

10.106.11.26
10.106.11.27

15.8.13.8 Prolong servers lifetime and clean up the space

TSM should react to the incoming alerts. There are two common cases on this: low disk space alert and site for removal alert.

15.8.13.8.1Low disk space alert

In case free disk space reaches the critical mark, the notification e-mail will be received. Answer to the notifications in case the problem state is CRITICAL.

Answer to notifications like:

**** PROBLEM alert - db044.netcracker.com/Disk space utilization /u01 is CRITICAL ****

icinga@icinga.localdomain

Sent: Cp 07.06.2017 7:40
To: **Education Group**

***** centreon Notification *****

Notification Type: PROBLEM

Service: Disk space utilization /u01
Host: db044.netcracker.com
Address: 10.232.1.58
State: CRITICAL

Date/Time: 07-06-2017 Additional Info : DISK CRITICAL - free space: /u01 388 MB (1% inode=58%):

Standard answer:

From: Anna Bolshakova
Sent: Thursday, May 25, 2017 5:56 PM
To: IT Deployment Group; Vincy Diana L
Cc: Sergey Trusenkov; Anton Shimorskiy
Subject: RE: ** PROBLEM alert - db044.netcracker.com/Disk space utilization /u01 is CRITICAL **

Hi colleagues,
Could you please clean the space?
GP code NC.SMS.NCU.
Thank you,

The result should be like:

RE: ** PROBLEM alert - db044.netcracker.com/Disk space utilization /u01 is CRITICAL **



Vincy Diana L

Sent: Cp 07.06.2017 13:02
To: Sergey Trusenkov; **IT Deployment Group**
Cc: Anna Bolshakova; Anton Shimorskiy

Hi Sergey,

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/mapper/vg_db044-U01	24G	18G	4.9G	79%	/u01

15.8.13.8.2Site for removal alert

In case a server lifetime's

Answer to notifications like



RE: site for removal - http://devapp054.netcracker.com:6315 (open)

NMS@netcracker.com

Sent: Чт 25.05.2017 16:15

To: Anton Shimorskiy; Irina Khorokhorina; Andrei Denesh; Igor Karnaukhov; Sergey Trusenkov; Evgeniy Osintsev; Tatiana Fedotova; Alexandra Vokhmyanina; Anna Bolshakova

Cc: NMS; Sergey Chesnokov; Vitaly Arefiev

Site for removal
http://devapp054.netcracker.com:6315 (open)

GP Code: VC.IM.R5130_EDU **Mode:** Open
End GP Code: June 30, 2017 **Expiration Date:** June 30, 2017

CI Params

URL: http://devapp054.netcracker.com:6315

Check if the server is one of the https://bass.netcracker.com/pages/viewpage.action?spaceKey=CDT&title=Release+Training+Environment

If yes, write an answer.

Standard answer:

Hello.

Colleagues, please, prolong the server lifetime for <time>.

GP code NC.SMS.NCU.

Thank you.

15.8.13.9 Server migration to the Cloud

Cloud space gives the following benefits: a proper security neede for the training delivery; using snapshots instead of backups. Therefore, the following servers should be deployed on cloud:

- Etalon and development servers (https://bass.netcracker.com/pages/viewpage.action?spaceKey=CDT&title=Release+Training+Environment)
- Servers used for the external training sessions.

Initially: 20 VMs requested: SDNPOCIT-5194 - Training [NC.SMS.NCU] Create tenant CLOSED

Ticket fo additional space: DEVOPSIT-954 - extend parameters of nc.sms.ncu tenant CLOSED

Current state: 20 units:

1. oob_traning2 etalon_rhel66_wl12_v2 10.106.11.27 IaaS.ram_8 cloud Running 1 day, 2 hours по заявке Анны
2. oob_traning1 etalon_rhel66_wl12_v2 10.106.11.26 IaaS.ram_8 None Running 1 day, 2 hours по заявке Анны
3. maxcom01_rbm90 rhel72_rbm90_image 10.106.11.25 IaaS.ram_8 None Running 2 days, 1 hour - тестируется
4. egypt01_rbm90 rhel72_rbm90_image 10.106.11.24 IaaS.ram_8 None Running 2 days, 6 hours - тестируется
5. traning_rbm9_et rbm_rhel72_90_v2 10.106.11.14 IaaS.ram_8 None Shut Down 5 days, 3 hours - эталон rbm9
6. mdcnt_rbm_03 mdcnt_rbm_et_install 10.106.1.247 IaaS.ram_8 None Running 1 week, 1 day для Розы

7. mdcnt_rbm_02 mdcnt_rbm_et_install 10.106.1.246 IaaS.ram_8 None Running 1 week, 1 day для Розы
8. mdcnt_rbm_01 mdcnt_rbm_et_install 10.106.1.245 IaaS.ram_8 None Running 1 week, 1 day для Розы
9. mdcnt_rbm_et etalon_rhel66_wl1012_ora12 10.106.1.224 IaaS.ram_8 None Running 1 week, 2 days для Розы
10. maxcom-cm-3 etalon_rhel66_wl10_v1a 10.106.1.178 IaaS.ram_8 None Running 2 weeks, 5 days – запасной для CM
11. maxcom-cm-2 etalon_rhel66_wl10_v1a 10.106.1.177 IaaS.ram_8 None Running 2 weeks, 5 days для CM по заявке Дарьи
12. maxcom-cm-1 etalon_rhel66_wl10_v1a 10.106.1.176 IaaS.ram_8 None Running 2 weeks, 5 days для CM по заявке Дарьи
13. maxcom_2 etalon_rhel66_wl10_v1a 10.106.1.154 IaaS.ram_8 None Running 4 weeks по заявке Дарьи
14. maxcom_1 etalon_rhel66_wl10_v1a 10.106.1.153 IaaS.ram_8 None Running 4 weeks по заявке Дарьи
15. rbm_rhel72 RHEL7.2-fix2 10.106.0.250 IaaS.ram_8 None Shut Down 1 month, 1 week эталон
16. rbm_rhel66 rhel6.6_fix1 10.106.0.249 IaaS.ram_8 None Running 1 month, 1 week эталон
17. etalon_rhel66_wl12 rhel6.6_fix1 10.106.0.247 IaaS.ram_8 None Shut Down 1 month, 1 week эталон
18. etalon_rhel66_wl10 rhel6.6_fix1 10.106.0.246 IaaS.ram_8 None Running 1 month, 1 week эталон

How may VMs to be added: **TBD**

Instances to be moved to cloud: **TBD**

RBM servers in DMZ: **TBD**

Contact: Vitaly Arefiev

15.8.14 How To

Here the instructions for **atomic** actions are described.

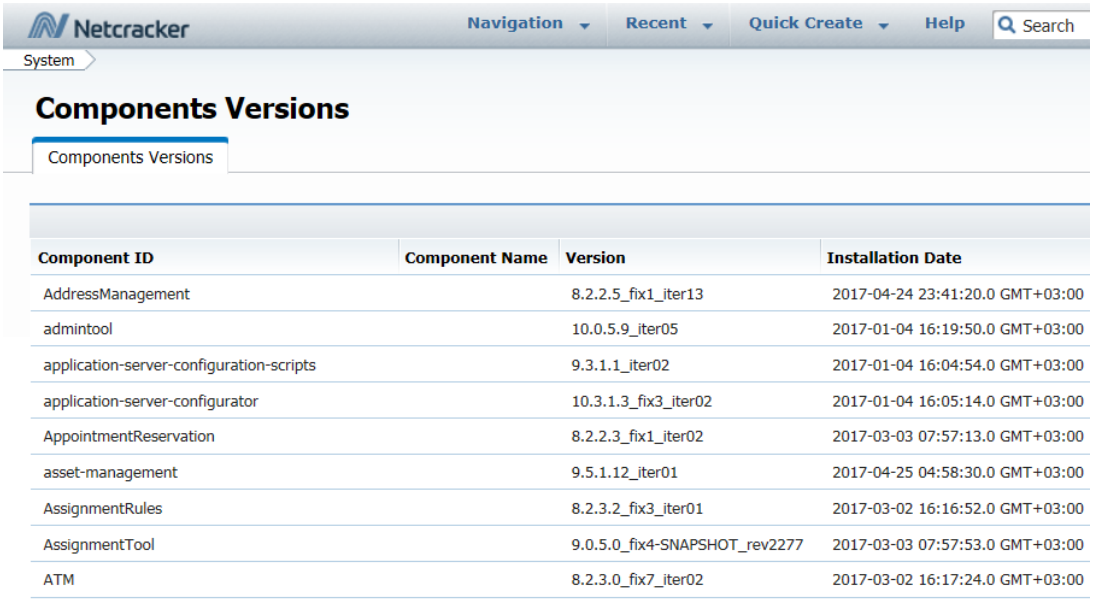
- Check on components versions on server
- Create an instance
- Create a Ticket
- Create common and generic orders
- Handle problems during the installation
- Manage server files
- Other hints
- Reset Caches
- Run a script on server
- Search for hardware servers on erp

- Start/Stop the Servers
- Update a Single Component

15.8.14.1 Check on components versions on server

In case you need to know the exact components versions installed on server, do the following:

1. Navigate to the server, for example: http://devapp054.netcracker.com:6910
2. Add the string "/tools/components_versions.jsp" after the port name, for example: http://devapp054.netcracker.com:6910/tools/components_versions.jsp.
   The following page appears:

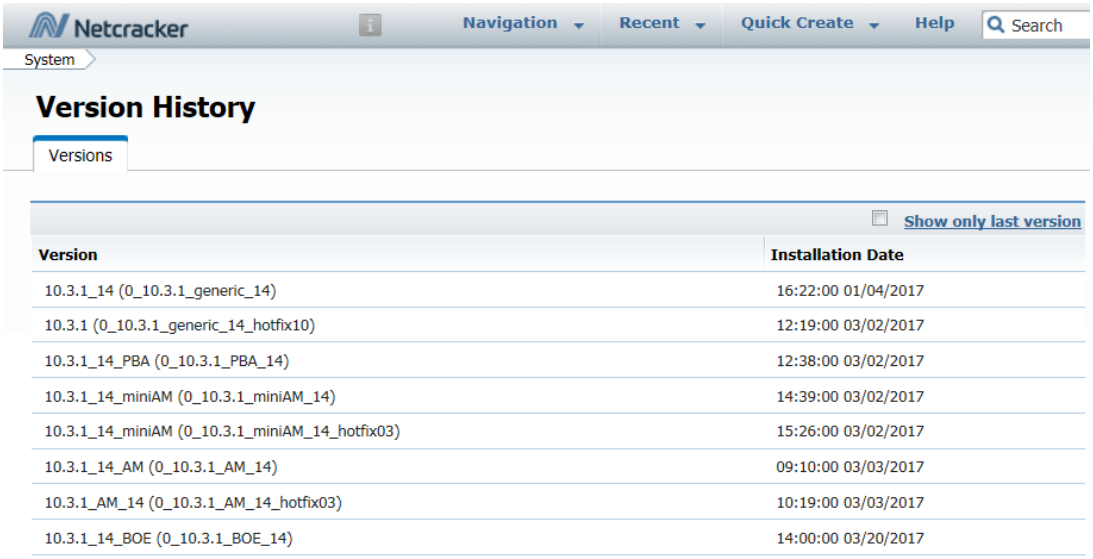


Component ID	Component Name	Version	Installation Date
AddressManagement		8.2.2.5_fix1_iter13	2017-04-24 23:41:20.0 GMT+03:00
admintool		10.0.5.9_iter05	2017-01-04 16:19:50.0 GMT+03:00
application-server-configuration-scripts		9.3.1.1_iter02	2017-01-04 16:04:54.0 GMT+03:00
application-server-configurator		10.3.1.3_fix3_iter02	2017-01-04 16:05:14.0 GMT+03:00
AppointmentReservation		8.2.2.3_fix1_iter02	2017-03-03 07:57:13.0 GMT+03:00
asset-management		9.5.1.12_iter01	2017-04-25 04:58:30.0 GMT+03:00
AssignmentRules		8.2.3.2_fix3_iter01	2017-03-02 16:16:52.0 GMT+03:00
AssignmentTool		9.0.5.0_fix4-SNAPSHOT_rev2277	2017-03-03 07:57:53.0 GMT+03:00
ATM		8.2.3.0_fix7_iter02	2017-03-02 16:17:24.0 GMT+03:00

3. In the list, find the required component/version.

Also, to check the patches installed on server, do the following:

1. Navigate to the server, for example: http://devapp054.netcracker.com:6910
2. Add the string "/version.jsp" after the port name, for example: http://devapp054.netcracker.com:6910/version.jsp.
   The following page appears:



Version	Installation Date
10.3.1_14 (0_10.3.1_generic_14)	16:22:00 01/04/2017
10.3.1 (0_10.3.1_generic_14_hotfix10)	12:19:00 03/02/2017
10.3.1_14_PBA (0_10.3.1_PBA_14)	12:38:00 03/02/2017
10.3.1_14_miniAM (0_10.3.1_miniAM_14)	14:39:00 03/02/2017
10.3.1_14_miniAM (0_10.3.1_miniAM_14_hotfix03)	15:26:00 03/02/2017
10.3.1_14_AM (0_10.3.1_AM_14)	09:10:00 03/03/2017
10.3.1_AM_14 (0_10.3.1_AM_14_hotfix03)	10:19:00 03/03/2017
10.3.1_14_BOE (0_10.3.1_BOE_14)	14:00:00 03/20/2017

15.8.14.2 Create an instance

Creating an instance depends on the Solution Type:

- How to Create/Update an Instance (TOMS)
- How to Create an Instance (MANO)
- How to Create an Instance (RBM for TOMS)
- How to Create an Instance (RBM in DMZ)
- How to create an instance in the cloud (working with snapshots)

15.8.14.2.1 How to Create/Update an Instance (TOMS)

You should know the NC version required and configuration (Server #1 or #2) and decide what resources you'll be using.

15.8.14.2.1.1 In case resources are devapp + db servers

15.8.14.2.1.1.1 Get a hardware

You should decide based on Recommended NC Iteration for New Product Projects and CR what application server and database server to use (see **Hardware servers to install TOMS** in TOMS Environment).

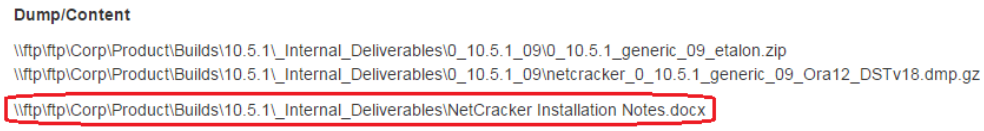
For example, use devapp054 + db664 (DBG125).

15.8.14.2.1.1.2 Install instance

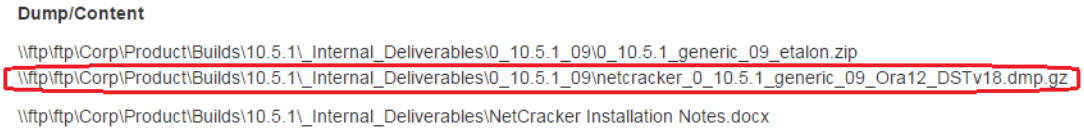
Then you have to create a common order of NEW_INSTANCE type from the application server page (for example, devapp054→ TOMS_home1).

Specify the following parameters:

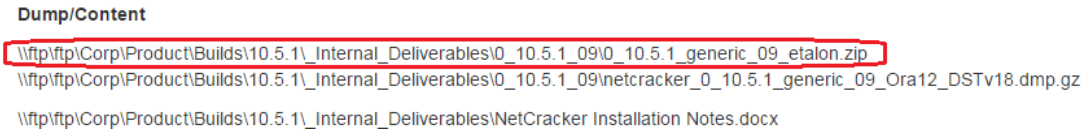
1. **GP Code** = NC.SMS.NCU
2. **Product type** = TOMS
3. **End time constraint** = DD (e.g., tomorrow)
4. **Comment** =
    - New server should be clustered, one-node. **(this is actual for NC 10.3 and higher)**
    - Use *\\ftp\ftp\Corp\Product\Builds\<NC_version>_Internal_Deliverables\NetCracker Installation Notes* for the installation. **(this IN is taken from Recommended NC Iteration for New Product Projects and CR page; Dump/Content part); for example**

    - User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.
    - Create NC_ADMIN in SID and grant rights to NC_ADMIN by script \package\scripts\maintenance\admin\create_ncdba_user.sql.
      User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.
    - Please specify port = admin port, not clustered! **(this is actual for NC 10.3 and higher)**
5. **Database Dump Location** = *dmp.gz* file, see the corresponding **Dump/Content** part in Recommended NC Iteration for New Product Projects and CR, fro example



6. **NC Application Archive Location** = *etalon.zip* file, see the corresponding **Dump/Content** part in Recommended NC Iteration for New Product Projects and CR, for example



7. **Target Installation Type** = Standalone
8. **Database SID** = SID name (e.g., DBG125)
9. **Application Server** = application server name (e.g., devapp054)
10. **Preferable Instance Name (About)** = _t321_
11. **Patch Set Location** = add one by one.
    Patch Set Installation Notes = add one by one (insert the corresponding IN for each patch).

    - To decide what patches to install, use the installation sequence for the appropriate NC Version (e.g. for NC 10.3 - Installation sequence 10.2.3/10.3)

    - Also for server #1 and server #2, different patches should be installed - see the table in **Servers configuration** part in TOMS Environment.

    - At the end of all new install/update set of patches, specify GWT Linkage as the last one.

    - Install OMD patch before BAIP, otherwise required BAIP folders will be absent on server.

As the order's is executed, the port will be assigned to the instance by a deployer, you should register the new server, including the server's url, to the following page https://bass.netcracker.com/pages/viewpage.action?spaceKey=CDT&title=Release+Training+Environment.

15.8.14.2.1.2 In case resources are cloud server

15.8.14.2.1.2.1 Get a hardware

In case you create an instance on cloud server, first you should ask for a dedicated IP from Vitaly Arefiev.

The required hardware parameters (depending on NC release version) are described here Recommended NC Iteration for New Product Projects and CR.

To get a hardware:

1. Write an e-mail to Vitaly Arefiev with hardware parameters (Oracle, WebLogic, Java versions), number of instances and tenant name (Tenant NC.SMS.NCU).
2. Vitaly should provide IP(s) to be used. For example:

10.106.11.26
10.106.11.27

На них

Oracle	12.1.0.2.0
WebLogic	12.1.3
Java	8u131 (64bit)

15.8.14.2.1.2.2 Install instance

You should create a generic order and specify the required parameters:

Product type = TOMS

GP CODE = NC.SMS.NCU

End time constraint = DD (e.g., tomorrow)

Comment = all the information from steps 4-11 of the instruction above (**In case resources are devapp + db servers > Install instance)**, except for

Database SID = SID name (e.g., DBG125)

Application Server = application server name (e.g., devapp054)

Instead of these parameters, you should specify the dedicated IP (see **Get a hardware** above).

Also, for NC versions 10.3 and higher, don't mention "**Target Installation Type** = Standalone".

Contacts: with all the questions on TOMS installation, please refer to Release_RE_Group <Release_RE_Group@NetCracker.com>.

15.8.14.2.1.3 Updating instance

If the instance should be updated by installing some patches, you should create order on instance update (i.e., of INSTANCE_UPDATE type) and specify the required patches + INs.

Note that if you want to update server with patch of another iteration, you should reinstall the server (see **Order on instance reinstall** in Create common and generic orders).

15.8.14.2.1.4 Order examples

In this section we show how the form should be populated for NC 10.3.1 server setup at the moment of the order creation.

- New Instance Order Form for Server 1
- New Instance Order Form for Server 2

Note:

The difference between the orders 1 and 2 consists in the following items to set:

- Patch Set Locationhttps://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1#null
- Patch Set Installation Notes Location

15.8.14.2.1.4.1 New Instance Order Form for Server 1

Update	Cancel	Submit	Cancel Process

Name* New Instance Order Template

New Instar

New Instance Order Template

Object Type* NC Instance Order Templatehttps://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1#null

NC Instance Order Template

Administrative Information

Submitted By Sergey Trusenkov Closed By

Received Closed

Order Type NEW_INSTANCE Priority High

Order Status NOT_SUBMITTED

Resources Time Constraints

Start Time Constraint End Time Constraint

/ / : / / :

GP Code **NC.SMS.NCU**

Project Code

Instance Life Time [weeks] * 8

Instance Users List

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1

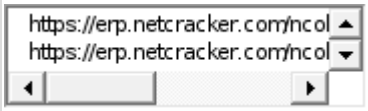
Instance Updaters List

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1



Instance Owners List *

Anton Shimorskiy
Sergey Trusenkov



Also Notify

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1



Time Spent [hours] Total Time Spent [hours]

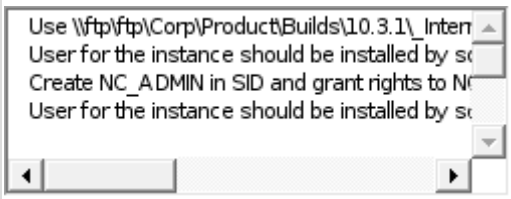
Execution Information

Reopened 0

Attachments

Comments

Comment



Use \\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\NetCracker Installation Notes for the installation.
User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.
Create NC_ADMIN in SID and grant rights to NC_ADMIN by script \package\scripts\maintenance\admin\create_ncdba_user.sql.
User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.

Source Information

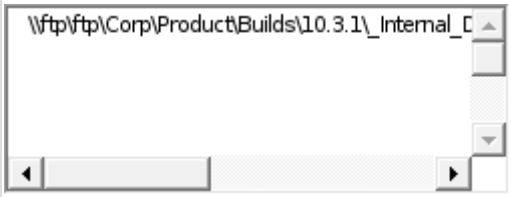
Source Database Schema

Database Dump Location



\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\netcracker_0_10.3.1_generic_15_Ora12_DSTv18.dmp.gz

NC Application Archive Location



\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_generic_15_etalon.zip

Pictures WebApp Location



Patch Set Location



\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_generic_15_hotfix04.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_PBA_15.zip\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_miniAM_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_miniAM_15_hotfix01.zip\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_AM_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_AM_15_hotfix07.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_HDS_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_CIA_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_miniBAM_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_OMD_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_TTM_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_TTM_15_hotfix01.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_BOE_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_BOE_hotfix01_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_SFA_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_BAIP_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\GWT Linkage\gwt-linkage_10.2.0.0_fix2_49_autoinstaller.zip\\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\NCU_9.4_12.ZIP



Source NC Instance

Patch Set Installation Notes Location

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for NetCracker Fixes cluster
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for PBA
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniAM
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for AM

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for NetCracker Fixes cluster \\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for PBA.doc\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniAM.doc\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for AM.doc \\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for HDS.docx
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for CIA.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniBAM.docx
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for OMD.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for TTM.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for BOE.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for SFA.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for BAIP.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for GWT Linkage\\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\Installation Notes NCU Training Server NC 9.4 (autoinstaller)



Source Readiness Time	/ / :
Target Information	
Oracle Version	
Database Codepage (NLS_CHARACTER SET)	
Database SID	DBG125 DBG125

Target Instance Type *	Standalone
Managed Application Servers	https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1
Weblogic Version	
Application Server	devapp054 devapp054
Purge NC_HISTORY Table Records *	No
Purge Reconciliation Tables *	No
Preferable Instance Name (About) *	_t321_ t321
Concurrent Sessions Count	450
Named Users Count	450
Backup Information	
Backup Sequence	
Backup Target	

Bottom of Form

15.8.14.2.1.4.2 New Instance Order Form for Server 2

Update	Cancel	Submit	Cancel Process

Name* New Instance Order Template
New Instar
New Instance Order Template
Object Type* NC Instance Order

Templatehttps://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1#null

NC Instance Order Template

Administrative Information

Submitted By Sergey Trusenkov Closed By

Received Closed

Order Type NEW_INSTANCE Priority High

Order Status NOT_SUBMITTED

Resources Time Constraints

Start Time Constraint End Time Constraint

/ / : / / :

GP Code NC.SMS.NCU

Project Code

Instance Life Time [weeks] * 8

Instance Users List

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1

Instance Updaters List

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1

Instance Owners List *

Anton Shimorskiy
Sergey Trusenkov

https://erp.netcracker.com/ncol
https://erp.netcracker.com/ncol

Also Notify

https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1

Time Spent [hours] Total Time Spent [hours]

Execution Information

Reopened 0

Attachments

Comments

Comment

Use \\ftp\ftp\Corp\Product\Builds\10.3.1_Intern
User for the instance should be installed by sc
Create NC_ADMIN in SID and grant rights to NC
User for the instance should be installed by sc

Use \\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\NetCracker Installation Notes for the installation.
User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.
Create NC_ADMIN in SID and grant rights to NC_ADMIN by script \package\scripts\maintenance\admin\create_ncdba_user.sql.
User for the instance should be installed by scripts \package\scripts\maintenance\admin\create_ncdba_user.sql.

Source Information

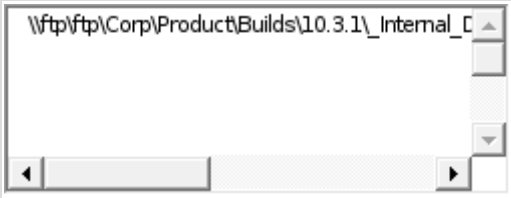
Source Database Schema

Database Dump Location

1_Internal_Deliverables\0_10.3.1_15\netcracker

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\netcracker_0_10.3.1_generic_15_Ora12_DSTv18.dmp.gz

NC Application Archive Location



\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_generic_15_etalon.zip

Pictures WebApp Location



\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_generic_15_hotfix04.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_PBE_15.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_miniAM_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_miniAM_15_hotfix01.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_RDB_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_RDB_15_hotfix01.zip
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_AM_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_AM_15_hotfix07.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_DPE_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_DPE_15_hotfix05.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\0_10.3.1_OFF_STP_15.zip

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\0_10.3.1_15\GWT Linkage\gwt-linkage_10.2.0.0_fix2_49_autoinstaller.zip
\\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\NCU_9.4_12.ZIP



Source NC Instance

Patch Set Installation Notes Location

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for NetCracker Fixes cluster
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for PBA
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniAM
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for AM

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for NetCracker Fixes cluster

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for PBA.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniAM.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for AM.doc
\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for HDS.docx

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for CIA.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for miniBAM.docx

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for OMD.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for TTM.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for BOE.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for SFA.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for BAIP.doc

\\ftp\ftp\Corp\Product\Builds\10.3.1_Internal_Deliverables\Installation Notes for GWT Linkage
\\ftp\ftp\Projects\Internal\NCU_9.3_Internal_Deliverables\NCU_9.4\Installation Notes NCU Training Ser

Source Readiness Time	/ / :
Target Information	
Oracle Version	
Database Codepage (NLS_CHARACTER SET)	
Database SID	DBG125 DBG125
Target Instance Type *	Standalone
Managed Application Servers	https://erp.netcracker.com/common/uobject.jsp?object=9147964919213915701&mode=1

Weblogic Version	
Application Server	devapp054 devapp054
Purge NC_HISTORY Table Records *	No
Purge Reconciliation Tables *	No
Preferable Instance Name (About) *	_t321_ t321
Concurrent Sessions Count	450
Named Users Count	450
Backup Information	
Backup Sequence	
Backup Target	

Bottom of Form

15.8.14.2.2Hardware

The hardware and its parameters for MANO servers are: Application server devapp582, db server db625.

15.8.14.2.2.1 Install instance

To install a 7.1 MANO server, do the following:

1. Create generic order.
2. Produc type = MANO.
3. In comment, specify:

Please install MANO server.
Owners: Anna Bolshakova; Sergei G. Kolesnikov; Evgeniy Osintsev; Andrei Denesh.
Appl server devapp582 https://erp.netcracker.com/ncobject.jsp?id=9145434108813774191
Db server db625 https://erp.netcracker.com/ncobject.jsp?id=9145434108813774227

IN: \\ftp\ftp\TempUsersData\bolshakova\Single Node Installation Manual.

Builds list:
\\Ftp\ftp\Corp\Product\Builds\SDN_Etalon_wf8.2\wf82-template-nc_build014.zip

\\Ftp\ftp\Corp\Product\Builds\Product Projects\RTF\Global_7.1.3_Monitoring_Mediation_Proxy\026\0_RTF_Global_7.1.3_Monitoring_Mediation_Proxy_build026_autoinstaller.zip
IN: \\Ftp\ftp\Corp\Product\Builds\Product Projects\RTF\Global_7.1.3_Monitoring_Mediation_Proxy\Installation Notes for Global 7.1 Monitoring Mediation Proxy

\\Ftp\ftp\Corp\Product\Builds\Product Projects\RTF\Global_7.1.3_Monitoring_Processing_Node\053\0_RTF_Global_7.1.3_Monitoring_Processing_Node_build053_autoinstaller.zip
IN: \\Ftp\ftp\Corp\Product\Builds\Product Projects\RTF\Global_7.1.3_Monitoring_Processing_Node\Installation Notes for Global 7.1 Monitoring Procesing Node

\\Ftp\ftp\Corp\Product\Builds\Product Projects\MANO\Global_7.1.5_Network_Orchestrator\012\0_MANO_Global_7.1.5_Network_Orchestrator_build012.zip
IN: \\Ftp\ftp\Corp\Product\Builds\Product Projects\MANO\Global_7.1.5_Network_Orchestrator\Installation Notes for MANO Network Orchestrator Global 7.1 (Single Node)

Order example:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=91459957909138903 50

15.8.14.2.3How to Create an Instance (RBM for TOMS)

15.8.14.2.3.1 Get a hardware

Use devapp789, db776, or devapp790, db777, or Tenant NC.SMS.NCU. See the servers parameters in RBM Configurations.

In case you use tenant, first request an IP from Vitaly Arefiev.

15.8.14.2.3.2 Install instance

Create a generic order and specify

Product type = RBM

GP CODE = NC.SMS.NCU

End time constraint = DD (e.g., tomorrow)

then:

15.8.14.2.3.2.1 For RBM 8.0.4

Comment =

> Please deploy RBM server to <devapp790/db777 or tenant server>
>
> UTILITIES_6.0.3.13.zip
> PF-6.0.2.10lX12c.64.GenericJ2EE.zip
> RB-8.0.4.151lX12c.zip
> ECA-8.0.4.280jJ12c.64.WebLogic.zip
> TAP3-8.17.3.14lX12c.zip

! See the mail attached to this page (currently 8.0.4 server is installed to the environment dedicated for 9.0.4, see details in "RE работоспособность связки серверов TOMS-RBM" mail)

Order example:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9147471504613230047

15.8.14.2.3.2.2 For RBM 9.0.4
Comment =

> Please create appropriate environment for RB 9 based on <devapp790/db777 or tenant server>
> Also we need two RB instances with RB9.
> Please ensure that all IT requirements for RB 9 will be covered
> Linux 11g and 12c packages in below location.
> /irb/candidate/rc/rb/9.0/RB_9.0.4.RC4/full
> PF : 6.0.4
> Java : 1.8
> Web logic : 12.1.3.0
> Jboss : jboss-eap-6.1.0
> Oracle : 12.1.0.2.SE, 11.2.0.3.SE
> Utilities : 6.0.3.13
> Server : camvl21 (RHEL7)
> Also take note that this RC contains change in OS – RHEL7/JDK 1.8/ WINDOWS 10 & 7 PC builds for GUI

Order example: https://erp.netcracker.com/ncobject.jsp?id=9146756077813553848

! After the server is deployed, you should configure it using the instructions https://bass.netcracker.com/pages/viewpage.action?spaceKey=JPG&title=Create+and+configure+RBM9

Support: Mikhail Ignatev, Release_RE_Group

15.8.14.2.4RBM in DMZ

15.8.14.2.4.1 Hardware
Resources that can be used for creating RBM servers in DMZ zone: devapp187/db187, cloud (see RBM Configurations)

15.8.14.2.4.2 Install instance(s)
To install the RBM instances required for the training, do the following:

1. From the project TM, get the information on all the components and releases used in RBM.
2. From the project TM, get the information whether any business data is required (i.e., business roles, customers, currencies, etc.)
   If yes, ask project or Justin Ian Parker to provide these data.
3. Create ticket (group- **tbd**) on creating instances in cloud. Point out the contact from project.
4. Wait for the RBMs allocated.
   Note that this process may take about 2 weeks.
5. Check if RBMs are working fine.
6. Publish RBM servers and check the connection.

Contacts: Vitaly Arefiev, Evgeniy Belov.

See also: collection management servers.

15.8.14.2.5How to create an instance in the cloud (working with snapshots)
Working with snapshots gives a better usability than with servers backups.

There are some rules for working with cloud servers/snapshots:

- To operate with cloud servers, you should use generic orders (see **Generic orders** in Create common and generic orders).
- Before creating an instance in cloud, you should first request an IP (see **Request IP in tenant** in Manage the resources)
- In case the server will be used as a template for creating other servers (that is etalon servers), server snapshot should be created each time the etalon server is created or updated. Point it out as a comment in generic order (provide a **snapshot_name**).
- To take a copy of a cloud etalon server, create a generic order and ask for a copy of the required **snapshot_name**.
- By using a snapshot, you may always return the server to its initial state.

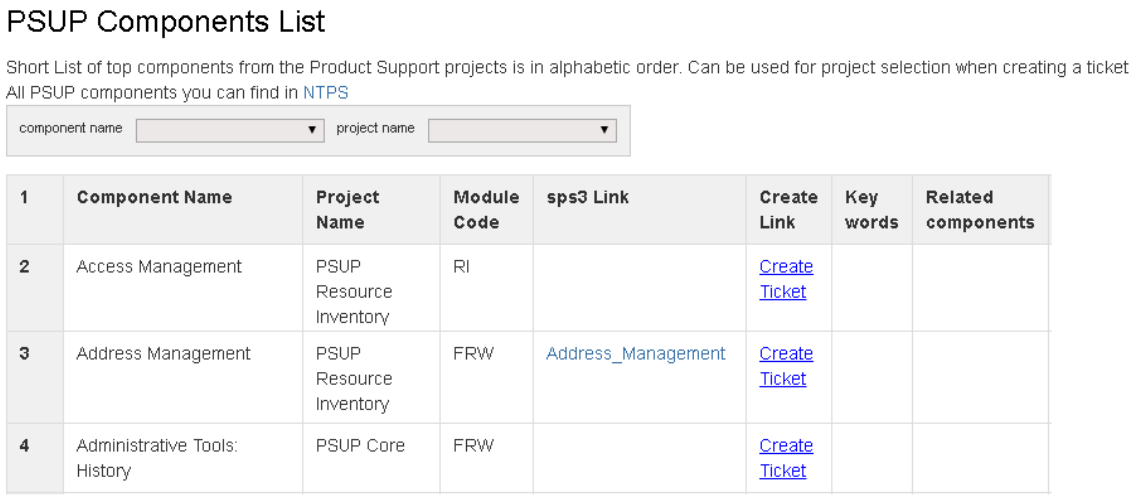
Contact: Vitaly Arefiev.

15.8.14.3 Create a Ticket

Typcially, if a bug is detected on the existing server instance a ticket should be created by TSM to initiate fixing process. In other cases, a ticket can be created to request for information and so on.

Perform the following steps:

1. Navigate to PSUP in order to select a relevant NC group: **PSUP Components List**

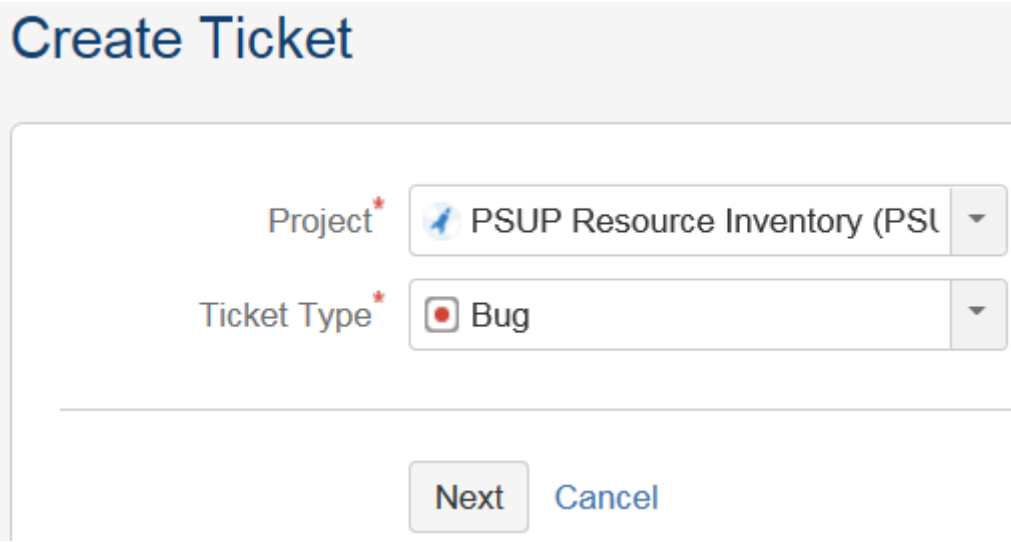

PSUP Components List

Short List of top components from the Product Support projects is in alphabetic order. Can be used for project selection when creating a ticket
All PSUP components you can find in NTPS

component name ▼ project name ▼

1	Component Name	Project Name	Module Code	sps3 Link	Create Link	Key words	Related components
2	Access Management	PSUP Resource Inventory	RI		Create Ticket		
3	Address Management	PSUP Resource Inventory	FRW	Address_Management	Create Ticket		
4	Administrative Tools: History	PSUP Core	FRW		Create Ticket		

1. Find the required component name/project name and click **Create Ticket**.
2. Select the **Ticket Type**. Generally it's Bug, Task, or Information, and click **Next**.



3. The following fields should be filled:
    a. **Summary** = short summary of the problem/task
    b. **Customer / GP code** = NetCracker; NC.SMS.NCU
    c. **Priority** = select the required priority. Note that for "Critical" and "Blocker" states, the status explanation is needed in the **Explanation of Priority** field. For example, "the customer training is started tomorrow".
    d. **Component/s** = select the affected component(s).
    e. **Affected Component Version** = select the component(s) version(s). To find out the version, use how to Check on components versions on server.
    f. **Server URL** = specify the server address, for example http://devapp054.netcracker.com:6910/
    g. **NC Version** = specify the server version, for example 10.1.
    h. **Description** = (optional) specify the ticket description.
    i. **Steps to Reproduce** = describe the erroneous case step by step.
    j. **Stack Trace** = check if there is a stack trace on the error page and if yes, insert into this field. To see the stack trace:
        - navigate to the server page where error takes place
        - right-click on empty space > View Source
        - search the "stack trace" section and copy the code into the ticket.
    k. **Attachment** (optional) = insert attachment (picture, etc.) if needed.
    l. **Watchers** (optional) = specify the persons you want to follow the ticket.
4. Click **Create**. The ticket should be created and automatically assigned to a person from the certain group.

See also: the Initial assessment guide.

Timing: depends on the **Priority** and **Due Date** fields. Normally, ticket is resolved in 2-5 days.

15.8.14.4 Create common and generic orders

Normally, to create/update instances, you should create common orders. In case common order can't be created, use a generic order.

Generic orders are used for RBM, MANO, cloud servers, to request a new space, etc. The generic orders are used in case the resources are unable to select in the required parameters of

a common order. Generic order can be used to create or update an instance, create TOMS-RBM connection, request an additional space, etc.

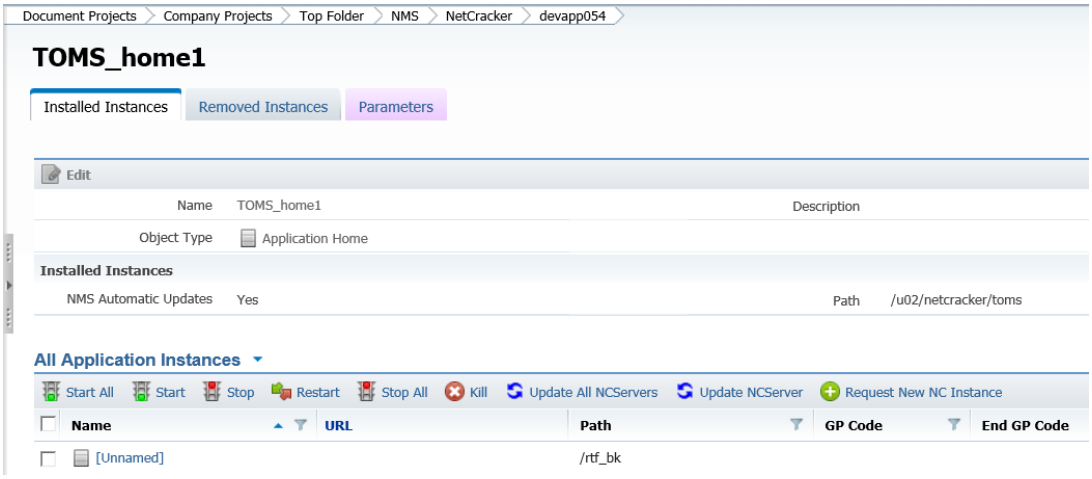
Note that this instruction doesn't refer to the particular solution type (TOMS, RBM, MANO, etc.). For these instructions, please refer to Create an instance.

15.8.14.4.1Common orders

15.8.14.4.1.1 Order on instance creation

To create common order on instance creation (Order Type = NEW_INSTANCE), do the following:

1. Navigate to the required application server (see Search for hardware servers on erp). For example, devapp054>TOMS_home1.



2. On the toolbar, click **Request New NC Instance**.
3. From the **GP Code** list box, select the required code.
4. Click **Next**.
5. Specify the common parameters (**Product type**, **End Time Constraint**, **Preferable Instance Name (About)**, **Database SID**, **Application Server**).
   Example:

Product type	TOMS
End Time Constraint	09/28/2016 12:00
Preferable Instance Name (About)	[u M-net code]_t506_[port_name]
Database SID	DBG115
Application Server	devapp054

6. Specify the required parameters for instance creation:
    - If you're creating an instance by installing patches, see Create an instance.
    - If you're creating an instance by taking a copy from another instance, specify the source instance parameters in **Source Database Schema** and **Source NC Instance** parameters, for example:

Source Information	
Source Database Schema	Database Schema: U79_Q466_6800
Database Dump Location	
NC Application Archive Location	
Pictures WebApp Location	
Patch Set Location	
Source NC Instance	Installed NetCracker Instance: u79_q466_6800

7. Click **Submit**.
8. Receive the e-mail notification, track the progress.

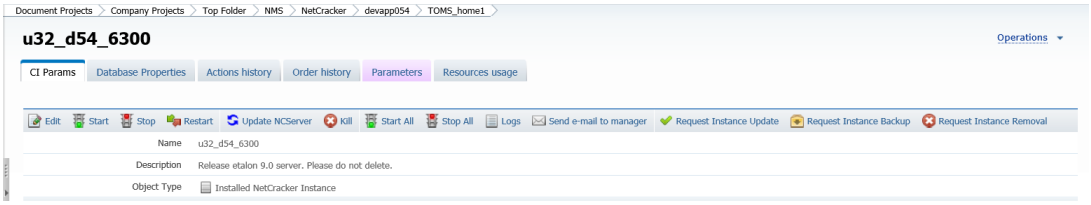
Example of NEW_INSTANCE order with patches installing:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=91478361317139278 30

Example of NEW_INSTANCE order with taking a copy of server:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=91476121620134591 51

15.8.14.4.1.2 Order on instance update

To create common order on instance update (Order Type = INSTANCE_UPDATE), do the following:

1. Navigate to the certain instance. For example, u32_d54_6300.



2. On the toolbar, click **Request Instance Update**.
3. From the **GP Code** list box, select the required code.
4. Click **Next**.
5. Specify the common parameters (**Product type**, **End Time Constraint**).
6. Specify the patches for update in **Patch Set Location** and **Patch Set Installation Notes Location** parameters. For example:

Patch Set Location	\\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\10.0.1_14\0_10.0.1_SFA_14.zip \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\10.0.1_14\0_10.0.1_SFA_14_hotfix04.zip \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\10.0.1_14\0_10.0.1_CIA_14.zip \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\10.0.1_14\0_10.0.1_BAM_14.zip \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\10.0.1_14\0_10.0.1_TTM_14.zip
Source NC Instance	
Patch Set Installation Notes Location	\\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\Installation Notes for SFA \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\Installation Notes for SFA \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\Installation Notes for CIA \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\Installation Notes for BAM \\ftp\ftp\Corp\Product\Builds\10.0.1_Internal_Deliverables\Installation Notes for TTM

7. Click **Submit**.
8. Receive the e-mail notification, track the progress.

Example of INSTANCE_UPDATE order:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9143073377913745305

15.8.14.4.1.3 Order on instance reinstall

To create common order on instance reinstallation (when you want to remove the current server and replace it with another one), do the following:

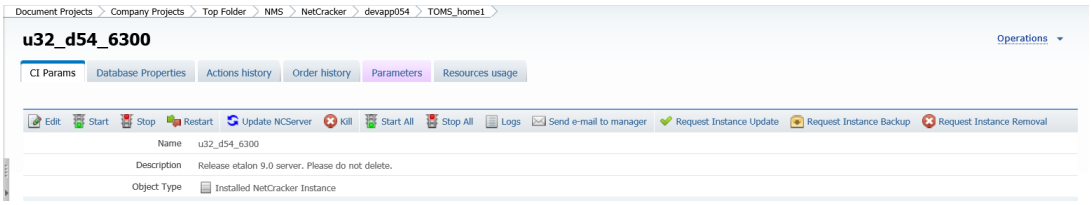
1. Create the INSTANCE_UPDATE order (see the previous topic - **Order on instance update**).
2. In the **Comments** field, type "Please re-install the server".
3. Specify all the parameters needed for order creation (see step 6 of **Order on instance creation** topic).
4. Receive the e-mail notification, track the progress.

Example of INSTANCE_UPDATE order for reinstallation
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=9142488643413803926

15.8.14.4.1.4 Order on instance backup

To create an instance backup, do the following:

1. Navigate to the certain instance. For example, u32_d54_6300.



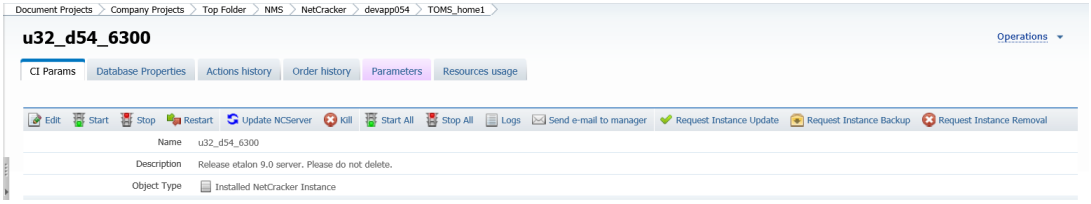
2. On the toolbar, click **Request Instance Backup**.
3. From the **GP Code** list box, select the required code.
4. Click **Next**.
5. Specify the common parameters (**Product type**, **End Time Constraint**).
6. In the **Backup Target** parameter, specify the path to put backup into. For example, your temporary folder on ftp (\\ftp\ftp\TempUsersData\<username>).
7. Click **Submit**.
8. Receive the e-mail notification, track the progress.

Example of INSTANCE_BACKUP order:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=912608258321330829 5

15.8.14.4.1.5 Order on instance removal

To remove an instance, do the following:

1. Navigate to the certain instance. For example, u32_d54_6300.



2. On the toolbar, click **Request Instance Removal**.
3. Click **Next**.
4. Specify the common parameters (**Product type**, **End Time Constraint**).
5. Click **Submit**.
6. Receive the e-mail notification, track the progress.

Example of INSTANCE_REMOVAL order:
https://erp.netcracker.com/common/uobject.jsp?tab=_Parameters&object=914792188521322625 6

15.8.14.4.2 Generic orders

To create a generic order, do the following:

1. Navigate to the page (the path to this page is: https://erp.netcracker.com, then **Navigation** > **IT DEPL OTS**, in the table, click "NetCracker Corp", on the toolbar, click **Submit New Order**).
2. **Order Type** = GENERIC.
3. **GP CODE** = NC.SMS.NCU.
4. Click **Next**.
5. **Product type** = the required product type (e.g., if SID for TOMS is being created, choose TOMS).
6. **Comment** = specify all the required information (e.g., installation instructions, hardware version, installation patches, size requirements, etc.). Generally, you should put all the information you specified in the common orders (see the **Common orders** topic above) into this field.
7. Click **Submit**.
8. Receive the e-mail notification, track the progress.

15.8.14.5 Handle problems during the installation

It's a very common case when a deployer starts working with order but is getting an error. Usually he addresses the unexpected error to that one who created the order (i.e. to TSM). Or, lack of information or credentials is found. When unable to resolve the issue, TSM, however, should help communicating to a right knowledgeable manager. A pretty long thread might occur consuming attention.

15.8.14.5.1 Thread Example 1:

Surendra Mogilipalepu: Hi Sergey, regarding https://erp.netcracker.com/ncobject.jsp?id=914791235561313143 9&return=/desktop.jsp please provide the credentials for DB side

Sergey Trusenkov: Hello Surendra, What is the problem?

Surendra Mogilipalepu: i have login in app side with netcracker credentials. But , In db side i can't login. so, we need credentials for Db side

Sergey Trusenkov: I have created an email for Vitaly Arefiev. let's wait for Vitaly to respond.

Surendra Mogilipalepu: ok... Now i have login Db side. which ORACLE_SID can i use?

[cloud-user@tfncam ~]$ sudo -i -u oracle12
ORACLE_HOME=/u01/app/oracle/product/12.1
ORACLE_SID=DBG129

can i use ORACLE_SID=DBG129
Sergey Trusenkov: I cannot answer this question. Please would you communicate to Vitaly to write about this into the same email thread. Thanks.

Surendra Mogilipalepu: i will update you by tomorrow.

In this case the following email has been sent to Vitaly Arefiev:

From: Sergey Trusenkov
Sent: Monday, June 05, 2017 11:43 AM
To: Surendra Mogilipalepu; Vitaly Arefiev
Cc: Anna Bolshakova; Anton Shimorskiy
Subject: DB credentialds request

Hello,

Vitaly, our colleague Surendra Mogilipalepu is asking for credentials for DB side, concerning the following order https://erp.netcracker.com/ncobject.jsp?id=9147912355613131439&return=/desktop.jsp. This generic order was recently issued for NC 10.3.1 server to be created in a Cloud.

Please advise what is the problem, what should be done in this case and what is the role on my side.

Thanks

Sergey Trusenkov, Technical Writer
Netcracker Technology

15.8.14.5.2Thread Example 2:



FW: [NC.SMS.NCU] Order #000132524

Geetha B

You forwarded this message on 03.11.2016 15:56.

Sent: Чт 03.11.2016 15:46
To: Anna Bolshakova

Message | console.log (4 MB)

Hi Anna,

I have created the new instance **u32_t321_6457.**

While executing the \\ftp\ftp\Corp\Product\Builds\10.1.1_Internal_Deliverables\0_10.1.1_17\0_10.1.1_HDS_17.zip patch, I am getting the below error

BUILD FAILED
/u02/netcracker/toms/u32_t321_6457/AutoInstaller/build.xml:1707: Property 'patch_list_expanded' is not defined.

I found the below error in the console log:

<Nov 3, 2016 3:37:30 PM MSK> <Error> <nc.sql> <BEA-000000> <ERROR nc.sql - Error due to access to database
java.sql.SQLException: ORA-04063: package body "U32_T321_6457.PKG_WFM_SCHEDULE_QUEUE" has errors
ORA-06508: PL/SQL: could not find program unit being called: "U32_T321_6457.PKG_WFM_SCHEDULE_QUEUE"
ORA-06512: at line 1
SQL: BEGIN :1 := pkg_wfm_schedule_queue.popGroup(true); END;
^-- error at this line -- ORA-04063: package body "U32_T321_6457.PKG_WFM_SCHEDULE_QUEUE" has errors

<Nov 3, 2016 3:37:30 PM MSK> <Error> <nc.sql> <BEA-000000> <ERROR nc.sql - Error due to access to database
java.sql.SQLSyntaxErrorException: ORA-00942: table or view does not exist

<Nov 3, 2016 3:37:00 PM MSK> <Error> <nc.sql> <BEA-000000> <ERROR nc.sql - Error due to access to database
java.sql.SQLSyntaxErrorException: ORA-00942: table or view does not exist
Position: 56, Line: 2, Column: 28
SQL: select distinct wi.object_id
from nc_wfm_work_items wi, nc_wfm_jeopardies j,
^-- error here -- ORA-00942: table or view does not exist

Please find the attached console log.
Kindly suggest

We can't provide the answer to this, so we have to refer to a person who gave the patch to us - for example, Release_RE_Group (if it's TOMS installation) or any other person who gave the patch.

In this case, I've added Oleksandr Makeyev (from Release_RE_Group). The later conversation is the following:

From: Anna Bolshakova
Sent: Thursday, November 03, 2016 2:56 PM
To: Oleksandr Makeyev
Cc: Geetha B
Subject: FW: [NC.SMS.NCU] Order #000132524

+ Oleksandr
Hi,
Could you please help with the issue?

From: Oleksandr Makeyev
Sent: Thursday, November 03, 2016 4:31 PM
To: Anna Bolshakova; HDS Support Group
Cc: Geetha B
Subject: RE: [NC.SMS.NCU] Order #000132524

+HDS Support Group HDSSupportGroup@NetCracker.com

From: Anna Bolshakova
Sent: Thursday, November 03, 2016 5:33 PM
To: Oleksandr Makeyev; HDS Support Group
Cc: Geetha B
Subject: RE: [NC.SMS.NCU] Order #000132524

Hello, colleagues.
Logs attached.

From: Dmitry Potapov
Sent: Thursday, November 03, 2016 4:48 PM
To: Anna Bolshakova; Oleksandr Makeyev; HDS Support Group
Cc: Geetha B
Subject: RE: [NC.SMS.NCU] Order #000132524

Hello all,

Dear colleagues, please, provide link to destination server and archive with installer logs.
Error "/u02/netcracker/toms/u32_t321_6457/AutoInstaller/build.xml:1707: Property 'patch_list_expanded' is not defined" looks like problem with AutoInstaller (bug or incorrect usage of AutoIsntaller) - not like bug with HDS installation.
For example - http://psup.netcracker.com/browse/PSUPAI-1246.

Errors from console.log do not depend to HDS, because package PKG_WFM_SCHEDULE_QUEUE and table nc_wfm_work_items do not depend to HDS component and HDS does not recreate those tables during installation.
In my opinion, this database entities depend to WFM component(s)
(http://psup.netcracker.com/browse/PSUPWFM).

Best Regards,

From: Anna Bolshakova
Sent: Thursday, November 03, 2016 8:12 PM
To: Dmitry Potapov; Oleksandr Makeyev; HDS Support Group; Geetha B
Subject: RE: [NC.SMS.NCU] Order #000132524

Appl server https://erp.netcracker.com/ncobject.jsp?id=9128088445213250054
DB server https://erp.netcracker.com/ncobject.jsp?id=9146047353913687191

Geetha, could you please provide archive with installer logs?

From: Geetha B
Sent: Friday, November 04, 2016 9:19 AM
To: Anna Bolshakova; Dmitry Potapov
Cc: Oleksandr Makeyev; HDS Support Group
Subject: RE: [NC.SMS.NCU] Order #000132524

Hi Anna,

Please find the installer logs in the below temp location:

\\ftp\ftp\TempUsersData\geeb0915\ installer_logs.tar

From: Dmitry Potapov
Sent: Monday, November 07, 2016 11:42 AM
To: Geetha B; Anna Bolshakova
Cc: Oleksandr Makeyev; HDS Support Group
Subject: RE: [NC.SMS.NCU] Order #000132524

Hello all,

I looked into installation logs and found out that:

1. HDS has been successfully installed.
2. We have error in installation of HDS Repository Indexes (additional step, which is not required for installation of HDS from scratch).
   In my opinion root cause was in the additional space after "=" symbol in the command line:
   [2016-11-03 15:33:53.060 +0300] [echo] launching command: ./install.sh -bystep=
   HDS_9.0.4.13:repository_indexing_step_list -skip_connect_validation
   Geetha, please, run installation via next command, if you want complete this step:
   ./install.sh -bystep=HDS_9.0.4.13_fix1c_02:repository_indexing_step_list -skip_connect_validation

Best Regards,

Hi Dmitry,

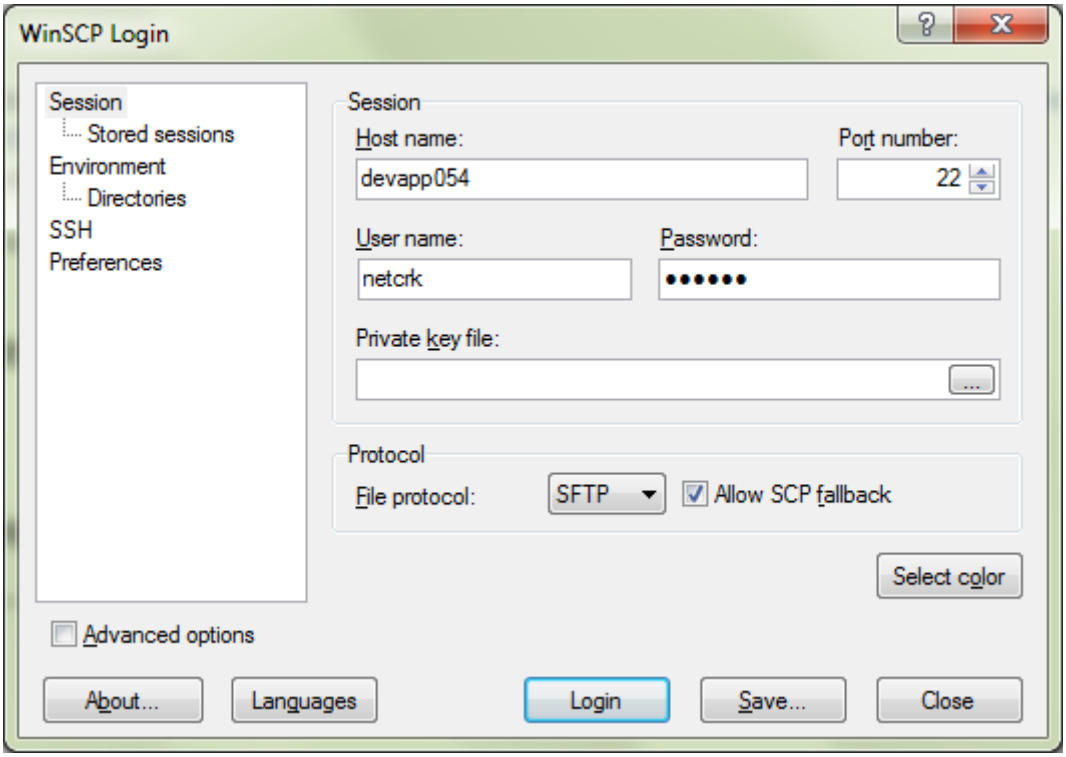
Thank You!!
I will trigger the installation as given below and update on the same.

15.8.14.6 Manage server files

If a file on a server needs to be modified and/or added or a command (e.g. start/stop server) needs to be applied on the server.

Steps:

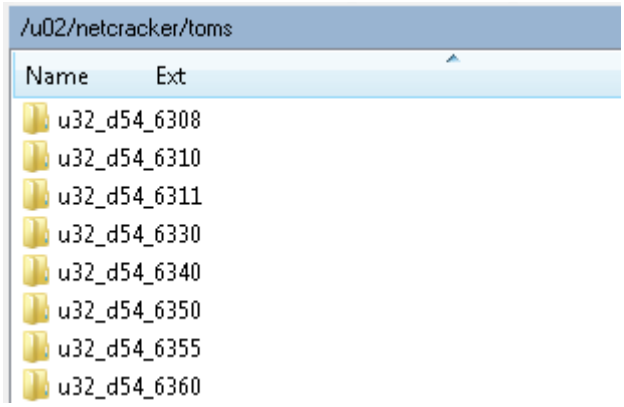
1. Launch winscp (Start menu > search "winscp").



2. Specify the following parameters:
   Host name = devapp054
   User name =netcrk
   Password = crknet

Specify the other parameters as shown at the picture
Note: for some servers, credentials = your netcracker domain login/password.

3. Navigate to our servers:



4. Navigate to the required instance.
5. If needed, open the terminal



15.8.14.7 Other hints

Here's other useful hints used not so often.

15.8.14.7.1 If there is no Installation notes file

In case there's autoinstaller zip patch and there's no IN file (installation notes), specify the following phase instead: "just unpack the archive and launch install.sh"

15.8.14.7.2 If reports do not work - known issue

if all the reports don't work, the issue may be resolved by the following way:

Create a mail to IT Deployment group with the following text:

Please grant execution rights on DBMS_CRYPTO package for the database user (GRANT EXECUTE ON DBMS_CRYPTO TO <DB_USER>).
Database - *<the corresponding db scema name>, for example - U32_T321_6308.*
Ticket - https://psup.netcracker.com/i#browse/PSUPCORE-25603.

15.8.14.7.3 To install test data

In case thest data should be installed according with patch (was actual for 9.4 and lower versions for BOE patch), in order comments, specify the following phrase:

Please install patch with key -qa=true

15.8.14.7.4 Correct java version

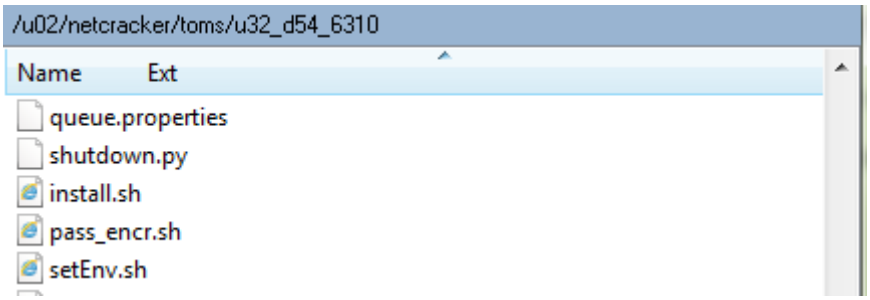
In case if configurator or some visual tools do not work, check the java version installed. The version should be Java 7u80-windows-i586.

In case the other version is installed, you should first remove the current version, then install Java 7u80-windows-i586 from folder: \\netcracker.com\public\distribs\Java.

15.8.14.7.5 Different strings number in server copied

Sometimes there are errors after server copying caused by lack of some strings in setEnv.sh file. To access this file, use WinSCP.

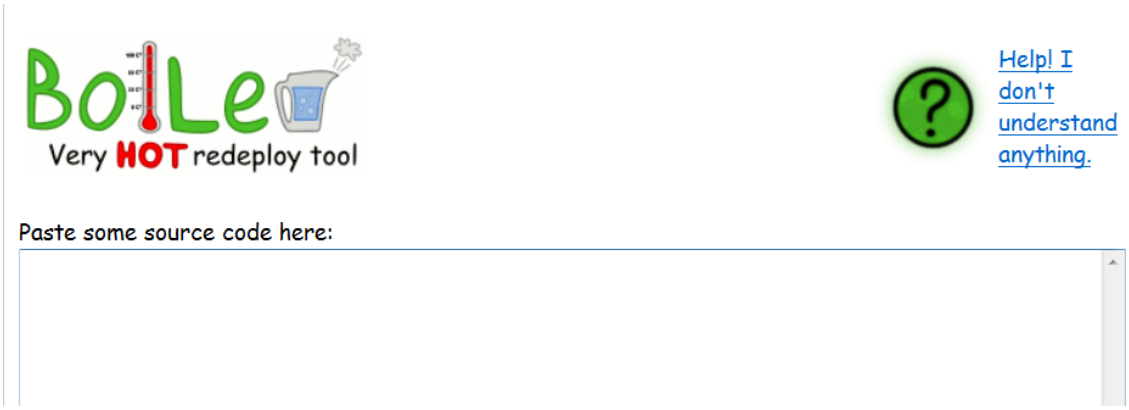
If some strings are missing in the copy, then they should be added. The setEnv.sh file is located in the root server folder, for example:



15.8.14.7.6 Boiler

Some files/functions can be placed to server by using the boiler. This operation can be performed by a ticket assignee, in case some critical problem that should be fixed asap takes place.

To check if the boiler works, add "/boiler" after the port name. For example: http://devapp054.netcracker.com:6333/boiler/



15.8.14.8 Reset Caches

Sometimes, to apply the changes made on server, you should reset caches.

There are 2 ways to reset caches (reset NCDO, reset from tools). You may apply both.

15.8.14.8.1 Reset NCDO

Perform the following steps:

1. Navigate to a server. For example, http://devapp054.netcracker.com:6910.
2. After the port, insert "/ncdo/resetCaches.jsp". For example, http://devapp054.netcracker.com:6910/ncdo/resetCaches.jsp.
3. Wait until the page reloads.

15.8.14.8.2 Reset from tools

Perform the following steps:

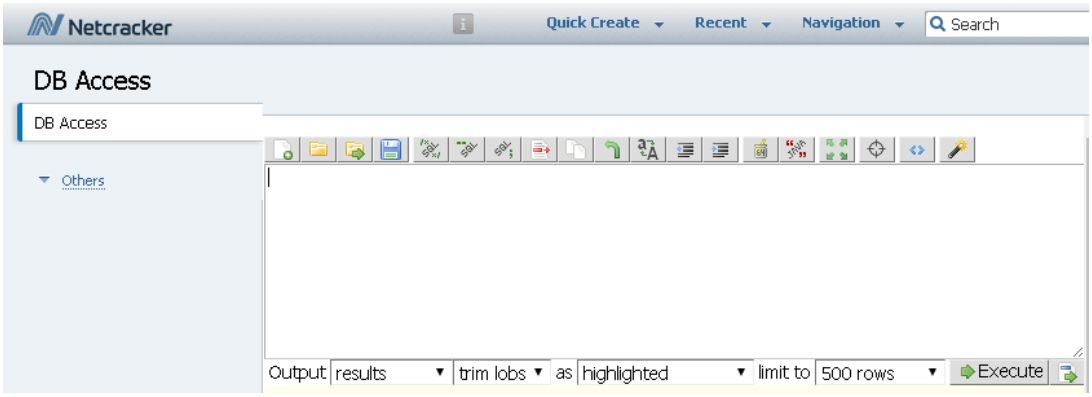
1. Navigate to a server. For example, http://devapp054.netcracker.com:6910.
2. After the port, insert "/ncdo/resetCaches.jsp". For example, http://devapp054.netcracker.com:6910/tools/reset.jsp.
3. Wait until the page reloads.

15.8.14.9 Run a script on server

In some cases, the changes should be applied to an instance by running the script. Note that it's easy to corrupt the server by executing a script, so make sure the script you use is proper and safe.

To launch the script, do the following:

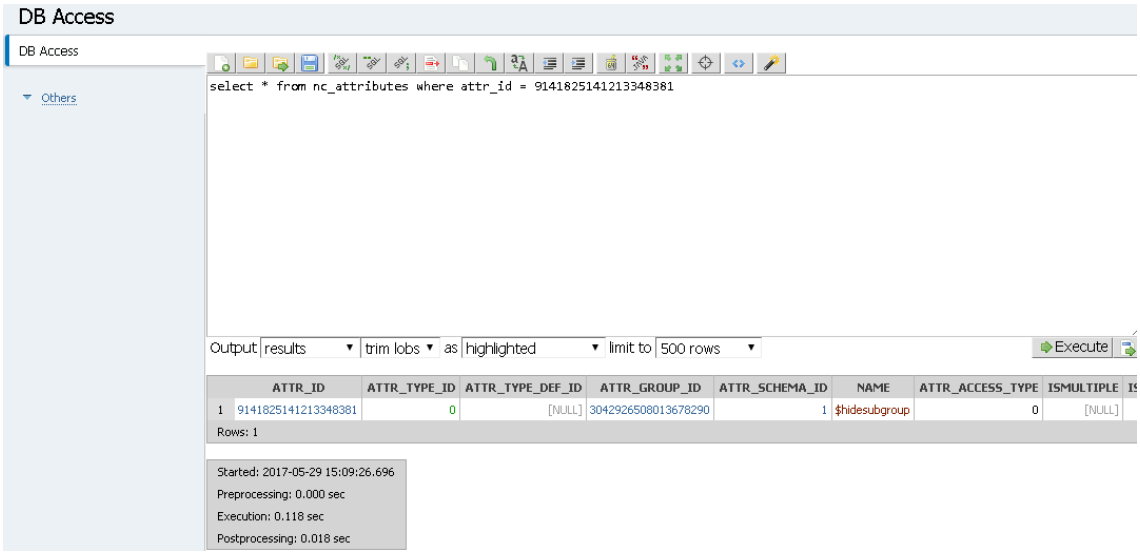
1. Navigate to a server, for example http://devapp054.netcracker.com:6910.
2. After port name, insert "/tools/db150.jsp".



Note: if the confirmation in this page is needed (the warning message appears), click **Confirm**.

3. Insert the script into the text field and click **Execute**.
   The script execution result will appear.

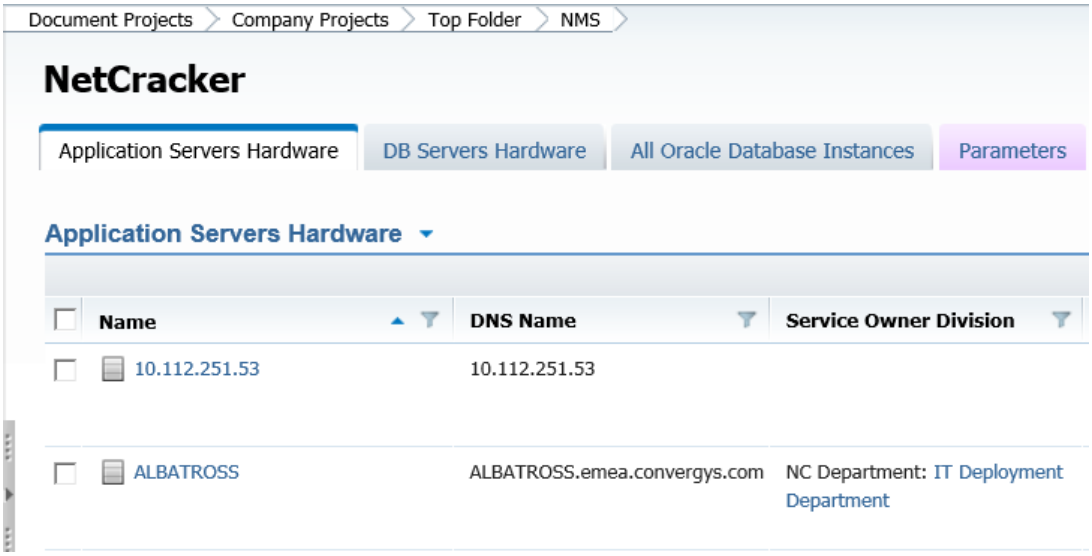
Note: the script be not only for update, sometimes just to search for some data. For example:



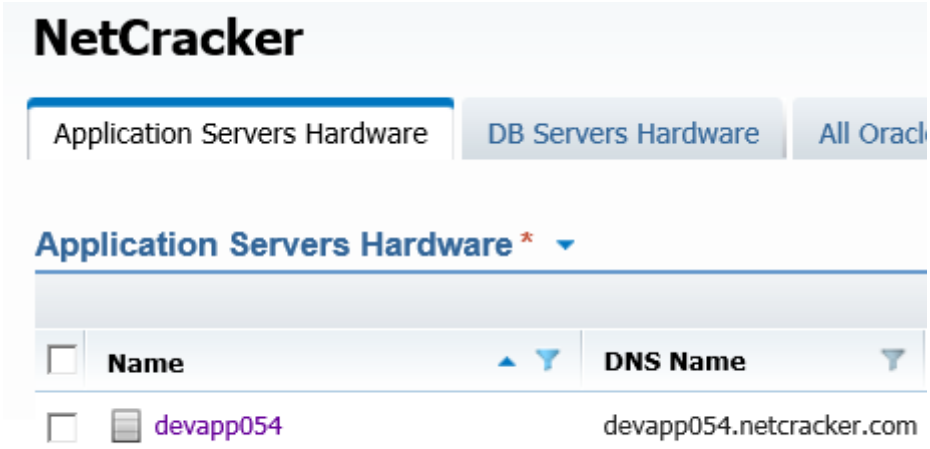
15.8.14.10 Search for hardware servers on erp

To find the required hardware instance on erp, do the following:

1. Navigate to https://erp.netcracker.com/
2. From the **Navigation** menu, select **NMS**.



3. In the required tab (**Application Servers Hardware** or **DB Servers Hardware**), find the required server. For example, devapp054:

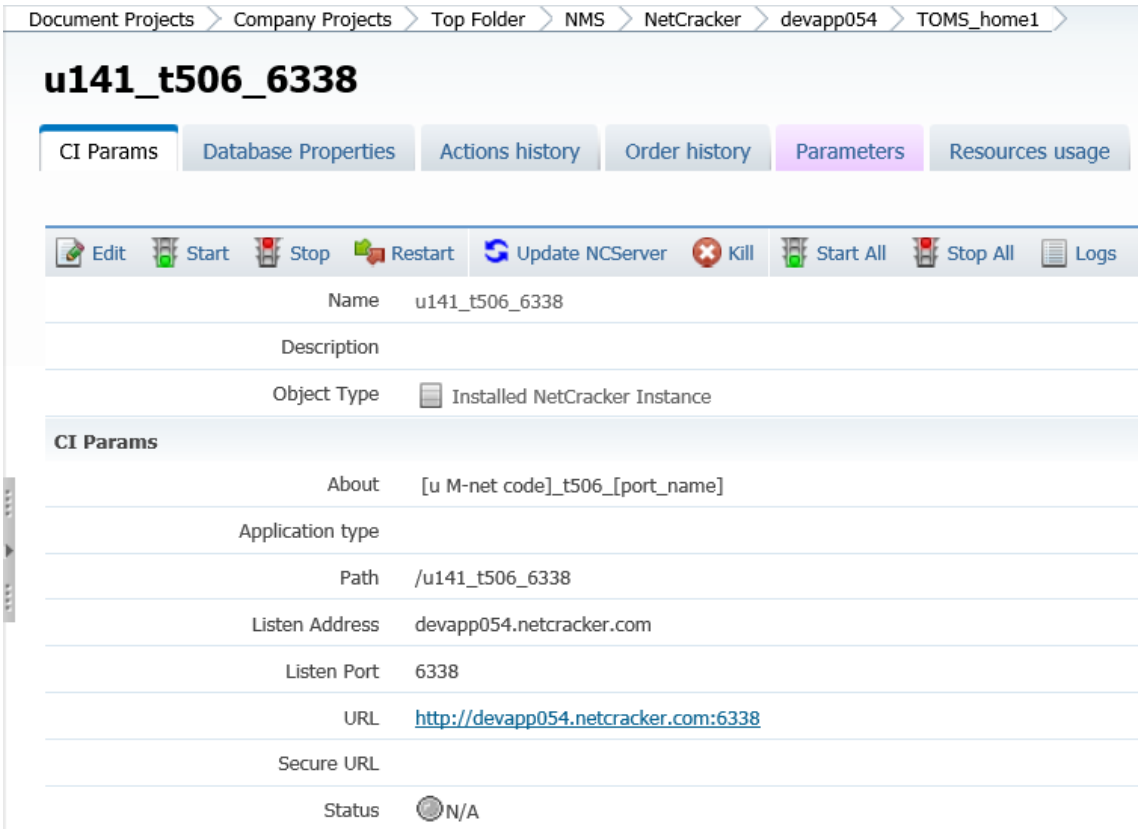


4. Navigate to the required server by clicking its name.



15.8.14.11 Start/Stop the Servers

In case server is down (the **Status** parameter is "Down"), you need to start the server. Or there are some cases when it's needed to restart the server (i.e., first stop, then start).



There are 2 ways to start the server:

15.8.14.11.1 From the erp page

To start the server:

1. Navigate to the server on erp (see the screen above)
2. On the toolbar, click **Start**.
3. Wait for about 5 minutes and then check the server status (it should be "Up") and the server (the link itself, e.g. http://devapp054.netcracker.com:6338) should work.

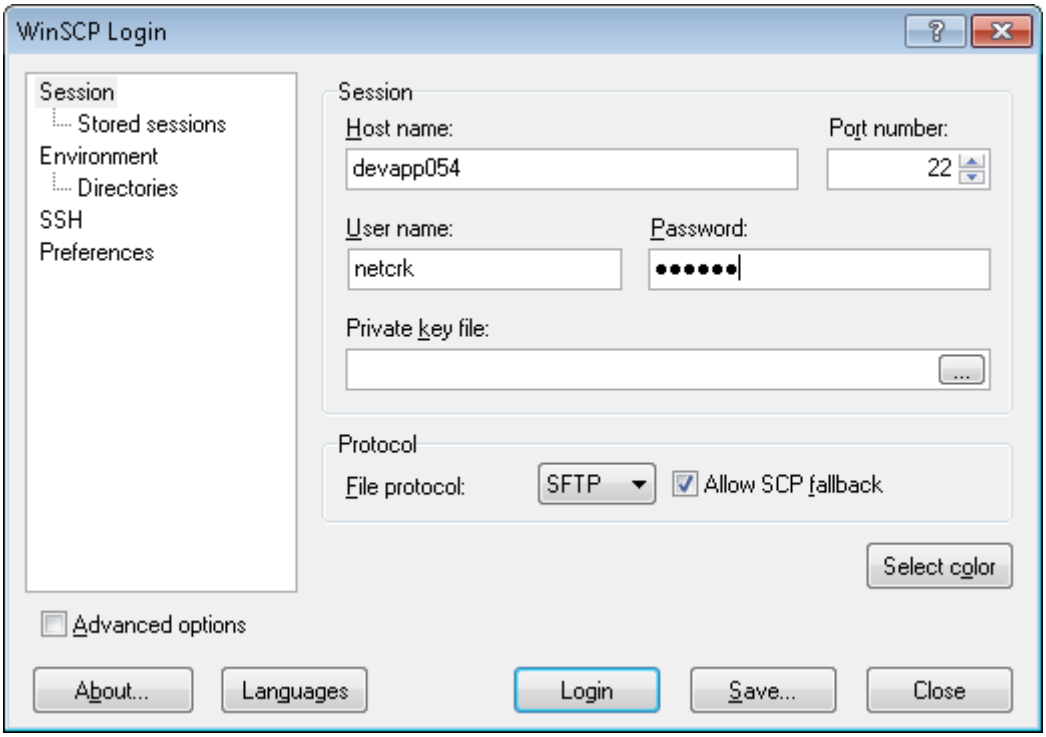
To stop the server:

1. Navigate to the server on erp (see the screen above)
2. On the toolbar, click **Stop**.
3. Wait for about 5 minutes and then check the server status (it should be "Down") and the server (the link itself, e.g. http://devapp054.netcracker.com:6338) should not work.

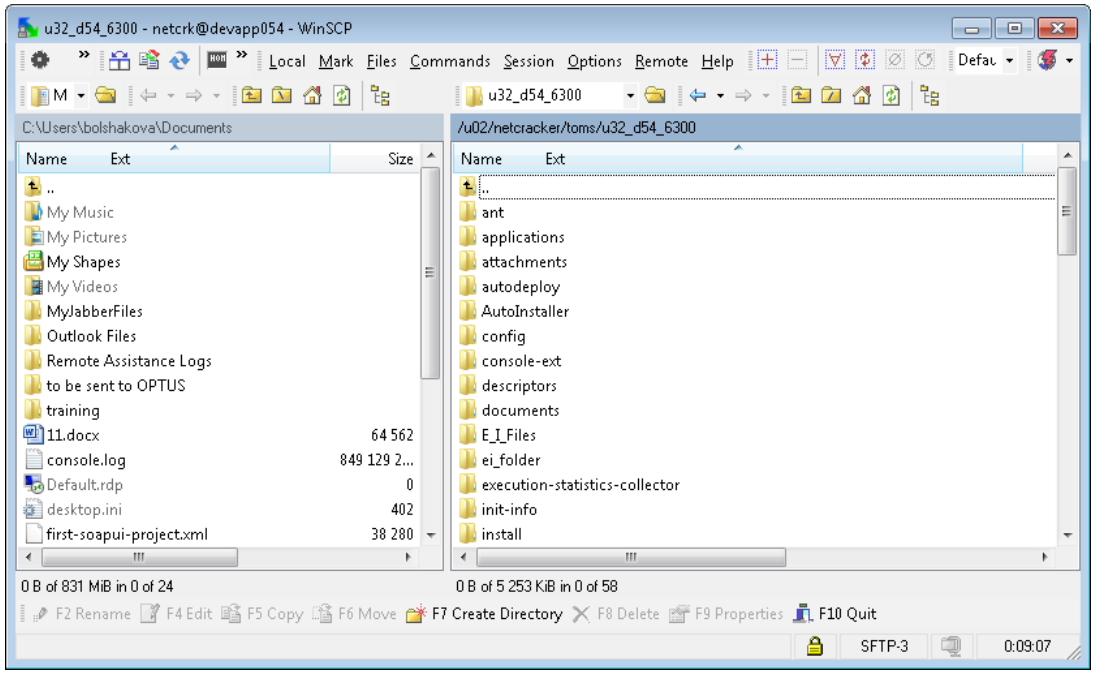
15.8.14.11.2 From winscp

To start/stop the server from winscp:

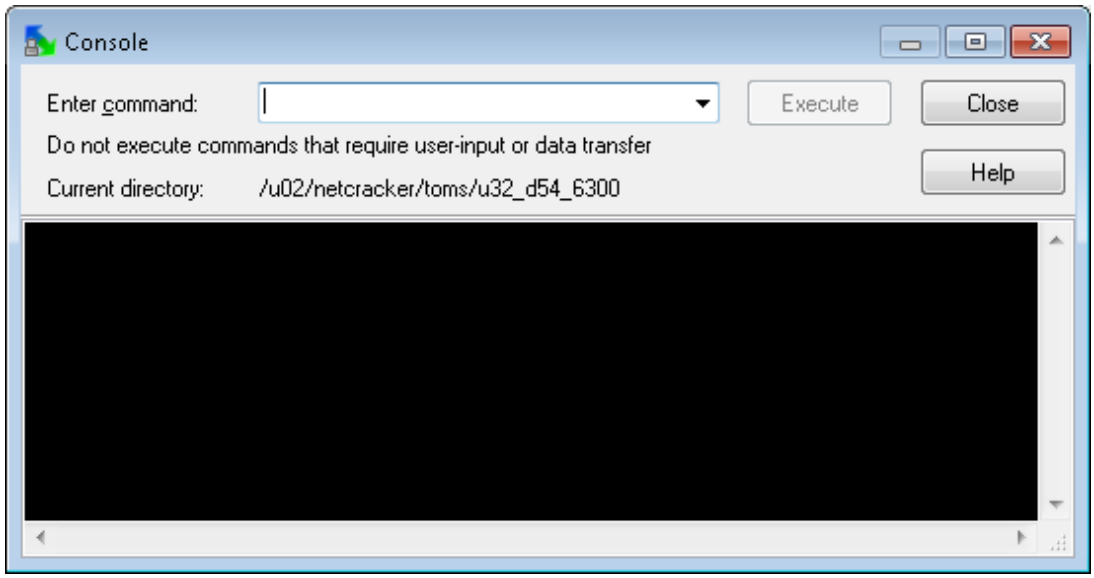
1. In the **Start** menu, start typing "winscp".
2. Click WinSCP to start the program.



3. Specify the following parameters:
   Host name = devapp054,
   Port number = 22,
   User name = netcrk,
   Password = crknet.
   Note that for some servers, user your NC credentials should be used as name/password.
4. Click **Login**.
5. Navigate to the required server, e.g. /u02/netcracker/toms/u32_d54_6300.



6. To open the terminal, click  or Ctrl + T.
7. If the confirmation message appears, click **OK**. The console window appears:



8. To stop the server, in the **Enter command** field, type "./stop.sh". Wait about several minutes.
9. To start the server, in the **Enter command** field, type "./start.sh". Wait about several minutes.

15.8.14.12 Update a Single Component

In case a single component should be installed on server (of the same or higher version), do the following:

1. Find the required component autoinstaller + version in *ftp**ftp**Corp**Product**ModulesInstallations*\. For example, if you need *ResourceInventory* of

8.2.3.12 fix23 iter 03 version, you should take patch *\\ftp\ftp\Corp\Product\ModulesInstallations\ResourceInventory\8.2.3.12_fix23\WL10.3.6\ResourceInventory_8.2.3.12_fix23_03_autoinstaller.zip*.

2. Create the order on instance update and specify the patch + IN.
   Patch Set Location:
   \\ftp\ftp\Corp\Product\ModulesInstallations\ResourceInventory\8.2.3.12_fix23\WL10.3.6\ResourceInventory_8.2.3.12_fix23_03_autoinstaller.zip
   Patch Set Installation Notes Location:
   \\ftp\ftp\Corp\Product\ModulesInstallations\ResourceInventory\8.2.3.12_fix23\WL10.3.6\Installation Notes for Component ResourceInventory(autoinstaller)

16 Training Delivery

16.1 How to Deliver Training

16.1.1 How to Begin a Presentation

In modern English, Presentations tend to be much less formal than they were even twenty years ago. Most people these days prefer a relatively informal approach. However, there is a certain structure to the opening of a Presentation that you should observe.

1. Get people's attention
2. Welcome them
3. Introduce yourself
4. State the purpose of your presentation
5. State how you want to deal with questions
6. Housekeeping issues

16.1.2 How to Begin

Smile, look into the eyes of as many of your audience as possible and speak slowly: "Hello everyone, good morning and welcome. Thanks for coming."

Your presentation is off to a good start. Starting slowly, engaging in eye contact and being able to say your first few sentences without looking at notes, will help relax you and make your audience feel comfortable. Let's keep going.

A good presentation is well-structured and properly practiced. You can have notes to look at occasionally, but if you want to give a professional impression, then the best advice I can give you is don't read them word for word. Glance at them now and again but give your introduction without reading it from a page.

A good structure is simple - in the introduction, introduce yourself and your topic.

Get people's attention

- If I could have everybody's attention.
- If we can start.
- Perhaps we should begin?
- Let's get started.
- Right. Well. OK. Erm. Let's begin.
- Good. Fine. Great. Can we start?
- Shall we start?
- Let's get the ball rolling
- Let's get down to business.

Welcome them

- Welcome to Microsoft.
- Thank you for coming today.
- Good morning, ladies and gentlemen.
- On behalf of Intel, I'd like to welcome you.

Introduce yourself

- My name's Jane Shaw. I'm responsible for travel arrangements.
- For those of you who don't know me, my name's Tom Stotter.
- As you know, I'm in charge of public relations.
- I'm the new Marketing Manager.
- Good afternoon ladies and gentlemen, let me introduce myself.
- Good morning everyone, I'd like to start by introducing myself. My name is... I am a student at the INT where I am a doctoral candidate,
- I am X. Y. from 3 Com. I'm the manager of…
- I am a researcher from …
- I've been working on the subject now for X years..and I've had wide experience in the field of ...
- Good morning, my name is Lawrence Couderc. I am a student at the INT and I would like to talk to you today about some of my findings in study I did on

16.1.3 How to Introduce Your Presentation Topic

If you want people to pay close attention, you can tell them put away writing instruments.

A good introduction is clear and structured. So once you have told the audience who you are, you need to tell them what you are going to talk about. For this purpose, let's say your topic is the rise in popularity of shopping online. If your presentation isn't too formal then you could say, "The topic of my talk today is shopping online and I am going to discuss some of the reasons why it has become so popular." Alternatively, if your audience is more formal and less relaxed, you could use the following: "The title of my presentation is The Rise in Popularity of Shopping Online and I will give you some background about this trend in retail."

State the purpose and topic of your presentation.

- This morning I'd like to present our new processor.
- Today I'd like to discuss our failures in the Japanese market and suggest a new approach.
- This afternoon, I'd like to report on my study into the German market.
- What I want to do this morning is to talk to you about our new mobile telephone system.
- What I want to do is to tell you about our successes and failures in introducing new working patterns.
- What I want to do is to show you how we've made our first successful steps in the potentially huge Chinese market.
- I plan to speak about...
- Today I'm going to talk about...
- The subject of my presentation is...
- The theme of my talk is... I've been asked to talk to you about...
- I have chosen to speak about this because...
- I was asked to speak about X because...
- My purpose in doing this paper is to give you a solid background on the subject of oral presentation so that in the future, at the INT or elsewhere you can deliver a successful speech in front of a group.
- What I want my listeners to get out of my speech is...
- What I would like to do today is to explain...

- to illustrate...
- to give a general overview of...
- to outline...
- to have a look at...

Announce your outline

- I have broken my speech down/up into X parts.
- I have divided my presentation (up) into Y parts.
- In the first part I give a few basic definitions. In the next section I will explain. In part three, I am going to show...
- In the last place I would like/want to give a practical example...

The next thing to do is to explain when you will be happy to answer questions. So this is when you can say, "I hope you enjoy my presentation and if you have any questions, please don't hesitate to ask me them at the end."

Alternatively, "I trust you will find what I have to say useful and relevant. There will be a Q&A session at the end so please hold on to any questions you may have until then."

It's now important to signal that your introduction is at an end and you are about to begin the main part of your presentation.

State how you want to deal with questions

- If you have any questions, I'll be happy to answer them as we go along.
- Feel free to ask any questions.
- Perhaps we can leave any questions you have until the end?
- There will be plenty of time for questions at the end.
- I'd ask you to save your questions for the end.
- There will be plenty of time at the end of my speech for questions and discussion.
- You may interrupt me at any moment to ask questions or make comments.

16.1.4 Housekeeping

At the start of some presentations you may need to make what are called 'housekeeping' announcements. Housekeeping announcements provide attendees with information to help make their day more comfortable. They do not address the content of the class; rather, they provide information about the facility, administrative announcements or items that will transpire during the day. Announcements should be made just before the beginning of the session.

Here are a few suggestions to help you plan for these.

Things to include

Introductions

Sometimes it is helpful to introduce people. Beyond yourself, this can include people at the back, support services and so on. If your audience is small, it can also be useful to ask each person to introduce themselves.

Phones

Mobile cell phones can be rather annoying, to say the least, when they go off in the middle of a presentation (and it is even worse if the owners decide to take the phone call!). People often just forget to silence them, so a reminder is often a good idea.

Phones are quite personal things so doing this politely is generally a good idea. You may want to ask people to turn their phones to 'silent' or even ask them to turn them off -- phones that vibrate can still distract listeners.

Recording

Sometimes, for example where confidential or copyright material is being presented, you may want to ask people not to record or photograph the session. With cameras and recorders built into phones, this can actually be difficult to police. And policing in general can also be tricky -- stopping to tell people not to take photos is unlikely to endear you to the rest of the audience.

If *you* are recording the presentation it can be a good idea to tell people that this is happening as they may worry about cameras. If the recording will be online at a later date, you may also want to give information about this.

Timekeeping

People like to know how long things will take so they can plan other activities, from work to comfort breaks. If you have an agenda of activities then start and stop times are important, including coffee and lunch breaks.

You can also indicate timescales within your presentation, for example by saying 'We will take a quick five minute to overview the subject before going into detail over the next half hour in the major types of human error.'

When starting a break it is usually important to remind the audience what time you will be restarting.

When people are not back in their seats when you are starting (or restarting) your talk, you have a dilemma to handle -- do you start on time or give the others a few minutes? And if they come back after you have started, do say anything or give them a quick recap? One view is to assume all take responsibility for their own action and so start on time. Sometimes you do need everyone to understand so will have to wait. It can help to politely (and privately, if possible) remind people of their obligation to others.

Drinks

Telling participants where they can obtain drinks (often they will be in your room, however, not always).

Toilets

Location of the bathrooms. Point out where the toilets are, with an appropriate use of language, for example talking about 'comfort breaks' or 'the loo', depending on where you are and the culture of your audience. If in doubt, avoid humor here.

Emergency

Tell them what to do if there is a fire, earthquake, or other calamity which needs them to exit safely. This usually just means pointing out the fire exits. You may have to find where these are before making your speech.

Services

Where there are services provided, such for directions, help getting taxis and so on, the services provided and the method of tapping the them may be described. This can be a physical desk, by phone or other method.

Online conversation

It can be trendy and helpful to organize parallel online conversations, giving hashtags and other contact information to allow people across the audience to comment and connect.

Handouts

If there are handouts, sign in sheets, etc. you can describe these and tell people where to get them.

Security

Sometimes a security announcement is needed, such as to wear name tags or to be vigilant for intruders (such as journalists at a political rally).

Ways to say it

A Slide

A simple approach is to have a slide at the beginning of your presentation with pictures of the items in question: a phone, fire, food, etc. You can then use these as prompts to remind you what items to cover.

Another quick way is to put text messages on the slide and just say 'please read this' then waiting in silence for a few moments.

Maps

For information about where fire exits are and where lunch will be served, a map is often much easier than a waving-arms verbal description. This can be put on paper or a slide.

Using humor

Housekeeping is a dry subject and you can enliven it a little with a little humor. Freud saw humor as based in the rush of pleasure comes from sudden release of tension, for example, by saying 'If there's a fire, don't follow me as I'll be panicking! It's probably a better idea to walk calmly to the nearest exits, which you will see all around the hall'.

Delayed

Sometimes you do not need to make all announcements at the same time and can leave them to breaks, after lunch, etc.

Someone else

The easiest way of managing housekeeping announcements is to let somebody else do it. This is typical of conferences where all you need to do is speak and everything else is managed by your hosts.

Introduce housekeeping announcements.

- Before the meeting starts, I'd like to address some housekeeping issues.
- Before getting started let me go over a little bit of housekeeping.
- I will go through the usual housekeeping announcements. We are not expecting a routine fire drill, so if we hear the fire alarm, please follow the instructions of the staff. Please switch off all mobile equipment completely as it can interfere with the broadcasting equipment.
- Good afternoon and welcome to today's Council on Foreign Relations meeting. Before we get started, just a couple of housekeeping announcements. We'd like to ask you to completely turn off your cellphones and Blackberrys and any other wireless devices, not just put them on vibrate. If it's not keeping you alive, please try to just turn it off. As a reminder, this meeting is on the record.
- Please turn off all cellular phones and personal electronics for the duration of the event.
- Please turn off your phones of set them on stun.
- We'll be breaking for lunch at Noon. Our breaks will be at 10 and 3.
- The bathrooms are on your left as you exit the meeting room..."

16.1.5 A Strong Ending is Worth Remembering

Last, but by no means least because the end of a presentation is crucial. No matter how long or short your talk was, or how fantastic everything you had said was, it is inevitable that your audience will go away remembering the last few seconds. So you must finish your presentation with strong and easily understood language.

Consider using a strong and powerful visual aid at the end of your presentation. Try to summarize what you want your audience to go away with on one colorful but simple visual which will stay with them.

Don't say, "I am now going to summarize what I have just been talking about." Say, "Right, so that was the long version - here's the only thing you have to focus on ..." Because if you can't summarize your presentation in one sentence, your audience won't remember it all. Try to focus on the one main thing you want them to go away with.

Don't say, "Thank you for your attention. It was nice to meet you all and I hope you liked my presentation." Consider saying, "I hope you've learned something new today and if you have questions, please feel free to ask me now. Otherwise, I am available and happy to discuss anything I have said with you ..."

Remember, don't repeat the same verbs, keep your structure simple and easy to follow and make sure you can close your talk with one punchy sentence which is all you want your audience to remember.

16.2 Developers Training Setup

Для успешного прохождения тренингов для разработчиков, необходимо удостовериться, что на машинах установлено следующее программное обеспечение:

	NetCracker Developer	NetCracker Database/Replicated Database	System Administrator
Инструменты, которые задействуются, чтобы пройти практику в курсе для NC8.0	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB Access Tool** – like SQL Developer or TOAD **JDK 1.5.0_10** **Oracle Client** (including sql*plus) **BEA WebLogic Server 9.2** **IDEA 7.0.x** (trial mode) **Internet Explorer 9.0** **SOAPUI**	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB Access Tool** – like SQL Developer or TOAD **Oracle Client** (including sql*plus) **Internet Explorer 9.0**	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB Access Tool** – like SQL Developer or TOAD **Oracle Client** (including sql*plus) **Internet Explorer 9.0**
Инструменты, которые задействуются, чтобы пройти практику в курсе для NC9.0	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB access tool** – like SQL Developer or	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB access tool** – like SQL Developer or TOAD **Oracle Client** (including sql*plus)	**SSH Client** – like Putty or WinSCP **File Manager** – like Free Commander **DB access tool** – like SQL Developer or TOAD **Oracle Client**

	TOAD **JDK 1.7.0_40** **Oracle Client** (including sql*plus) **Oracle WebLogic Server 11** **Eclipse IDE** **Internet Explorer 9.0** **SOAPUI**	**Internet Explorer 9.0**	(including sql*plus) **Internet Explorer 9.0**

16.3ICOMS Trainers

ICOMS Course	Experts/ Trainers	Job Title	Department	Line Manager
Interfaces, PTM	Mike Dingman Milton Klika Cathy Kremer	Technical Consultant Technical Consultant Sr Analyst	Cable Migration & Interface Delivery Cable Application	Roman Yepifanov Karen Harrison
Taxing	Scotlan Adams	Technical Consultant	Cable Application	Karen Harrison
Query	Wendy Borchers	Sr System Analyst	Cable Application	Karen Harrison
Order Entry **Customer Care - Order Entry** **Basic Payments & Adjustments**	Karen Lyons Lana Sargent Xay Sengkhammee	Sr Client Training Associate	Customer Documentation&Training	Andrey Denesh
Counter Cash **Scheduling/Routing/Dispatch**	Xay Sengkhammee	Sr Client Training Associate	Customer Documentation&Training	Andrey Denesh
Billing	Scotlan Adams	Technical Consultant	Cable Application	Karen Harrison
User Security	Wendy Borchers	Sr System Analyst	Cable Application	Karen Harrison

ICOMS Course	Experts/ Trainers	Job Title	Department	Line Manager
Campaing Overview	Linc Barefoot Mike Belknap	Specialist Sr System Analyst	Cable Application	Karen Harrison
Collections	Wendy Borchers	Sr System Analyst	Cable Application	Karen Harrison
Contract	Tom Rheinschmidt Mike Belknap	Technical Consultant Sr System Analyst	Cable Implementation Cable Application	Steve Badgio Karen Harrison
Equipment **Equipment & Item Master**	Larry Thomansson Wendy Borchers	Sr System Analyst Sr System Analyst	Cable Application	Karen Harrison
Monthend	Glenn Turner	Sr System Analyst	Cable Solutions RND	Sally Arocena
Nightly	Wendy Borchers	Sr System Analyst	Cable Application	Karen Harrison
NIM Overview	Marcie Marker	Sr System Analyst	Provisioning	Sally Arocena
PPV & VOD	Joe Peragine	Sr System Analyst	Cable Migration & Interface Delivery	Roman Yepifanov
Rate Master & Matrix Pricing	Tom Rheinschmidt Leonard Sheree	Technical Consultant Sr System Analyst	Cable Implementation Cable Application	Steve Badgio Karen Harrison
Statement Presentation	Scotlan Adams	Technical Consultant	Cable Application	Karen Harrison
System Parameters	Tom Rheinschmidt Boris Baytler	Technical Consultant Sr Testing Analyst	Cable Implementation	Steve Badgio
Toll Ration Overview	Scotlan Adams	Technical Consultant	Cable Application	Karen Harrison

ICOMS Course	Experts/ Trainers	Job Title	Department	Line Manager

Campaign Overview

17 Product Documentation and Training

17.1 Contacts

For all questions regarding product documentation and trainings, such as LOE estimations, documentation, etc. click navigate to Documentation and Training Services and click necessary button.

For any question not covered by the link above send an e-mail to **Documentation and Training CIS Group**.

17.2 Configuring Your System

Information in this section covers the basic steps that are to be taken when you produce on-line help using WebWorks Automap, or when you make a printed version of the documentation, or else.

17.2.1 Administrator vs. Sysadm

When creating documents intended for administrators, use only the "Administrator" login, and NOT "sysadm", as the latter has a lot more system features than need to be described.

17.3 FAQ

17.3.1 - Где можно взять актуальную продуктовую документацию?

Краткий ответ такой: а) на FTP, б) по запросу. В обоих случаях есть следующие ограничения.

Для варианта **а)**:

- На Corp/Documentation в соответствующие папки выкладываются комплекты продуктовой документации для релизов продукта, соответствующие 1) набору компонент, вошедшему в релиз, 2) функционалу на дату выхода релиза (General Availability). Документация на FTP выложена в формате PDF. Папки, соответствующие релизам, названы как "Documentation *Release Name*", например, "Documentation 7.3 Release".

- Комплекты документации по продуктовым релизам, выдаваемым некоторым заказчикам, выложены там же. В имени папки при этом указывается название заказчика. Например, "Documentation 7.3 MAXIS".

- Документы в этих папках впоследствии не обновляются, даже если само обновление соответствующего исходного документа делалось. Также в эти папки не выкладывается документация по более поздним версиям компонент.

Для варианта **б)**:

- Если вам нужна документация по конкретной версии той или иной компоненты для *ознакомления*, обращайтесь в PDTSupportGroup. Желательно сразу указать, для какой версии нужен документ, поскольку этот вопрос вам все равно зададут :)

- Если вам нужна документация для *выдачи заказчику*, то, в общем случае, такие запросы нужно проводить через группу Release Engineering. Об этом подробней написано ниже.

17.3.2 - Почему нигде в свободном доступе не лежит вся имеющаяся документация по продукту?

Можно назвать несколько причин, но основная - это сделано потому, что в данный момент нет механизма, который бы "предотвращал" попытки выдачи документации заказчикам без подтверждения группы RE или PDTG. Такое подтверждение необходимо для того, чтобы проектные команды и все остальные участники могли быть уверены, что заказчик получит именно ту документацию, которая ему требуется.

Если есть идеи, как реализовать упомянутый выше механизм, сообщайте по адресу PDTSupportGroup :)

17.3.3 - Что означает пятое число в номере, указываемом в нижнем колонтитуле в документации?

Первые четыре числа номера, указываемого в документах соответствуют версии компоненты, которую документ описывает. Пятое число означает номер ревизии. Для нового документа ставится "01". Изменяется в случае обновления документа в связи с изменениями в самой версии компоненты или по каким-то другим причинам, например, при исправлении найденных ошибок в описании.

Поскольку документ привязывается к компоненте по номеру ее версии, то изменения, вызванные фиксами, описываются в том же документе, с изменением номера ревизии. В настоящее время, номер фикса в документации никак не указывается.

17.3.4 - Как получить комплект документации, соответствующий определенной выдаче заказчику?

Если вам необходима продуктовая документация, отобранная в соответствии с набором компонент вашего проекта, отправьте, пожалуйста, запрос в группу Release Engineering вашего проекта (например, "Прошу выдать пакет документации для проекта P1") и в этом же запросе укажите ссылку на интеграционную выдачу или ClearCase stream.

На основе вашего запроса группа RE применит автоматическую процедуру отбора подходящих документов в соответствии с версиями компонент, включенных в вашу выдачу. Обратите внимание, что такие запросы обрабатываются исключительно сотрудниками отдела RE, а не PDT.

В этой процедуре имеется следующее ограничение. Поскольку проектная выдача обычно включает наиболее актуальные стабильные версии продуктовых компонент, для которых может еще не быть создано документации (например, может быть документация по более ранней версии компоненты и отсутствовать документация по фиксу, сделанному в рамках той же версии), RE предоставляет самую свежую из доступных версий по каждой компоненте, для которой в документации нет запрошенной версии.

Для четкого понимания, какие из запрошенных версий документов были заменены замыми последними из имеющихся, RE предоставляет отчет, указывающий, для каких версий компонент не было строго соответствующих им документов и какие версии документов по таким компонентам были выданы взамен.

Обновление документации с целью гарантировать, что все компоненты в вашей выдаче имеют строго соответствующие им документы, может потребовать (и, по нашему опыту, действительно требует) дополнительного времени. Такое обновление может занять от нескольких дней до нескольких недель, так как для каждого документа, нуждающегося в обновлении, мы сначала связываемся с соответствующей продуктовой командой разработки для того, чтобы узнать об изменениях, произошедших в компоненте, затем оцениваем LOE и планируем работы в соответствии с текущей загруженностью нашей группы. Кроме того, если ваш проект единственный, кто запрашивает некоторую версию документа, работа будет списана на GP код, который вы предоставите.

Тем не менее, спешим вас обрадовать, что в большинстве случаев расхождения между версиями выданной компоненты и документов представляют собой лишь незначительные исправления или даже просто изменения в номере версии.

17.3.5 - В каком виде выдается пакет документации заказчику?

Подробности см. в разделах:

Структура пакета продуктовой документации клиента

Выдача продуктовой документации клиента на FTP

17.3.6 - Где найти продуктовые design specifications?

Product design specifications доступны здесь:

http://sps3.netcracker.com/corporate/ProductDocumentation/default.aspx

17.4Product Documentation: List of Documents

This page contains a list of some common product documents with brief descriptions.

Search

Document	Short Description
Administrator's Guide. NC_DIRECTORY v.8.2	This document contains the description of the NC_DIRECTORY table which is used to store system properties and miscellaneous application settings. The document also contains useful recommendations for NetCracker application administrators.
Attribute Adapters v.8.2.2.5	The document contains a short description of attribute adapters and a reference for the most commonly used ones.
Attribute Details and Object Type Properties v.8.2.2.5	The document gives an idea about a variety of parameters, additional options and properties to let you freely configure custom object types, attributes and actions implemented by toolbar buttons.
Maintenance Guide NetCracker New York Release 2	The document contains a description of a NetCracker system configuration concept. There are basic principles enabling the NetCracker system to function in various environments. The general notes related to the Oracle RAC interoperability are given, while the cases of single and cluster configurations are discussed in the context of a WebLogic domain concept.
Object Model and User Interface Customization v.8.2.3.9	This document deals with making the user interface more flexible and convenient. NetCracker user interface customization includes adding new tabs to allow displaying and managing objects of system and custom object types, adding buttons (for example, to start processes or open pages), adding new items to NetCracker menus to get quick access to specific pages, setting page layout, and so on.
Object Types Attributes and Schemas v.8.2.3.9	NetCracker combines two approaches to describe objects, parameters, and their relationship, and to organize information into a simple and comprehensive structure: object model and attribute model.

17.4.1 Documentation 8.2 Release - Updated

Document	Short Description

Document	Short Description
2G Integration Adapter for Huawei M2000™ 8.0.1.0	This document is intended to provide all the necessary information on the tools for administrating 2G Integration Adapter for Huawei M2000™.
3G Integration Adapter for Huawei M2000™ 8.0.1.0	This document is intended to provide all the necessary information on the tools for administrating 3G Integration Adapter for Huawei M2000™.
Administrative Tools 8.2.3.9	The document describes the administrators' tools and permissions to perform the different operations.
Archiving 8.2.3.0	NetCracker enables users to save printed versions of the pages in the text navigation mode. This functionality which is called archiving and the saved printed version of a page which is called an archive are described in the document.
Assignment Rules 8.2.3.1	The document contains a short description the mechanism of assignment rules action in detail.
ATM 8.2.3.0	This document describes the procedures of creating and configuring ATM circuits in NetCracker.
Attribute Adapters 8.2.2.5	The document contains a short description of attribute adapters and a reference for the most commonly used ones.
Attribute Details and Object Type Properties 8.2.2.5	The document gives an idea about a variety of parameters, additional options and properties to let you freely configure custom object types, attributes and actions implemented by toolbar buttons.
Business Activity Monitoring 8.0.3.17	Business Activity Monitoring (BAM) document describes the information about the status and results of various operations, processes, and transactions. BAM provides a possibility to obtain updated information as often as it is necessary. The component captures raw data, transforms this data according to the pre-defined configuration and presents the information in a convenient and legible form. Visibility of the business activity monitoring process is provided by means of generating reports and calculating values of key performance indicators (KPI).
Business Calendar 8.0.2.8	Business calendars store and manage holiday and weekend information for various geographical areas, countries or company offices. The data stored in business calendars is used as reference to calculate different terms, time periods and deadlines depending on information on workdays, weekends, holidays, working hours and breaks for workdays for regions or local offices.
Capacity Management 7.3.2.6	The Capacity Management component is designed for monitoring the capacity level of resources used in the network infrastructure. It provides information for analyzing the current capacity level of the network resources and further planning the network infrastructure.
Card and Device Replacement Wizard 7.3.2.8	The document contains the description of the process of replacement and/or reconnecting a device or a card.
Coloring Configuration for GUI Views 1.2.0.0	The NetCracker system provides functionality for viewing different objects in graphical user interface. Various network elements or NetCracker logical entities can be viewed as hierarchy graphs. The objects represented in these graphs can be marked in different colors. The correlation between displayed objects and colors is

Document	Short Description
	represented in color legend. The coloring of objects and color legend are configurable.
Configuring Business Activity Monitoring 8.0.3.17	The document describes the Business Activity Monitoring configuration to manage all the objects involved in the Business Activity Monitoring component functioning.
Configuring Cabling Wizard Settings 7.3.2.8	The document contains the description of configuring the features of the cabling wizard.
Configuring Capacity Management 7.3.2.6	The document contains the description of configuring Capacity Management.
Configuring CAS Authentication 7.0.1.0	In NetCracker, authentication can be performed via the Single Sign-On (SSO) technology, which means that once a user is authorized in an external system, the user automatically gets access to the NetCracker system. The SSO authentication is performed by using the Central Authentication Service (CAS) protocol. For a proper CAS authentication process via the SSO technology, certain configurations are needed. Those configurations are described in the document.
Configuring Correlation Engine for Mass Market 8.1.1.1	The document contains the description of configuring correlations between service instance hierarchies and network resource hierarchies.
Configuring Customer Order Management 8.2.6.0	The document contains the description of configuring customer order management that is a flexible tool for initiating, storing, processing and tracking product orders.
Configuring Floor Space Management Graphical User	The administrator can set the image file to be used as a floor plan, define the coloring profiles, specify the list of parameters to be displayed in a tooltip in the Floor Space Management tool and set the reservation configuration.
Configuring Geographical Views 10.0.2.0	The system is provided with the default Geographical View configuration which is ready for usage in every inventory project. The default Geographical View configuration is used in case an inventory project does not include any Geographical Views configured specially for the project. NetCracker also provides a capability to configure one or several Geographical Views for each inventory project. Those configurations are described in the document.
Configuring Graph Views 10.0.2.0	The document contains the description of configuring tools for diagrams.
Configuring Historical Data Storage 8.1.3.2	Configuration of Historical data storage is a set of rules that determines how the objects to be transferred are selected, and what actions are to be done with these objects while executing the config. Config execution can be automatic with predetermined time interval, or can be started manually.
Customer Information Management 8.0.2.3	The document contains the description of customer accounts idea which manages gathering and documenting information about all customers of the company (customer name, account number, contract expiration date, references to the purchased services and to the equipment used for providing these services, etc.).
Configuring IP Planner	Administrators can enable or disable copying parameters of IP range templates when creating ranges, edge IP addresses

Document	Short Description
8.2.3.0	displaying, and propagation of IP ranges parameters. Also, administrators can configure the special search profile for searching IP addresses and group private IP ranges.
Configuring Jeopardy Management 8.0.1.20	Each process (for example, service provisioning) has two important milestones to monitor: the due date and the jeopardy date. The document contains the idea that some entities should be created and configured in the system to enable the monitoring process for objects of a particular object type.
Configuring Kerberos Authentication 7.0.1.0	For a proper Kerberos authentication process via the SSO technology, the following configurations are necessary: Web browser configuration, Active Directory configuration, Domain Controller configuration, NetCracker system configuration, NetCracker server's Java options configuration, Kerberos authentication ticket receiving configuration. Those configurations are described in the document.
Configuring Metro Ethernet Network View 8.2.1.0	After the Metro Ethernet Network View component is installed on a server, the initial configuration should be performed via the user interface to ensure the correct work of the component on the server. It is described in this document.
Configuring MW Links 8.2.2.7	In order to make the MW Links component even more convenient and easy to use, the NetCracker system uses its flexible approach by providing system administrators with the ability to customize the component.
Configuring Network Planning 8.2.2.0	The document contains the description of planning rules projects, rule sets, rules, rule operations, planning listeners.
Configuring Order Decomposition View 1.3.0.0	The document contains the description of configuring policies, parameters and colors for Order Decomposition View.
Configuring OSP. Textual Mode 8.2.7.0	The document contains the description of configuring cabling, fiber routes, traces, SPOF's (Single Point of Failure) management.
Configuring OSS/J Fault Management Integration 7.3.1.3	The document contains the description of configuring policies OSS/J Fault Management integration and resynchronization.
Configuring Planned Maintenance 8.1.1.1	The document contains the description of configuring the way the Planned Maintenance component processes maintenance tickets and correlates them with RTTs and STTs. Maintenance correlation rules and planned maintenance events are also described.
Configuring Process Orchestrator 8.0.2.34	This document describes the configuration of the Process Orchestrator component. The Process Orchestrator component of the NetCracker system enables composing and executing processes .
Configuring Rack Space Management Graphical User Interface 1.3.2.0	The administrator can configure the coloring profiles that will allow more vivid visualization of the racks and devices according to their parameters; configure the planning capability and set up the displayed objects' parameters.
Configuring Reports 8.2.3.26	The document contains the idea that reports, report folders, and report collections are managed like any other object in the NetCracker system: they can be created, edited, moved, exported, imported or deleted. Common NetCracker tools enable to manage

Document	Short Description
	user rights on reports, report folders and report collections, export generated reports to Excel and use Excel templates to view the generated reports, etc.
Configuring Resource Inventory 8.2.3.0	This document provides information on configuring and fine-tuning the Resource Inventory component.
Configuring Search Profiles 8.0.3.43	The document contains the description of the configuring Search Profiles.
Configuring Service Incident Logging 8.1.1.1	The document contains the description of the backward severity rules and setting resource and maintenance tickets deleting time.
Configuring Service Order Management 8.2.8.1	The document contains the description of configuring Service Order Management which provides a flexible tool for initiating, storing, processing and tracking service orders.
Configuring Service Problem Management 8.1.1.3	The document contains the description of configuring Trouble Tickets Repository; Event Management; Correlation Engine; Notifications and Escalations mechanism; Service Level Agreement Management; On-Line Topology and Services Database (OTSDB).
Configuring Service Visualization 8.2.1.0	Users with administrative rights are enabled to configure association of a diagram and a service instance via a service template and a service diagram template association. Those configurations are described in the document.
Configuring Shared Services 7.3.3.3	The document contains the description of adding subtypes of the specification and instance object types and managing the "Delete Implemented By Link" parameter of the Shared Service Catalog.
Configuring Specification Catalog View 1.3.0.0	The document contains the description of configuring policies, parameters and colors for Specification Catalog View.
Configuring Task Assignment Rules 8.1.2.4	To ensure operation of the Task Assignment Rules component, the following objects are to be configured beforehand: skill, context parameter, matching vector, rule, automatic and manual assignment rule. Those configurations are described in the document.
Configuring Template Based Integration 8.0.2.7	Configuration of the TBI component includes the following main steps: configuration of SYP, initial configuration of TBI DataFlow adapter, configuration of SYP action, configuration of TBI script templates, final configuration of TBI DataFlow adapter, configure SYP action interaction item. Those configurations are described in the document.
Customer Order Management 8.2.6.0	The document contains the description of the provisioning process that enables documenting operations on products. When a customer places his request for a product, the service provider has to undertake particular activities to deliver the services included in the product to the customer (for example, to install a modem in the customer's premises, or to configure provider's routers, and so on). All these activities need to be documented to control their fulfillment.
Device Library 8.2.3.0	The document contains the description of the NetCracker Device Library which provides an extensive device database that contains information on more than 50,000 network devices from more than

Document	Short Description
	700 manufacturers.
Diagram Editor 8.2.1.0	Although configuration of templates is rather flexible, in some cases particular service instance can have structure that differs in details from the template-generated structure. The Diagram Editor component provides possibility to make necessary changes for diagrams, generated for such service instances. The document contains the description of the Diagram Editor.
Discovery Solution 7.3.1.1	The document contains the description of the Discovery Solution component of the Discovery and Reconciliation module. The Discovery Solution component eliminates the need for manual data input by providing flexible tools for gathering information from across the network.
DSL 8.2.3.0	The NetCracker DSL Module provides users with the ability to model DSL equipment (splitters, DSLAMS and testing equipment), including DSL-specific ports, model different configurations of subtending DSLAM systems with the help of DSL-specific network elements and store information about local loop (copper pair) connection.
DWDM 7.3.2.1	NetCracker provides a DWDM component, which enables to document DWMD network infrastructure, from technology-specific equipment to a set of DWDM-specific circuits.
Enterprise Directories Integration 7.3.1.11	NetCracker's integration with Lightweight Directory Access Protocol (LDAP) servers implies authorizing NetCracker users through an LDAP Server. The main purpose of this integration is to provide a single authorization mechanism for internal NetCracker users and users contained in an external database.
Error Handling Framework 8.0.1.14	The main purpose of the Error Handling Framework component, which is described in the document, is to provide an extensible platform to centralize error detection and resolution activities. Errors caught in different components can be observed in one place and can be resolved (automatically or manually) by using the standard approach.
Event Listeners 8.2.2.5	An event listener, which is described in the document, responds to certain events in the system, such as object creation, modification of a parameter or a particular object or its child or parent object, and so on. For each listener, the handler of the corresponding events is specified. By default, a number of event handlers are implemented in the system. Based on these core handlers, the administrator can configure event listeners to set up the desired functionality in accordance with certain requirements.
Export and Import 7.3.3.2	NetCracker provides administrators with a tool used to save different objects on local data storage as a zipped .xml file and to import projects from the saved file to any NetCracker system. It is described in the document.
Feasibility Check 8.2.1.0	The document contains the description of configuring Feasibility Check, its results and API.
Floor Space Management. Graphical Mode 8.0.1.0	The document contains the description of converting a Microsoft Visio floor plan into a NetCracker floor plan.
Floor Space Management	The Floor Space Management component is intended to document

Document	Short Description
Graphical User Interface 1.6.0.0	the space usage of the areas like floors or rooms and to visualize objects' positions according to specific plans that represent actual areas within the buildings. The system uses a vector image as a floor plan in top-view and enables arranging inventory objects on it.
Floor Space Management. Textual Mode 8.0.1.0	The document contains the description of the floor space threshold management and the floor space management reports.
Form Designer 8.0.2.10	The pages that can be build via the Form Designer, which is described in the document, provide visual represention of certain predefined Java Objects (simple objects) and NCObjects (complex objects). The controls placed on such a page can be used to display data encapsulated in these objects. Also, the Form Designer enables creating various popup windows like dialog boxes, alarm windows, and so on.
Frame Relay 8.2.2.0	This document describes the routines of creating and configuring Frame Relay circuits.
FTTH 8.2.2.0	The leading FTTH configuration is PON, or Passive Optical Network configuration. Passive Optical Networks are characterized by splitting optical fiber and sharing it among multiple users. At the Central Office, the termination point is in the PON optical line terminal (OLT). At the customer premises, the termination point is in optical network terminals (ONTs). Between the OLT and the ONTs there is a passive optical network that includes fiber links and passive splitters and splices. Splices and splitters are installed in special enclosures—Optical Distribution Frames (ODFs) and FTTH pedestals.
FTTH Splitting. Graphical Mode 8.2.2.0	NetCracker supports splitting in graphical mode by using Network Configurator.
Geographical Views 10.0.2.0	NetCracker Geographical View, which is described in the document, is a type of view supported by the Network Configurator which provides a capability to operate with NetCracker objects belonging to different levels of the NetCracker hierarchy on a single view. The Geographical View enables presenting objects on a GIS map and defining actual geographic coordinates of displayed objects.
Historical Data Storage 8.1.3.2	The Historical Data Storage component, which is described in the document, is intended for transferring objects from the operational database to the independent storage database.
History of Changes 8.2.2.5	NetCracker system allows tracking changes made by all users to NetCracker objects. NetCracker database stores history records for all changes and displays them when prompted. Users can view changes made to the different objects, along with its child objects.
Integration Adapter for Alcatel 1353NM/1354RM™ 8.0.1.1	This document is intended to provide all the necessary information on the tools for administrating Integration Adapter for Alcatel 1353NM/1354RM™.
Integration Adapter for Ericsson OSS 8.0.1.0	This document is intended to provide all the necessary information on the tools for administrating Integration Adapter for Ericsson OSS.
Integration Adapter for Huawei T2000™ 8.0.2.1	This document is intended to provide all the necessary information on the tools for administrating Integration Adapter for Huawei

Document	Short Description
	T2000™.
IP Planner 8.2.3.0	NetCracker IP Planner is intended to distribute IP addresses in a network project.
IT Infrastructure 7.3.2.0	NetCracker supports documenting various types of servers, data storage equipment, EBR (Enterprise Backup and Recovery) equipment. Along with modeling physical equipment, NetCracker supports documenting logical resources of a SAN: server interfaces, switch fabrics, partitions, tape drives. The component also supports modeling clusters of servers and partitions.
IT Infrastructure Extension 8.0.1.0	The document contains the description of servers, specifying port network configuration and managing information technology infrastructure groups and users.
Jeopardy Management 8.0.1.20	The main function of the NetCracker Jeopardy Management (JM) component, which is described in the document, is to document Service Level Agreements (SLAs). An SLA is documented as an SLA metric object. Each SLA metric is related to a particular type of objects (for example, a service order) and defines standard duration and jeopardy interval of the object processing activity. Besides, the metric contains information on resolving actions in case of jeopardy and overdue events. If a jeopardy or overdue event is detected, the system undertakes the action defined in the SLA metric for this particular event.
Jobs 7.3.2.15	The document contains the description of the mechanism of jobs, which is available to administrators and is a flexible and simple way to perform operations in NetCracker. Each job is a task that is responsible for performing a definite operation.
L2TP 8.2.2.0	The document contains the description of L2TP tunnel circuits and L2TP PVC circuits.
License Key Guide New York Release 2	The document contains the description of the licensed user access, license policies and restrictions, license key update.
Mail Sender 8.0.2.1	The document contains the description of the Mail Sender which is a component that provides API for abstract description of e-mail essage source (message content and optional attachments). Also, Mail Sender displays e-mail messages via NetCracker's user interface.
Maintenance Guide NetCracker New York Release 2	The document contains a description of a NetCracker system configuration concept. There are basic principles enabling the NetCracker system to function in various environments. The general notes related to the Oracle RAC interoperability are given, while the cases of single and cluster configurations are discussed in the context of a WebLogic domain concept.
Managing Rights 8.2.3.9	In NetCracker, access rights are defined for object types, attributes and specific objects. This mechanism provides flexibility required to control access of each user to each object, or even to each parameter of an object.
Mediation DataFlow 7.1.3.21	The document contains the description of the Mediation DataFlow that not only enables users to quickly implement a new integration case, but also provides a set of reusable integration templates which can be easily configured for a new data content format. All

Document	Short Description
	this can be done in NetCracker without coding, using the standard NetCracker interface. In addition to this, Mediation DataFlow allows users to: integrate any systems with any interfaces, create new configurable integration templates, run integration based on DataFlow deployed as a part of NetCracker server or as a standalone system, incorporate existing data conversion applications via API.
Mediation DataFlow WebServices Pack 7.1.1.5	The document contains the description of Web service integration cases implementation.
Mediation Transition. Transformation Engine 7.3.3.1	The document contains the description of the stages of data integration process on which users need to transform data from one table set of the unified model configuration to another one.
Mediation Transition. Unified Model Configuration 7.3.3.1	This document describes the following subjects: the structure and basic settings of the Mediation Transition Engine configuration, the configuration consistency checking, documenting of the data integration process.
Mediation Transition. Validation Engine 7.3.3.1	The document contains the description of the validation engine and its mechanism of checking the data either in the Source Database (SDB) or in the intermediate database (IDB).
Message Engine 8.2.1.9	The document contains the details for administrators on how to create and send messages to users and user groups.
Metro Ethernet 8.2.1.6	NetCracker Metro Ethernet component enables modeling of an Ethernet-based network that covers a metropolitan area.
Metro Ethernet Network View 8.2.1.0	NetCracker's Metro Ethernet Network View component consists of graphical tools that provide an easy-to-comprehend visual display of the network and VLANs. The Network View can also be used to identify and fix problems in VLAN configurations.
MSC. Graphical Mode 8.0.2.0	The Network Configurator provides graphic tools to display and edit artifacts, shared service specifications, shared services, and interconnections between them.
MSC. Textual Mode 7.3.3.3	Mobile Service Catalog is designed to store the definitions of mobile services, such as SMS, MMS, and Blackberry, offered by Telecom providers within a particular network, for example GPRS. Mobile Service Catalog is a repository for storing and managing company mobile services.
Multilanguage Support 8.1.1.0	The document contains the details on how to specify locales and languages, associate users with locales.
MW Links 8.2.2.7	This document is designed to describe the principles of modeling point-to-point and point-to-multipoint microwave links in the NetCracker system. This guide also provides the detailed instructions on how to document the architecture of microwave wireless network and how this information can be used, including physical equipment and frequency channels management.
Naming Conventions 8.2.3.9	The document contains the details on two types of naming conventions in NetCracker — Object naming convention and Repository naming convention.
NC to NC Replication	The document contains the description of the "NC to NC Replication" component which provides facilities for data replication

Document	Short Description
8.0.2.2	between two NetCracker instances (source and destination databases).
Netcool/Impact Integration Adapter 7.3.1.0	The document contains the description of the materialized views which contain the data about devices, network elements, circuits, services, customer accounts, and about dependencies between all these objects.
Network Configurator 8.1.1.0	The document contains the description of the Network Configurator which is a tool for managing physical and logical network infrastructure. All details—from locations, equipment and cables to facilities and services—are available in a graphical form. The Network Configurator provides up-todate information regarding network hardware and software. By using the Network Configurator it is easy to update the inventory on the fly and use the inventory data to automate routine tasks.
Network Design and Planning. Framework 8.2.2.0	The document contains the description of documenting and planning of future changes in the network infrastructure.
Network Design & Planning. Lifecycle Rules 8.2.1.0	The document contains the description of planning mode, operations with plans, with planning actions, with inventory objects.
Network Design & Planning. OSP 8.2.2.0	The document contains the description of documenting planned changes in the Outside Plant (OSP) infrastructure.
Network Design and Planning. Validation Reports 8.2.2.0	The document contains the description of the process of validating a plan which is performed according to the special validation rules. Validation report is also described.
Network Modeling 8.2.3.0	The following document explains how Resource Inventory data is managed in the text navigation mode, which displays objects and their parameters in tables on different tabs to facilitate navigation throughout the system.
Network Modeling in Network Configurator 10.0.2.0	Network modeling in Network Configurator includes creating the entire network structure — sites, racks, devices and connections between them.
Object Model and User Interface Customization 8.2.3.9	This document deals with making the user interface more flexible and convenient. NetCracker user interface customization includes adding new tabs to allow displaying and managing objects of system and custom object types, adding buttons (for example, to start processes or open pages), adding new items to NetCracker menus to get quick access to specific pages, setting page layout, and so on.
Object Types, Attributes and Schemas 8.2.3.9	NetCracker combines two approaches to describe objects, parameters, and their relationship, and to organize information into a simple and comprehensive structure: object model and attribute model.
Oracle RAC Notes NetCracker New York Release 2	The document contains a description of the Oracle Real Application Cluster (RAC) that is a cluster-enabled variant of the Oracle Relational Database Management System (RDBMS) software. Due to Oracle RAC, multiple computers can run the Oracle RDBMS software simultaneously while accessing a single database, which is called a clustered database. The main concept of Oracle RAC is

Document	Short Description
	to allow multiple servers to share the load.
Order Decomposition. Graphical Mode 1.3.0.0	The document contains the description of functionality for constructing dependency graphs in graphical user interface (GUI), representing relations between particular orders.
Order Entry 8.1.4.5	The document contains the description of the order entry that is intended to present the customers with optimized (and appropriately limited) offers tailored to their needs and desires based on their personal history and purchase data. It provides a comprehensive web-based user interface for order capture, for supporting negotiations between a customer sales representative (CSR) and a customer for product orders details. The component provides a virtual workspace for a CSR,with a flow for capturing details of customer order. The Order Entry component contains mechanisms for quotation management.
Order Entry Wholesale 8.1.4.5	The document contains the description of the order entry wholesale component that enhances: the product catalog functionality by adding scenarios to product descriptions, the pricing engine functionality by adding the possibility to use scenarios as specifications for product offer components, the order entry functionality by adding possibility to use scenarios during quotas proceeding.
OSP. Configuring Cable Coloring 8.2.7.0.01	The document contains the description of the coloring of OSP cables by assigning a particular color schema to the cable. Color items, color palette and color mask are also described.
OSP. Graphical mode 8.2.3.0	The document describes a number of OSP facilities including OSP cables, conduits, manholes, poles and so on which can be created and managed in a graphical mode in the Network Configurator.
OSP. Textual Mode 8.2.7.0	The document describes a dynamic repository of all outside plant assets, including devices, ducts, cables, manholes, splice closures, demarcation patch panels and poles, as well as other aerial and underground equipment.
OSS/J. Service Inventory API 8.2.3.0	The document contains the description of the OSS/J Service Inventory API.
OSS/J. Service Order Management/ Product Order Management API 8.2.3.0	The document contains the description of the OSS/J Service Order Management and Product Order Management.
Parameter Visualization Configuration for GUI Views 1.1.1.0	The document contains the details on configuration of parameters visualization.
Password Encryption NetCracker New York Release 2	The document contains the description of using encryption formats with the help of which user passwords are encrypted and stored in the database. It prevents clear passwords from being accessed by any users including the system administrators. The concepts of the one-way encrypting format and two-way encrypting format are descrobed.
PBT 8.2.2.0	NetCracker enables modeling the PBT-based network infrastructure and configuring Instance Service Identifier (I-SID)

Document	Short Description
	services for these networks.
Phone Book: American Data Model 8.2.1.3	This document provides information about the North American model of the NetCracker Phone Book. The model is applicable for documenting the numbers of the Public Switched Telephone Network for countries sharing the resources of the North American Numbering Plan.
Phone Book: European Data Model 8.2.2.1	NetCracker Phone Book enables the users to assign and manage phone numbers and phone ranges in an inventory project. This document provides information about the European model of the NetCracker Phone Book.
Planned Maintenance 8.1.1.1	The document contains the description of maintenance tickets.
Power Management and Cooling Equipment 7.2.1.3	NetCracker's Power Management and Cooling Equipment component is intended to manage device power consumption that is based on power and supply equipment, and manage climatic equipment: heaters, conditioners, and fire extinguishers. To enable managing device power consumption, the component gives all devices special power consumption parameters. As power and cooling equipment also consumes power, they inherit these parameters.
Power Management and Cooling Equipment. Graphical Mode 8.0.1.0	The NetCracker system enables viewing power connection diagrams of floor and room objects as an interactive graph diagram of power connections between power consuming devices, power supply systems and power distribution units (PDUs).
Pricing Engine 8.1.4.5	The document contains the description of the pricing engine that provides abilities for managing product offers and setting up pricing schemas for them dependent on certain markets, customer categories, distribution channels, with support of recurring and non-recurring charges, and discounts.
Process Orchestrator 8.0.2.34	The document contains the description of the Process Orchestrator component of the NetCracker system which enables composing and executing processes, which are sets of tasks.
Product Information Management 8.2.1.0	The document contains the description of an extendable and configurable Product Catalog that enables defining products being offered by a telecommunications service provider and history of products being deprecated. Besides defining products, NetCracker’s Product Catalog makes it possible to organize them by categories. Also, the Product Catalog can be adjusted to supplement information on geographical locations and associate it with corresponding suppliers available there.
Product Inventory 8.2.6.0	The document contains the description of the product orders and product instances.
Queue Configuration 8.2.1.4	The document contains the description on how to configure queues, that is, to specify message listeners for them and set queues’ throttling parameters.
Rack Space Management Graphical User Interface 1.3.2.0	The Rack Space Management tool provides convenient means to view free space in racks.
Reconciliation Framework	The document contains the description of the NetCracker

Document	Short Description
8.0.8.6	Reconciliation Framework that is a tool intended to synchronize the data obtained from external source (which is not obligatory a database) with NetCracker Inventory data. Various reconciliation scenarios are available in Reconciliation Framework providing rich integration capabilities. Reconciliation configuration and reconciliation process are described in this document.
Replicated Database 7.3.3.9	The document contains the description of the replication mechanisms, mapping rules and mapping scenarios.
Reports 8.2.3.26	When working with certain NetCracker objects, it may sometimes be useful to have summary information about these objects. For these purposes NetCracker provides a report engine. The document contains the description of the report which is an object used by the report engine to get summary information about objects within the system.
Resource Assignment and Reservation 8.2.1.1	This document describes the configuration of the Resource Assignment and Reservation component (RAR).
Resource Catalog 8.2.1.0	The document contains the description of resource categories and resource specifications.
Resource Inventory Basics 8.2.3.0	This document describes the basics of using NetCracker's Resource Inventory.
Rule Engine 8.2.6.0	The document contains the description on how to to create, store, modify and execute rules. It also contains mechanisms of assigning rules to changes of NetCracker objects, such as creating, copying and moving, deleting objects, modifying objects' parameters; specifying rule operations.
Rules Graphical User Interface 2.0.0.0	The document contains the description of the Graphical Rules Editor which is alos used to specify rule operations and setting logical dependencies between these operations.
Scripting Framework 7.2.1.2	The document contains the details on how to execute scripts.
SDH/PDH 8.2.2.7	SDH/PDH module is developed to represent SDH and PDH circuits in NetCracker.
Search 8.0.3.43	NetCracker system contains a large number of objects with different types, names, parameter values, and locations. The document contains the description of the NetCracker's Search tool which is designed to help quickly navigate to the necessary object. By using the Search tool, users can find objects according to predefined criteria.
Security Policies 8.1.2.3	The document contains the description on the rules that define whether a user's status lets the user log on to the system, how often users can and must change their passwords, which symbols are allowed in users' passwords and whether it is possible to set a user's password that the user employed earlier.
Service Activation Framework 8.2.5.2	The document contains the description on the NetCracker Service Activation Framework (SAF) which is an integrated system module for activating services by issuing commands that change parameters of the equipment remotely, or stop a service, if necessary. Service Activation Framework provides a number of

Document	Short Description
	tools for configuring activation process.
Service Incident Logging 8.1.1.1	The document contains the description of service incident logging management which includes maintenance scheduling, dynamical root cause analysis and viewing closed tickets.
Service Information Management 8.2.8.1	The document contains the description of the Service Catalog and Service Order processing.
Service Inventory 8.2.4.0	In the Service Inventory, services provided to a particular customer are represented as service instances which are managed through service orders. The document contains the description of service order, service instance and component instance.
Service Order Management 8.2.8.1	The document contains the description of documenting operations from service initialization to service disconnection. Service inventory, service order processing, service order management reports are also described.
Service Problem Management 8.1.1.3	The document contains the description of Trouble Tickets Management; Event Management; Correlation Engine; Notifications and Escalations mechanism; Service Level Agreement Management.
Service Visualization 8.2.1.0	The document contains the description of the Service Visualization component which is intended to represent a schematic view of a service as it is used to be displayed in a particular company. These diagrams are used internally within the company to represent service instances and facilitate various sales, design, activation and assurance activities and enable more intuitive perception of the information.
Software and Licenses 8.2.1.1	NetCracker's Software and Licenses component is designed for documenting and managing software that can be installed on inventory devices and for documenting software licenses acquired by an organization to use this software.
SONET 8.2.2.8	With NetCracker SONET model network designer can document different levels of SONET network representing specific rules of SONET circuit construction and thus reflect functional and structural architecture of SONET-based circuits.
Specification Catalog. Graphical Mode 1.3.0.0	The document contains the description of functionality for constructing dependency graphs in graphical user interface (GUI), representing relations between specifications.
Subscriber Inventory 8.0.1.0	The document contains the description of managing subscribers and respective users, subscribers' subscriptions and users' service profiles.
Supported Software Configurations 1.0.1	The document contains the description of the software and hardware compatabilities.
Template Based Integration 8.0.2.7	The document contains the description of the TBI component which is used by the Order Processing Framework (OPF) component of the NetCracker Framework. TBI provides OPF with capabilities to run integration tasks directly upon order processing.
Templates 8.2.3.0	NetCracker provides users with templates that simplify project design by creating reusable project components.

Document	Short Description
Text Navigation Mode 8.2.7.2	The document describes basic interface elements in NetCracker. These elements are used to present objects and perform basic operations with them. The document also provides instructions on how to use the interface controls to navigate through the system, and store and find the required information.
Third-Party Products Configuration Requirements 1.0.1	The document contains the description of the third-party products configuration requirments: the NetCracker compatability matrix, operating system, WebLogic server, Oracle database.
UMTS 8.0.2.4	The NetCracker UMTS model includes all the necessary functionality that enables documenting the network structure by modeling network nodes and their interconnections.
Users and Groups 8.2.3.9	The document contains the description of managing users and groups.
VLAN Planner 8.2.1.3	The NetCracker VLAN Planner is a tool designed to represent VLANs in a network project. With the VLAN Planner network designers can document various aspects of the functional and structural architecture of a VLAN and its configuration.
VoATM 8.2.2.0	This document describes routines of creating and configuring VoATM circuits in NetCracker.
Voice 7.0.2.2	This guide provides information on creating and configuring objects of the PSTN and VoIP networks.
VPLS 8.2.3.1	The following document describes the procedures of creating and configuring VPLSs in NetCracker.
VPN MPLS 8.2.3.0	NetCracker offers the BGP/MPLS VPN module that enables representing MPLSbased VPN structure and document its configuration in inventory projects.
WebLogic Configuration for LDAP Integration 7.3.1.11	Configuring NetCracker's integration with an LDAP Directory Server involves several steps: opening WebLogic console, creating and setting up a security realm, populating realm with appropriate providers, setting up providers, selecting default realm (realm to be used), activating changes and restarting server. Those steps are described in the document.
WiMAX 7.3.1.0	The WiMAX component of the NetCracker system is developed to document all physical and logical resources of modern WiMAX networks.
Workflow 8.1.4.14	The document contains the description of managing workflow.
Workforce Management 8.0.4.1	The document contains the description of the NetCracker Workforce Management module which delivers exceptional value to service providers by providing full-fledged support for company and supplier/partner field workforces.
Work Orders and Work Items 8.0.4.1	The document contains the description of the Work Order Structure component of the NetCracker system which enables storing work orders and supports common functionality for managing them. A work order usually consists of one or several work items.
XPath 7.2.1.5	XPath is used with the help of special host objects (which are represented in NetCracker's Scripting component) or API methods. The document contains the description of those methods.

18 Education

18.1 All CDT Workshops

18.1.1 8-hour OOB Courses

18.1.2 Active Mediation

18.1.3 Activity Timeline Demo

Video on BASS
https://bass.netcracker.com/pages/viewpage.action?spaceKey=VID&title=Activity+Timeline+demo

Video on SPS3
https://sps3.netcracker.com/extprojects/CSIR/BPCC/Forms/AllItems.aspx?RootFolder=%2Fextprojects%2FCSIR%2FBPCC%2F02-%20CSI%20Practices%2F06%20-%20Customer%20Training%2FInternal%20Training

18.1.4 BHN CRM Solution Overview

Find video **Changes in Network Planning and Design** in Video section on BASS here:

Bright House Networks CRM Solution Overview

The video gives the overview of the CRM, the part of the Bright House Networks, its purpose, functionality, the ways to use it for the Customer Information Management (Customer Accounts, Customer search etc.).

18.1.5 Collections Manager

18.1.6 Confluence Structure Demo

This document is a Web-X and audio recording of the Confluence structure used by the CDT team:

Link to the folder containing the presentation on the CIS SharePoint:
https://sps3.netcracker.com/extprojects/CSIR/BPCC/Forms/AllItems.aspx?RootFolder=%2Fextprojects%2FCSIR%2FBPCC%2F02-%20CSI%20Practices%2F06%20-%20Customer%20Training%2FInternal%20Training

Presenter: Andrei Denesh

Date: 10/9/2017

18.1.7 Continuous Integration

Download Product Fixes and Components Delivery Process Overview presentation

Find video **Product Fixes and Components Delivery Process Overview** in Video section on BASS here:

 Product fixes and components Part1

 Product fixes and components Part2

The video gives the overview of product components, product component update and product fixes delivery processes.

18.1.8 Customer Problem Management

Find video **Customer Problem Management** in Video section on BASS here:

 Customer Problem Management

The video provides an overview of NetCracker Customer Problem Management and Service Problem Management solutions customized for Andorra.

18.1.9 Dynamic Decisioning

18.1.10 Network Planning and Design

Download Network Planning and Design presentation

Find video **Changes in Network Planning and Design** in Video section on BASS here:

 CDT Seminar - Changes in Network Planning and Design Part1

 CDT Seminar - Changes in Network Planning and Design Part2

 CDT Seminar - Changes in Network Planning and Design Part3

 CDT Seminar - Changes in Network Planning and Design Part4

The video gives the overview of the Network Planning and Design module (purposes, functional capabilities, main entities) and provides information on the new functionality that was implemented in the last version of the module.

18.1.11 PowerPoint and OneNote 2010 Tips

Find video **PowerPoint and OneNote 2010 Tips** in Video section on BASS here:

 PowerPoint and OneNote 2010 Tips

This video represents brief overview of major concepts of MS PowerPoint 2010: master slides, layouts, comparing presentations etc.. It also contains information about basic features of Microsoft note taking application OneNote 2010.

18.1.12 SharePoint Content Approval

Find video **SharePoint Content Approval Workshop** in Video section on BASS here:

SharePoint Content Approval Workshop

18.1.13 Sharepoint Documentation Storage User Guide

This document is designed to provide a step-by-step description of user actions required for documentation storage usage.

UG Sharepoint Documentation Storage

18.1.14 Tech Writers Skills

Seminar 1 (обсуждено):

- Не по назначению используемые Notes
- Буллет overkill
- Абзацы из одного предложения
- Не по назначению используемые таблицы
- Сплошное описание UI вместо решения задач с позиции юзера
- Ненужная читателю информация, "в лоб" скопипащенная из дизайн спеки или Requirements
- Интеллектуальная работа писателя, как information developer-а

Seminar 2 (идеи):

- Название документа и название продуктового компонента

18.1.15 Word 2010 Tips and CDT Training Template

Find video **Word 2010 Tips and CDT Training Template** in Video section on BASS here:

Word 2010 Tips and CDT Training Template

This video represents a brief overview of use of MS Word 2010 templates, styles, fields and content controls. It also contains information about features of the CDT Training Template implemented at the end of September, 2013.

18.1.16 Writing What's New

CDT Seminar - Writing What's New Information

This video provides instructions on how to write 'What's New' notes for product project or PDCR and add them to the integration deliverable.

18.2 To record a WebEx meeting

18.2.1 I. With no voice

a. Start a meeting.

b. Press “Record”.

c. Choose the option “Do not record a teleconference”.

d. Press “Start Recording”.

e. Use the button “Pause” to pause/continue recording.

18.2.2 II. With voice (via Meet-Me)

a. Start a Meet-Me conference.

b. Start a WebEx meeting.

c. Press “Record”.

d. Choose the option “Record other teleconference”, then “Next”.

e. In the opened window fill the fields:

“Dial-in number”: 7814198765

“Pause before user ID”: 4

“User ID”: enter Meet-Me Conference Number followed by the hash sign (#)

f. Press “Next”.

g. Use the button “Pause” to pause/continue recording.

18.2.3 III. With voice (via InterCall)

a. Start an InterCall conference.

b. Start a WebEx meeting.

c. Press “Record”.

d. Choose the option “Record other teleconference”, then “Next”.

e. In the opened window fill the fields:

“Dial-in number”: 8662970892

“Pause before user ID”: 4

“User ID”: enter InterCall Conference Code

f. Press “Next”.

g. Use the button “Pause” to pause/continue recording.

18.2.4 To manage records

a. Go to https://netcracker.webex.com

b. Navigate to the tab “My WebEx”.

c. Log in using your username and password.

d. Press “My files” on the left menu.

e. Navigate to the tab “My Recordings”.

f. Click drop-down menu and choose the appropriate action.

18.3 Sharing & Writing Sessions

These sessions were conducted by US technical writers for Hyderabad technical writers.

https://sps3.netcracker.com/sites/proddoc/Team/Forms/AllItems.aspx

19 Common Deliverables

19.1 Memo for Training Organization

(to be used internally and also when communicating with the customer)

1. The minimum period for preparing the OOB training delivery is at least 7 weeks from the date of the training request. In case there is no firm commitment from customer that this is a Go, the training is excluded from the schedule and planned according to the availability of the training resources.
   In case the delivery due date is earlier than 7 weeks from the date of the training request, the following risks may occur:
   - There will be no trainer available;
   - The visa execution process will take more time than the Embassy states;
   - Both, materials for the training and hands-on will correspond to the NC version different from that of the project.
2. The pre-UAT trainings are OOB only (since the functionality is not ready on the solution server). If there is a request for a business-specific UAT training, the following risks may occur:
   - The customer will get the training different from his expectations;
   - The server for the hands-on is locked for any further changes 2 weeks prior to the training, so they won't be reflected in the course materials.
3. The developer's training is not associated with the UAT or Go Live date, so it can (and should) be developed and delivered after the project is in production.

19.2 Training Estimation Process

https://bass.netcracker.com/pages/viewpage.action?pageId=222265800

The process of training budget estimation for RFP, RFQ, RFI consists of the following stages:

Scoping

The trainer, who estimates trainings, should provide:

1. Training Program or List of training courses:
   a. Per user groups
   b. Per phases
2. LOE of development:
   a. for OOB courses customization, if there are customized OOB courses in the progra
   b. for custom courses from scratch, if there are any
   c. for Product Training Gap, if there are gaps in OOB training courses in program
3. LOE delivery. Consider the following:
   a. Number of delivery days = Trainer + (optional) In-class support
   b. Number of repeating classes
   c. IT and management overheads
4. Information for T&L calculation
5. Assumptions:

a. Language of delivery
b. Language of training documentation
c. TTT assumptions for TTT mode
d. Location

Estimation

Bid Manager calculates the cost of trainings proposed. It is necessary to do the following:

1. Multiply LOE by the rate
2. Calculate T&L
3. Sum up all results.
   The budget is defined.

Approval by field sales or Account Manager

Budget reduction options:

1. De-scoping
2. Discounting (up to 30%)

20 Training Adventures

Add Retrospective

Title	Date	Participants
Adventures 2	Sep 03, 2014	Irina Khorokhorina
Adventures 1	Aug 22, 2014	Maxim Bashurov

20.1 Adventures 1

Date	Aug 22, 2014
Participants	Maxim Bashurov

20.1.1 Приключения

Непредвиденные обстоятельства

Как удалось разрешить

На одном из аккаунтов в США комната была такой большой и столы участников стояли так далеко от места тренера, что то, что тренер говорил, было плохо слышно. О чем участники время от времени возмущенно бухтели. При этом тренер, честное слово, говорит не тихо (кто знает тренера, подтвердит). В другом случае (Санкт-Петербург, МегаФон, их помещение) в комнате шумела система кондиционирования. Тот же эффект - не слышно, что говорит тренер.

Орали. Но мечтали о микрофоне. На самом деле, это может быть критичным, потому что голосовые связки не железные - к концу дня говорить громко уже очень и очень затруднительно.

На T-Mobile в Праге наблюдалось броуновское движение участников: они входили, выходили, потом входили и присаживались еще какие-то люди с доброжелательными лицами. Конец терпению настал, когда один из зарегистрировавшихся участников собрал вещи и тихо покрался к выходу.

Наехал на уходящего без уведомления: попросил всех не уходить (особенно с вещами), не сказав двух слов о причинах ухода. Выходы в туалеты не контролировали.

Американцы в одну из пауз тренинга затарились пиццей. Потом расположились с комфортом: кола, пицца - и, типа, давай, тренер, рассказывай, а мы пока пожуем. Правда, тренеру тоже предложили пиццу .

Я все понимаю, национальная специфика, но ну их нафиг, сделали паузу, пока они не дожевали.

Во время тренинга в Джексоне (США) за окнами начался торнадо. Хотели проигнорировать, но не удалось.

Были выгнаны на лестничную площадку, где пережидали торнадо. Потом радостно вернулись к ресурс инвентори.

В офисе МегаФон в Москве никто не встретил ко времени и не ловил сотовый (оператор - МегаФон!). Тренер блуждал с грустным лицом и кличем NetCracker по длинным коридорам, но никто о NetCracker не слышал.

Наткнулся в коридоре на СМЕ.  В итоге провели тренинг.

20.1.2 Отметить на будущее

- [ ] Завести hands free микрофон и портативные колонки

20.2 Adventures 2

Date	Sep 03, 2014
Participants	Irina Khorokhorina

20.2.1 Retrospective

Peculiarities

- На время одного из дней тренинга в США была забронирована комната, достаточная для вместимости заявленного количества участников. Все размещались, но сидели вплотную друг к другу. Видимо ввиду культурных особенностей, для большинства участников такое расположение оказалось некомфортным. Каждый вновь заходящий в комнату человек, отпускал шуточки на тему предстоящей близости сидения к соседу по тренингу.
- На тренинге в Сингапуре сообщили в четверг между делом, что по пятницам у сотрудников компании устраиваются танцы как раз за час до окончания тренинг сессии, и что все улизнут на эти танцы.
  Похожий случай в Малайзии - в пятницу днем проходила молитва, на которую большинство участников планировали пойти.
- Зачастую на участники тренинга приходят на сессию без мышек для ноутбуков. А потом мучаются и ковыряются при выполнении упражнений.

Found solution

- Нашли по соседству более вместительную комнату, к счастью, никем не забронированную, куда все участники и переместились с радостной оперативностью.

- Начало тренинг сессии перенесли на час раньше.

- Если есть возможность, жертвую на время свою мышку. Но как правило, нуждающихся больше, чем один. Как вариант, указывать в рекомендациях к тренингу, что поскольку предполагается самостоятельное прохождение достаточного количества упражнений на сервере, советуем принести ноуты вместе с мышками.

20.2.2 Actions

21 Learning Subject Domains

RU

21.1 Организация тренингов для сотрудников CDT

1. Каталог курсов представлен на тренинговом портале NetCracker Training Center https://training.netcracker.com/url/CatalogEntry/28999681
2. Из существующих каталогов можно выбрать интересующие тренинги согласно расписанию. Далее необходимо подать заявку на тренинг.
   При наборе группы из 8-10 человек тренинг может быть организован в определенное время вне зависимости от расписания.

   Список курсов представлен здесь:
   https://training.netcracker.com/auth/1%3A1%3A0%3A0%3A0/

   Для сотрудников CTE могут быть полезны следующие тренинги:

   1) NETCRACKER TRAINING CATALOG > Trainings by Directions > **00.Induction - 12 trainings** > Solution Delivery Implementation Methodology and Company Processes

   2) NETCRACKER TRAINING CATALOG > Trainings by Directions > **03.Telecom technologies - 23 trainings**

   3) В каталоге также представлены **курсы по разработке**, например, курс по OSS/J, который читает Елена Пахомова.

   4) Список **тренингов по должностям** представлен в каталоге NETCRACKER TRAINING CATALOG > **Trainings by Roles**

   5) Полезными могут быть курсы для BA, QA, Solution Architect (последний находится на стадии разработки).

3. При выборе тренингов можно обратиться к HR (Наталье Князевой):

   NETCRACKER TRAINING CATALOG > Trainings by Directions > **04.Soft Skills - 20 trainings** (к примеру, Mastering Presentation, Presentation skills).

   Наталья Князева читает курс Training for Trainers (больше направлен на тех, кто разрабатывает курсы для CDC). Первый уровень читает Александра Ахинян.

4. По конкретным примерам имплементации можно обращаться либо к Дмитрию Дорохину, либо к Андрею Лебедеву.
5. Информацию по бизнес кейсам можно искать в семинарах (короткие сессии с экспертами могут быть продуктивнее стандартных тренингов и их проще организовать)
   https://training.netcracker.com/auth/1%3A20%3A1004866096%3A2%3A0%3Anidle%3A87634546344179/

После выбора и составления списка интересующих курсов, необходимо обратиться в CDC для организации тренингов для группы сотрудников и внесения тренингов в расписание.

22 NetCracker TOMS (no RBM, ICOMs so far)

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
CC&SM *Эта практика хочет держать и версионировать всю дизайн документацию в SPS3 Product Documentation. Пока это не так для BOE.*	Architecture	MS Word	DOCX	SPS3 corporate Product Documentation folder				
	Use Cases	*Not provided*						*Группой компонентов не предоставляется*
	Functional Design (FDS)	MS Word	DOCX	SPS3 corporate Product Documentation folder, SVN COX repository				*SPS3 для OE, COX SVN для BOE*
	Data Model (DMS)	MS Word	DOCX	SPS3 corporate Product Documentation folder, SVN COX repository				*SPS3 для OE, COX SVN для BOE*
	Detailed Design (DDS)	MS Word	DOCX	SPS3 corporate Product Documentation folder				*Для OE только*
	User Interface (UIS)	MS Word	DOCX	SVN COX repository				*Для BOE только*
	What's New/Release	MS Word	DOCX	SPS3 corporate				*Существуют не для всех*

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
	Notes			Product Documentation folder				*релизов и не для всех компонентов. prepared quite rarely on demand*
CC&SM (WFM) *Эта практика не хочет использовать SVN+EA из-за слетающих ссылок в проектах EA при таком размещении. Эта практика хранит и версионирует дизайн документацию в SPS3 папке бизнес-практики.* *Контакт: Diana Kruglova*	Use Cases	Enterprise Architect	.EAP	SPS3, BP folder	.DOCx	SPS3, BP Folder	SPS3 corporate Product Documentation folder	
	Functional Design (FDS)	Enterprise Architect	.EAP	SPS3, BP folder	.DOCx	SPS3, BP Folder	SPS3 corporate Product Documentation folder	
	FDS Data Mappings	MS Word (MS Excel)	.DOCx, XLSx	SPS3, BP folder	.DOCx	n/a	SPS3 corporate Product Documentation folder	
	Data Model (DMS)	Enterprise Architect	.EAP	SPS3, BP folder	.DOCx	SPS3, BP Folder	SPS3 corporate Product Documentation folder	
	NetCracker Attribute Specification	MS Excel	.XLS	SPS3, BP folder	.XLS	n/a	SPS3 corporate Product Documentation folder	
	Detailed Design (DDS)	Enterprise Architect	.EAP	SPS3, BP folder	not compiled	n/a	SPS3 corporate Product Documentation folder	*Нет темплейта выгрузки DDS из EA .EAP не публикуется,*

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
								старые DOCs опубликованы
	User Interface (when applicable)	FDS: MS Word	FDS: .DOCx	SPS3, BP folder	.DOCx	SPS3, BP Folder	SPS3 corporate Product Documentation folder	*Выгруженные FDS берутся за основу, куда добавляются мокапы страниц*
	What's New/Release Notes	***Currently not available***	***Currently not available***				SPS3 corporate Product Documentation folder	
Platform & UE *Преимущественно живут непосредственно на SPS3 Product Documentation. Есть компоненты, дизайн документация по которым живет на SVN.* *Есть механизм, встроенный в сборку компонента. Когда собирается компонент на \\rebuild, можно одновременно автоматически выкладывать дизайн доки на SPS3 Product Documentation в свои папки релизов. Механизм можно также запускать независимо.*	UI Style Guide	MS Word	DOCX	SPS3 corporate Product Documentation folder				This document type is available for the TUI component only.
	Architecture	MS Word	DOCX	SPS3 corporate Product Documentation folder				Some documents are published from SVN repository to SPS3 corporate Product Documentation folder
	Use Cases	MS Word	DOCX	SPS3 corporate Product Documentation folder				*Хранят непосредственно в SPS3 Product Documentation*
	Functional Design (FDS)	MS Word	DOCX	SPS3 corporate Product Docume				Some documents are published from SVN

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
				ntation folder				repository to SPS3 corporate Product Documentation folder
	Data Model (DMS)	MS Word	DOCX	SPS3 corporate Product Documentation folder				Some documents are published from SVN repository to SPS3 corporate Product Documentation folder
	Detailed Design (DDS)	MS Word	DOCX	SPS3 corporate Product Documentation folder				Some documents are published from SVN repository to SPS3 corporate Product Documentation folder
	User Interface (UIS)	*Not provided*						*Группой компонентов не предоставляется*
	What's New/Release Notes	MS Excel	XLSX	SPS3 corporate Product Documentation folder				Some documents are published from SVN repository to SPS3 corporate Product Documentation folder
	Installation Notes	MS Word	DOCX	SPS3 corporate Product Documentation folder				Some documents are published from SVN repository to SPS3

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
								corporate Product Documentation folder
Service Fulfillment *SVN не используется. На SPS3 используются 2 папки бизнес практики в разделе Internal Projects. Процесс публикации дизайн документации отсутствует. Публикация в SPS3 Product Documentation происходит только по требованию.*	Architecture	MS Word	DOCX	SPS3 PSPS3 OPF folderB folder			SPS3 corporate Product Documentation folder	*Публикация происходит только по напоминанию команде*
	Use Cases	*Not provided*						*Группой компонентов не предоставляется*
	Functional Design (FDS)	MS Word	DOCX	SPS3 BP OPF folder			SPS3 corporate Product Documentation folder	*Публикация происходит только по напоминанию команде*
	Data Model (DMS)	MS Word	DOCX	SPS3 BP OPF folder			SPS3 corporate Product Documentation folder	*Публикация происходит только по напоминанию команде*
	Detailed Design (DDS)	*Not provided*						*Группой компонентов не предоставляется*
	User Interface (UIS)	*Not provided*						*Группой компонентов не предоставляется*
	What's New/Release Notes	*Not provided*						*Группой компонентов не предоставляется*

BP	Document Type	Platform	Source File Type	Source Storage	Compiled File Type	Compiled To	Published To	Comments
Service Assurance								
Network Infrastructure *SVN не используется. Исходники хранятся в EAP локально или в папке //sps3/intprojects/NC.ENG.BP.IN*								
Integration & Migration								
BSS & RT								
CDT	UG/AG	MS Word	.DOCx	SVN, product component repository	.PDF	FTP, \\FTP\ftp\Cortp\Product	SPS3 corporate Product Documentation folder	
	DG/CG	MS Word	.DOCx	SVN, product component repository	.PDF	FTP, \\FTP\ftp\Cortp\Product	SPS3 corporate Product Documentation folder	
	Public API	Plain Text	.XML, .HTML	SVN, product component repository	.ZIP	SVN, product component repository	SPS3 corporate Product Documentation folder	
	Module Books (aka Concepts)	MS Word	.DOCx	SVN, product component repository	.PDF	FTP, \\FTP\ftp\Cortp\Product	SPS3 corporate Product Documentation folder	

23 Staff Profiles

Igor Karnaukhov, Trainer/Manager



Key Qualifications/Certifications

- Solution tailored and out-of-the-box training courseware design and delivery
- Work with both NetCracker customer and NetCracker employees

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- 3-year experience in the IT industry and 5 year experience in teaching and training
- RI, OSP, COM, SOM, Network Planning and Design, Framework, System Architecture, Replicated Database and NetCracker database structure and Report Development tools

Customers

- Sprint, DiGi, Celcom, Videotron, NTT Communications, Bell Aliant, Claro Brazil, Allstream, AXIA, BHN, TE Data Egypt

Education/Degree

- Master's Diploma in Organization Management
- Bachelor's Diploma in Electro mechanics, Electro technology

Training delivery languages

- English
- German
- Russian

Office **Moscow** | Phone **1787** | Mail **Karnaukhov@NetCracker.com**

Alexandra Vokhmyanina, Manager



Key Qualifications/Certifications

- Trainings design and delivery
- Documentation and presentations design

Teaching Background

- Senior Lecturer at Samara State Pedagogical University (2002 – 2011)
- Senior Lecturer at Samara State Technology University (2006 – 2011)

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- Customer documentation update and design
- Training materials design
- Trainings delivery

Education/Degree

- Specialist, English Phylology (Samara State Pedagogical University)

- Postgraduate courses in Phylology (Samara State Pedagogical University)

Training delivery languages

- English
- Russian

Office **Samara** | Phone **2599** | Mail **vokhmyanina@NetCracker.com**

Rose Strubel, PMP Manager, Client Training Delivery

Key Qualifications/Certifications

- Certified PMP (Project Management Professional)
- Training delivery, development

Teaching Background

- 13 years as an elementary school teacher for kids 6-13

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- 17 years at CVG in several roles, most of which were training development, delivery (other jobs, line manager, project manager systems analyst);
- Conducting requirements/needs analyses with clients;
- Consulting with external clients on areas of focus and methods of delivery of training;
- Collaborating with development teams to successfully complete software customizations;
- Engaging with and among internal and external stakeholders in order to successfully delivery solutions;
- Participating in the development, configuration and deployment of the overall solution;
- Managing multiple client priorities for various projects, creatively deploying resources to meet the needs of the organization;
- Defining implementation plans and cost estimates based on needs analyses to meet requirements for clients;
- Establishing processes, including project assessment, establishing objectives, support activities and maintenance programs;
- Appropriately utilizing on an ongoing basis, information to benchmark and make recommendations of change to tailor processes per the implementation;
- Providing leadership to the team, including, managing performance by setting expectations, conducting performance reviews, and providing feedback and coaching to direct reports;
- Developing proposals based on needs analyses and other data for successful solutions for clients.

Education/Degree

- Bachelor’s degree
- Master’s degree in Education focusing on Instructional Technology
- Master’s degree in Master’s Business

Training delivery languages

- English

Office **Cincinnati** | Phone **3559** | Mail **rose.strubel@NetCracker.com**

Tatiana Fedotova, Technical Writer/Trainer

Key Qualifications/Certifications

- **Technical writer:** developing product end-user documentation for different NetCracker modules and components:
  Resource inventory, technology components, NetCracker Framework, Network Planning and Design, Outside Plant, Discovery and Reconciliation, Reports;
- **Courseware developer:** developing customer training courseware for different NetCracker modules and components:
  Resource Inventory, IP Planner, OSP, RSM, FSM, Power Management and Cooling;
- **Trainer:** delivery of customer training sessions, organization and delivery of training sessions for NetCracker employees.

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- Product projects documenting – documentation design and creation, documentation review and finalization
  Documentation types: user, administrator and, configuration, and maintenance guides
- Documentation projects LOE estimation, QA documentation
- Courseware design and development
  Training materials: training course goals and objectives, presentations, detailed training guides, quizzes, questioners, instructions for trainer
- Courseware testing and finalization
- Remote delivery of customer sessions
- Organization and delivery of product training sessions for NetCracker employees on the following NetCracker modules: Order Processing Framework
- Planning, organization and delivery of introduction trainings for new NetCracker employees (NetCracker Essentials)
- Onsite delivery of product trainings to customers on the following NetCracker modules: OSP
- Onsite delivery of customer trainings on the following modules: NetCracker Environment, Resource Inventory
- Onsite delivery of customer trainings on customer-specific functionality.

Education/Degree

- Samara State University, Roman and German Philology, Specialty - Teacher, Translator, Philologist

Training delivery languages

- English
- Russian

Office **Samara** | Phone **2809** | Mail **FedotovaT@netcracker.com**

Elena Markina, Trainer/Technical Writer

Key Qualifications/Certifications

Teaching Background

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

Education/Degree

- Moscow Institute of Oil & Gas, engineer (1984 – 1989)
- Moscow Institute of Foreign Languages, translator (1995 – 1998)

Training delivery languages

- English
- Russian

Office **Moscow** | Phone **1857** | Mail **Markina@NetCracker.com**

Vladimir Chernov, Lead Trainer

Key Qualifications/Certifications

- Engineer
- Programmer
- Developer
- Lecturer

Teaching Background

- Assistant professor at technical university
- Training Lead at NetCracker (9 years)

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- Training development and delivery
    - BSS – Service Fulfillment Area: Network and Service Inventory, Service Provisioning, Order Management, Workforce Management, Network and Service Assurance.
    - OSS – Network technologies' expertise including IP, DWDM, SDH, xDSL, ATM, VoIP, MPLS, GSM/UMTS, and PSTN.
    - Teaching operating systems, programming languages, databases, computer networks at Technical Universities in Russia, Algeria, Morocco, Bahrain

Education/Degree

- Moscow State University of Railway Engineering (MIIT), Computer Science, PhD

Training delivery languages

- English
- French

Office **Moscow** | Phone **1504** | Mail **Chernov@NetCracker.com**

Irina Khorokhorina, Assistant Trainer



Key Qualifications/Certifications

- Trainings design and delivery
- Documentation and presentations design

Teaching Background

- OSP training for DiGi (Malaysia) – 2013;
- End User training (NC Environment, Resource Inventory, Fixed Access and Core Networks) for TAG (Bulgaria) – 2013

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- Technical writer at NetCracker from May 17, 2012

Education/Degree

- Bachelor's degree in organization management at Samara State Aerospace University

Training delivery languages

- English
- Russian

Office **Samara** | Phone **2623** | Mail **khorokhorina@NetCracker.com**

Maxim Bashurov, Trainer



Key Qualifications/Certifications

- Trainings design and delivery
- Documentation and presentations design
- Training programs and materials development
- MS Office expert

Teaching Background

- NetCracker internal trainings managing and implementation
- Multiple External trainings delivery

Professional Experience at NetCracker+CVG/NetCracker/CVG-IM/Former Background

- NetCracker Product Consultant (December 2005 – present time)
- Lecturing and developing of training courses on NetCracker product and processes

Education/Degree

- Specialist, State Pedagogical University, Samara

Training delivery languages

- English
- Russian

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24 History of Changes

24.1 Recent space activity

- 

  Anton Shimorskiy
- Writer Checklistupdated 4 minutes agoview change
- 

  Adam Bramhall
- Writer Checklistupdated Nov 20, 2017view change
- Writer Checklistcommented Nov 17, 2017
- 

  Andrei Denesh
- Writer Checklistcommented Nov 17, 2017
- 

  Adam Bramhall
- Writer Checklistcommented Nov 17, 2017

Show More

Figure 4 Please wait



24.2 Space contributors

- Bass Moderator (1504 days ago)

25 Meeting Notes

Create meeting note

25.1 Meeting notes

Plan your meetings and share notes and actions with your team.

Create meeting note

26 ICOMS Metrics

Documentation is 15% of DCUT for the ROM.

Ria Small: *When it comes time for detailed estimates, we use the baselined design document to calculate estimates for doc (using formulas on a spreadsheet). If the estimate comes out to more than 15% of DCUT, we need to justify to the PM why we need extra hours so it can be funded. Most of the time, 15% is enough.*

27 Confluence Migration

27.1 Content Normalization Checklist

- [ ] Исправлена кодировка картинок
- [ ] Картинки вынесены из списков. Если более одной картинки, то первая помещена перед списком, вторая после списка, остальные удалены.
- [ ] Картинки вынесены вместе с caption
- [ ] Таблицы вынесены из списков.Таблица выносится после списка, в этом случае вторая картинка будет удаляться, а не выноситься после списка.
- [ ] Удалены все Figure ##
- [ ] Table captions переведены в subscript
- [ ] Удалены все Table ##
- [ ] Figure caption переведены в superscript и сделаны centered
- [ ] Картинки сделаны centered
- [ ] Текст с отступом приклеен к позициям списка
- [ ] H2 и H3 заменены на Heading 2 и Heading 3
- [ ] Heading 1 удален
- [ ] Все заголовки – Title Case
- [ ] Строки контекста вынесены из поля и помещены внутрь контейнера
- [ ] Стиль code размечен, как monospace для импорта
- [ ] Удалена титульная страница и TOC
- [ ] Удалены все bookmarks

27.2 Post Migration

Порядок важен!

1. Все
 заменены на
2. Строки контекста перемещены в property PAGE_CONTEXT.

28 File lists

Create file list

Title	Creator	Modified
NEC_FemtoSAM	Aleemuddin Mohammad	Dec 13, 2016

28.1 NEC_FemtoSAM

NetCracker Service Activation Module (SAM) system is intended to be a part of NEC Femtocell Solution

Name	Version	Date

29 NEC

30 Train-the-trainer session