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IBM Rational Software







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Purpose

- This session will show how the Rational Requirements Composer development team used the Collaborative Lifecycle Management (CLM) jazz products to specify, analyze, design and implement key features, intended for future versions of RRC. It will focus on our use of RTC and RRC and include a discussion of benefits to the team.
- Plus (we hope)
 - Give you a vision of how IBM Rational® Requirements Composer (RRC) can improve team performance and project outcomes
 - Show you a "real" usage model that is improving the product
 - Rational "Drinking our own Champagne!" Campaign
 - Get you thinking about how you and your teams can benefit from RRC





Some Familiar Situations... we face them too !!





IBM Rational Requirements Composer 4.0

Requirements Management for the Development Lifecycle

Rational Requirements Composer



Definition

- Rich-text documents
- Diagrams: Process, Use Case
- Storyboards, UI sketching & flow

mproved

- Project glossaries
- Templates (formal/agile)

Visibility

- Customizable dashboards
- Project dashboards
- Analysis views
- Collections
- Milestone tracking & status

Collaboration

- Review & Approval
- Discussions
- Email Notification



Supports RequisitePro Data Migration

Management

- Structure, Attributes/Types
- Traceability, Suspect Link
- Filtering, Change History
- Tags, Reuse, Baselines,
- Reporting Metrics & Doc.



Lifecycle

- Central requirements, test, & development repository
- WAS Clustered Server
- Common admin and rolebased user licensing
- Warehouse reporting

Planning

- Integrated planning
- Effort estimation
- Task management





Requirements Definition and Management for the Development Lifecycle IBM Rational Requirements Composer v4.0.1 Q4 2012

- **Empower teams of all sizes and complexity** to define, analyze, manage, report with project requirements
- Improve visibility and understanding of requirements across the development lifecycle
- Realize project impact and downstream visibility using traceability across requirements, test, and development
- **Drive development forward** with agile-at-scale and iterative processes in fast paced markets
- Customer and stakeholder collaboration for improved agility and informed decisions



IBM Rational Requirements Composer v4.0.1 Q4 2012 highlights

- New online document structures (Modules) for requirement organization and structure
- Take requirements offline or exchange them round trip for broader collaboration Improved traceability to show more detail to enable business analysts to better analyze
 - Connect tests and plans to requirements using the new RRC/HPQC Integration Adaptor
 - Connect requirements to models and elements through OSLC to RSA Design Manager
 - Business analysts can compare collections to version of the same collections







RRC Product Team



- Server in Research Triangle Park, NC, USA
- Intel Core2 2.66Ghz, 4GB of RAM, Windows 2008 server
- **Using Tomcat**
- Using separate AIX DB2 server

https://jazz.net/rm/web





IBM agility@scale[™] – our team self-assessment







Geographical distribution





Agile

Delivery

Domain Complexity





Enterprise discipline

Project Enterprise focus focus

Organization distribution (outsourcing partnerships)

Collaborative < Contractual





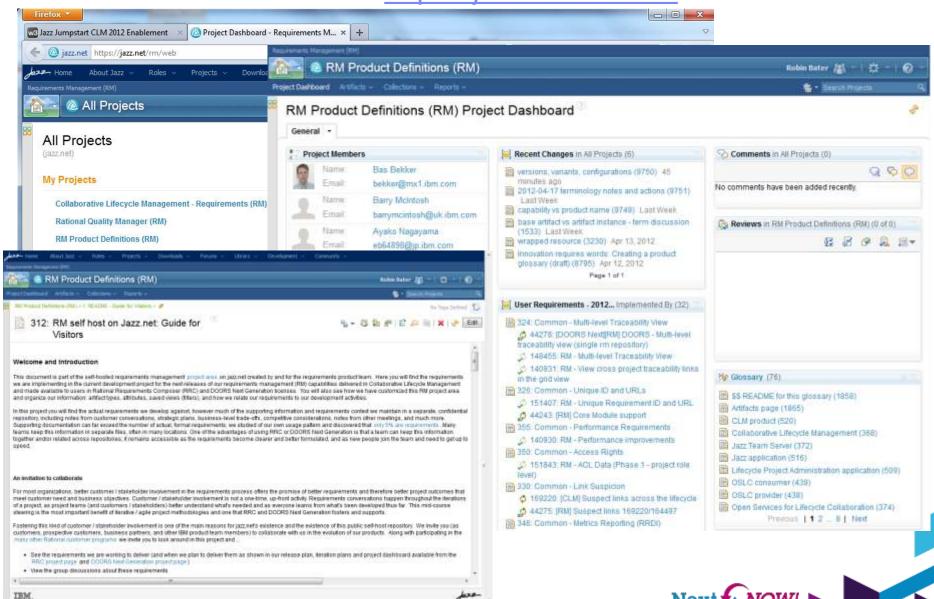
Technical complexity





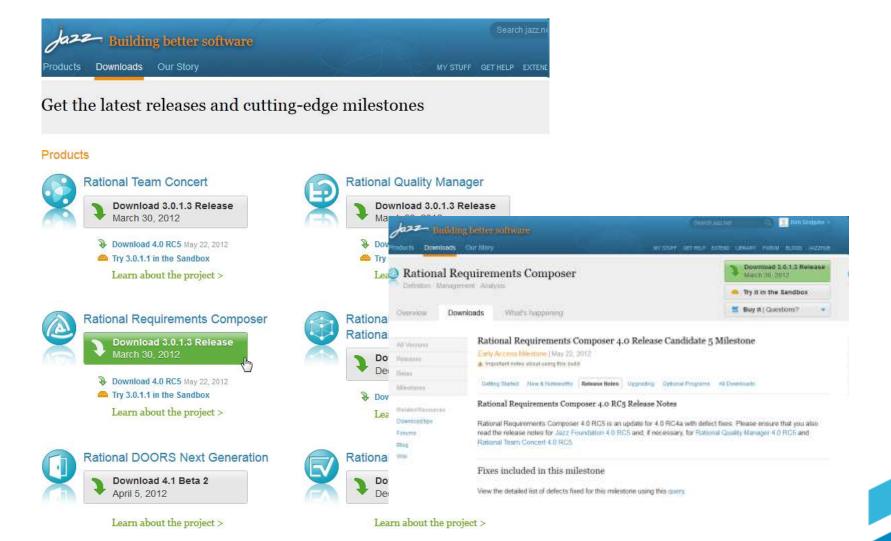


We do much of our work on https://jazz.net/rm/web





And provide milestones https://jazz.net/downloads/ for feedback





For the two projects we support

- Rational Requirements Composer
- https://jazz.net/projects/rationalrequirements-composer/

- **DOORS Next Generation**
- https://jazz.net/projects/rational-doors/



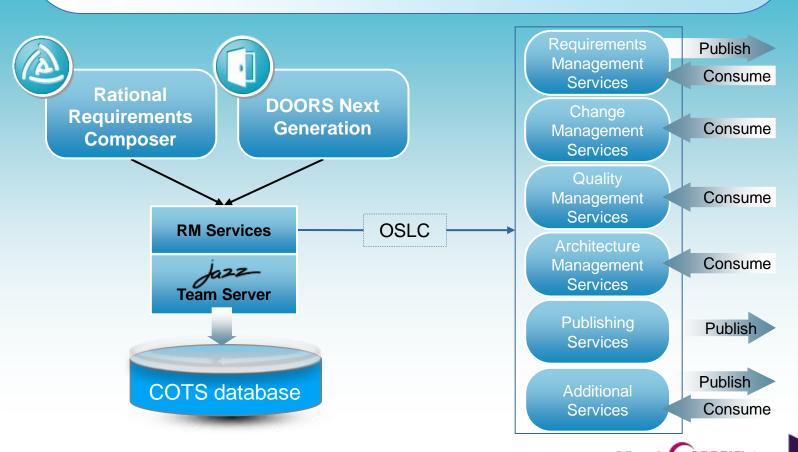




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Architectural End Goal for Rational RDM Tools

- Requirements visibility and traceability across the lifecycle
- Open integration architecture built on the Jazz Team Server
- Integrations using Open Services for Lifecycle Collaboration (OSLC)







Drinking Our Own Champagne







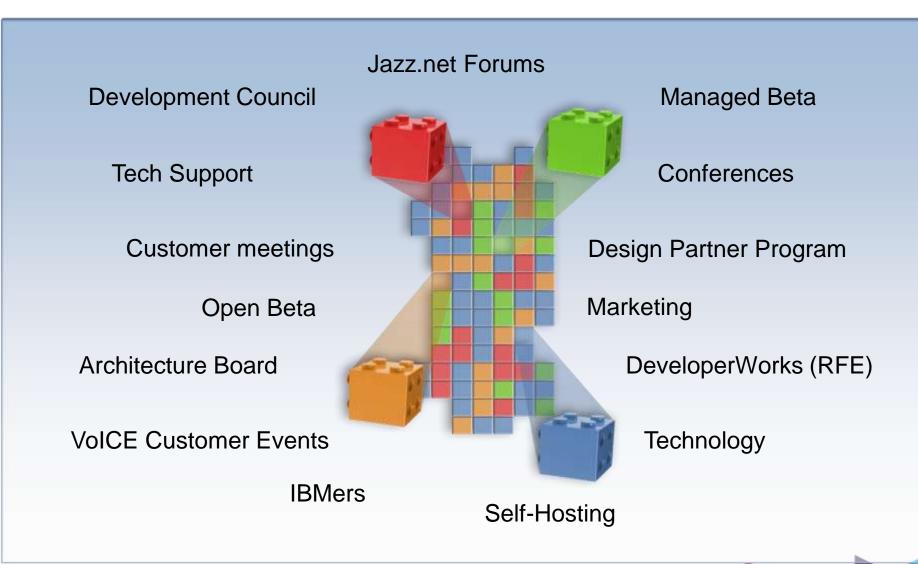
Typical feature evolution

- Stakeholder describes the feature
- Product Manager then creates Plan Items
- Product Manager then Ranks the Plan Items
- 4. Product Manager describes the business scenario and related requirements
- 5. Architect defines the workflow and oversees design
- User Interface designers then developed mockups
- Development team developed incremental solutions, creating "Stories" based on Plan Items
- Test team creates test cases based on Stories and UI design documents, tests drivers, opens defects.
- We use milestone drivers to obtain feedback from the stakeholders



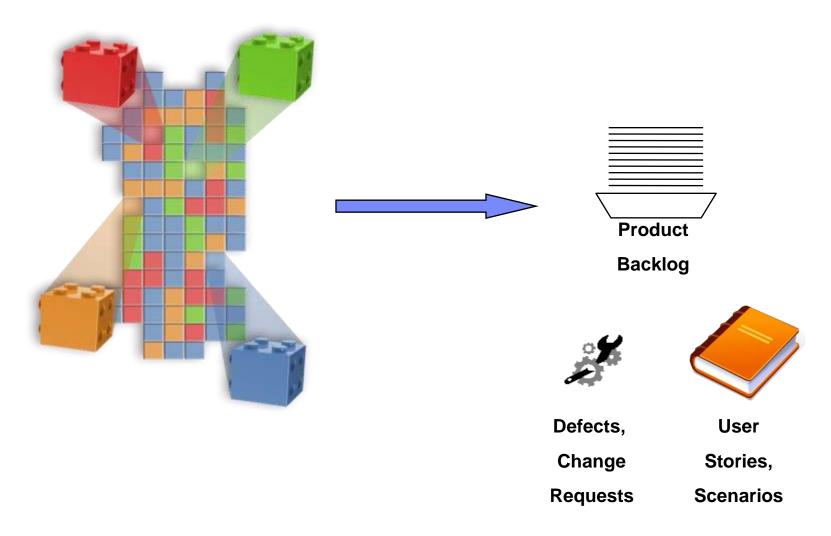


Sources for our Requirements – Everywhere!





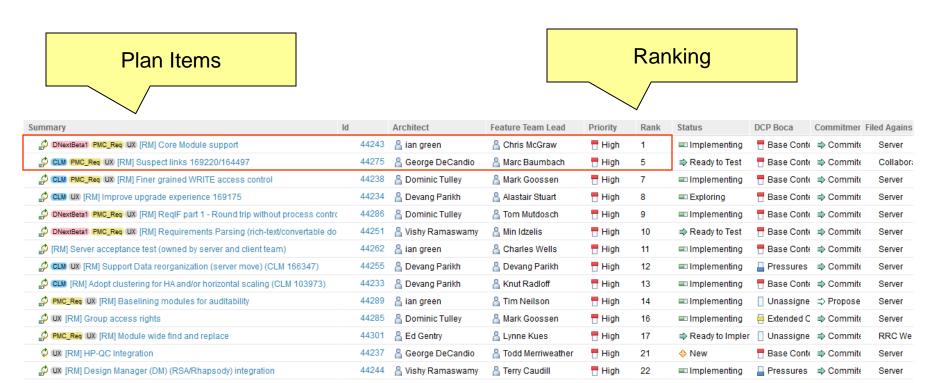
Product Backlog







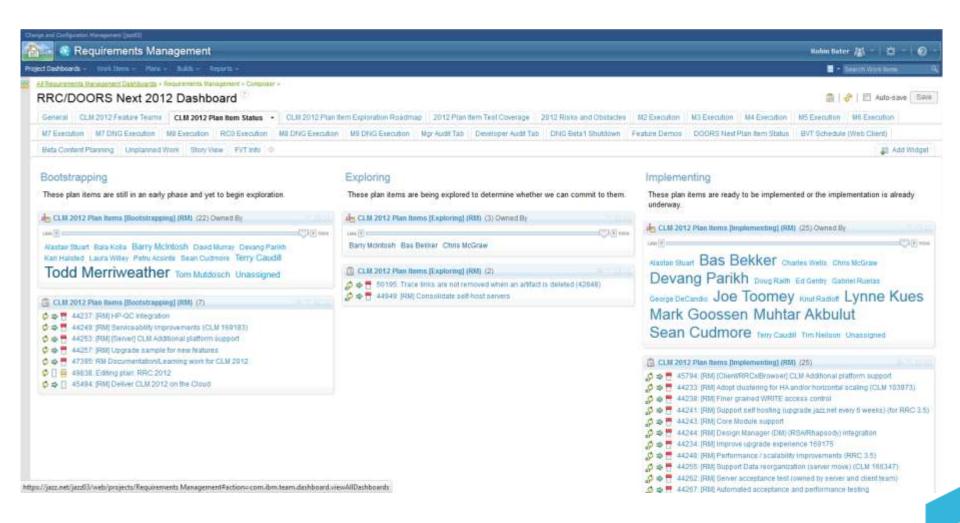
Plan Items - Ranked







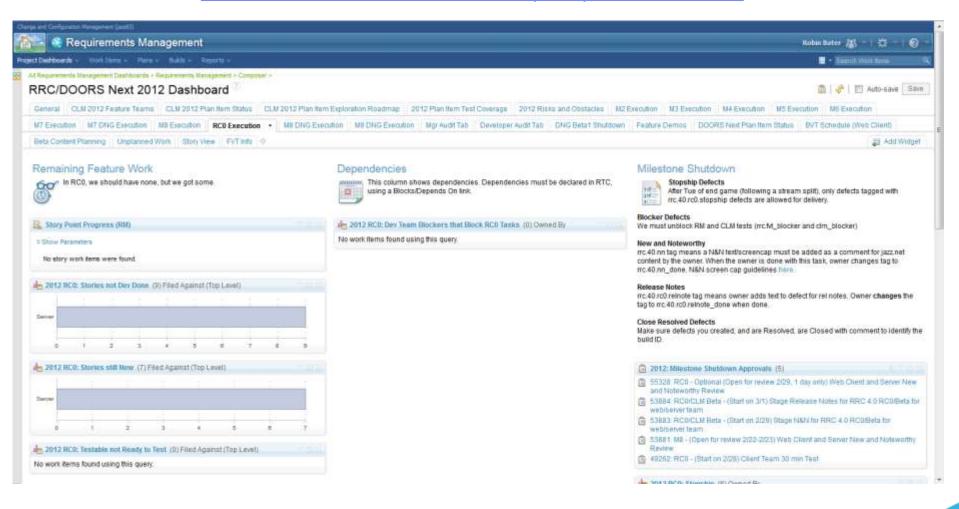
Plan Items - Release Plan (RM) Dashboard







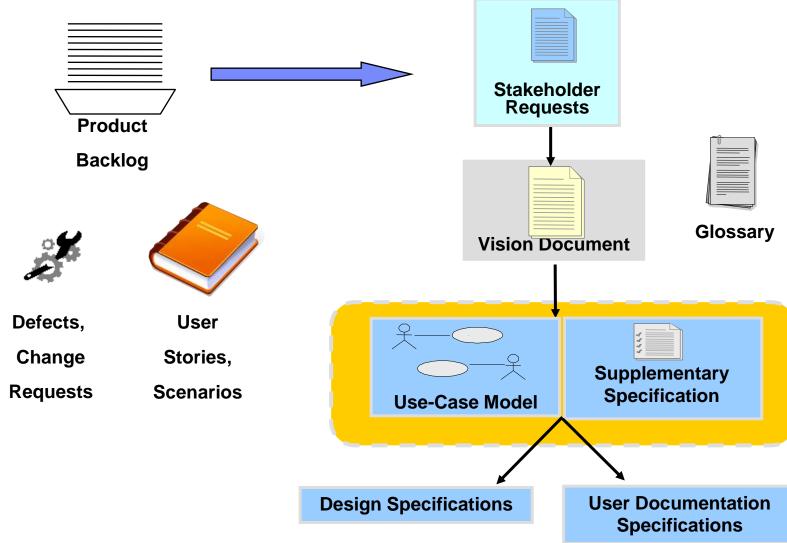
Plan Items - CLM 2012 Release Plan (RM) Dashboard







Our Artifacts







Top 2 Features – User Requirements (RRC)





 Commenting · Reviews



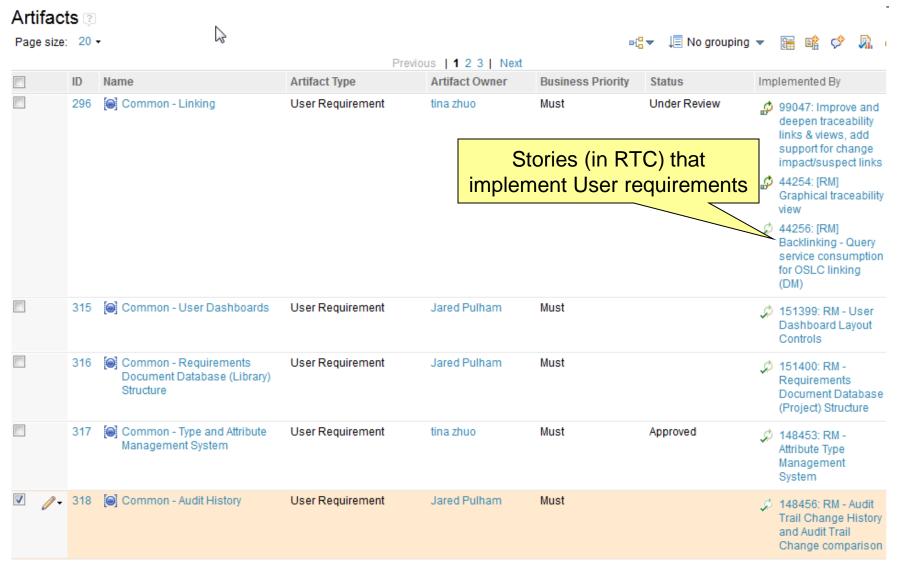
User Requirements Satisfied by Software Requirements (in RRC)

Artifacts ? Page size: 20 •			Software requirements that satisfy User requirements	- ▼ ↓ □ No grouping ▼ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
	ID	Name	Artifact Type	Satisfied By
	317	Common - Type and Attribute Management S	ystem User Requirement	 386:Type System 387:Type system useability
	318	Common - Audit History	User Requirement	[e] 390:Audit History
	323	Common - Relationships for Traceability Stru	cture User Requirement	[→] 392:Traceability
	324	Ocmmon - Multi-level Traceability View	User Requirement	[e] 392:Traceability
	325	[●] Common - Database Wide Query	User Requirement	384:Sample queries and views383:Saved query393:Search
	333	Glossary Tagging Capability	User Requirement	391:Glossary and Terms
	334	Sketching/GUI Wireframe, Storyboards Facili	y User Requirement	457:Enable installation and upgrade of artifact plugins and extensions
	335	Use Cases and Process Diagram Infrastruct	ure User Requirement	457:Enable installation and upgrade of artifact plugins and extensions
	336	Common - User Collaboration	User Requirement	[e] 458:CLM UI compliance
	338	Oceanne - CSV Data Import (Attribute Import	User Requirement	[388:CSV import and export
	339	Ochmon - CSV Export: View Based	User Requirement	388:CSV import and export
	340	Ocument Import	Data Parsing) User Requirement	389:Import a Word document and convert it to a rich-text artifact
	341	Common - Word Export	User Requirement	382:Printing requirements artifacts and collections





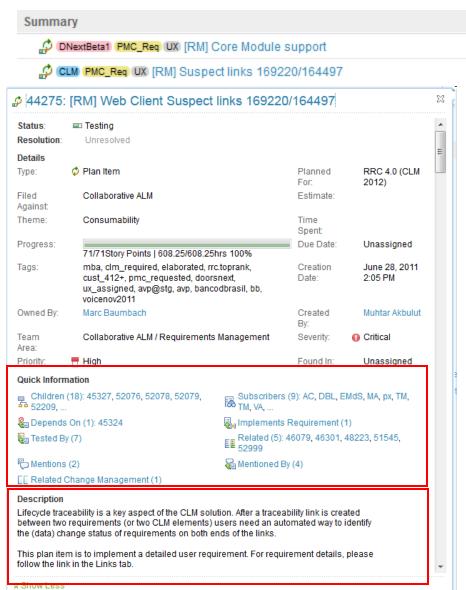
User Requirements Implemented By Plan Items

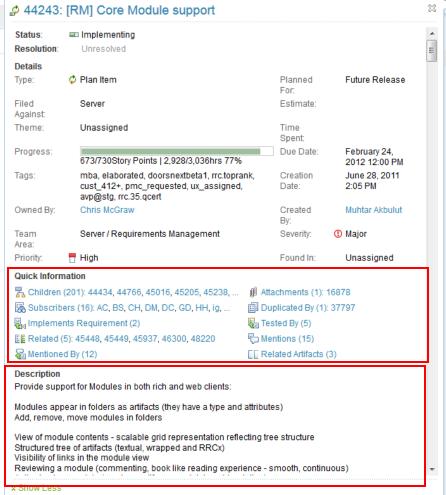






Top 2 Features - Plan Items (RTC)

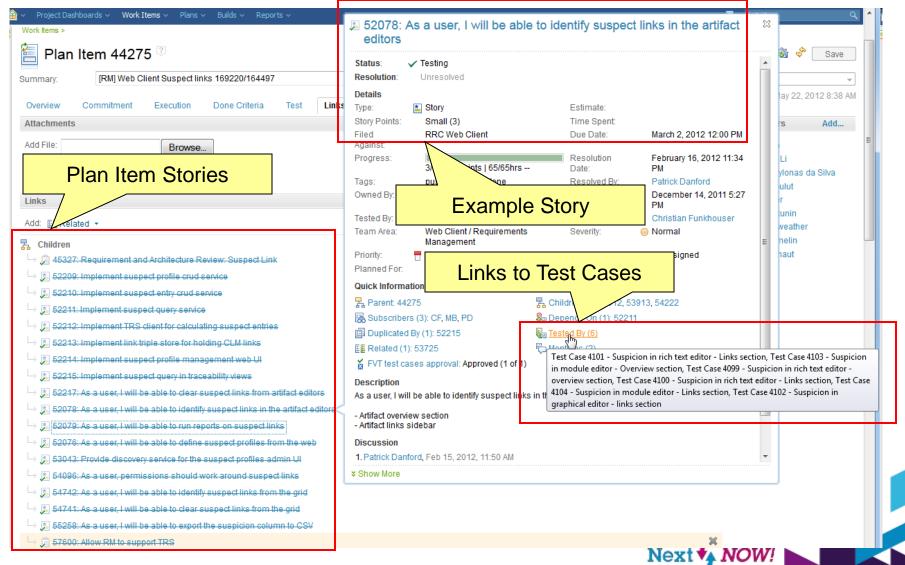








Suspect Links - Plan Items Decomposed to Child Stories



[DOORS Next] Type Based Link Preferences

[RM] Group access rights

ሉ 🕨 🧬 [RM] Module wide find and replace



Plan Items - Release Plan in RTC (Lifecycle View)

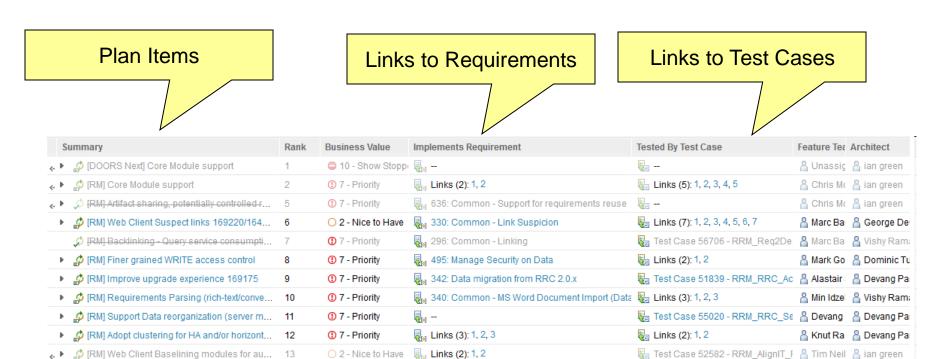
1 7 - Priority

2 - Nice to Have

2 - Nice to Have

15

16



739: Link Schema Control User Stories

and Replace Wide Find and Replace

495: Manage Security on Data



Test Case 52458 - RRM_AlignIT_ & Mark Go A Dominic Tu

Test Case 52582 - RRM_AlignIT_F A Lynne Ki A Ed Gentry

Lynne Ki Bed Gentry



Other Requirement Elaboration Artifacts in RRC

- End user scenarios
- Feature team supporting documents
- UI design documents
- Terminology
- Meeting minutes
- Customer feedback (e.g., beta program, DPP, etc.)
- Process documents









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End User Scenarios





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Beta Scenario



554: DOORS Next Beta 1 Scenario



Part 1. Product installation and figuration

Role: Product administrator

- 1. Installs and configures DOORS Next server, DOORS Next Rich client and Web client.
- 2. Optionally install and configure CCM from the CLM offerings

Part 2. User and project administration

Role: Project Administrator

DOORS Next Web Client

- 1. Project administrator manages users.
- 2. Project administrator creates a project using an out-of-box project template, and customize the type system. (Need a requirements engineering template for managing system requirements)
- 3. Project administrator assigns users to the project.

Part 3. Task management

Role: Project Manager & Requirements Engineer

DOORS Next Web Client & CCM Work Item & Planning

Note: To complete this part of the scenario, CCM application from CLM needs to be installed and configured.

- 1. Project Manager does RM planning using work items, and creates the following RM tasks and assign them to Requirements Engineers,
 - · Define a folder hierarchy to organize requirements
 - Create different requirements specifications (using modules) to capture stakeholder requirements, system requirements and subsystem requirements.
 - Use rich text artifacts
 - Import a Word
 - Import CSV
 - Import a ReqIF package from DOORS9 into a module.
- 2. Requirements Engineers view assigned tasks on the personal dashboard
- 3. Requirements Engineers start working on RM tasks

Part 4. Importing, authoring, and linking requirements





Suspect Artifacts – Feature Team Supporting Artifacts

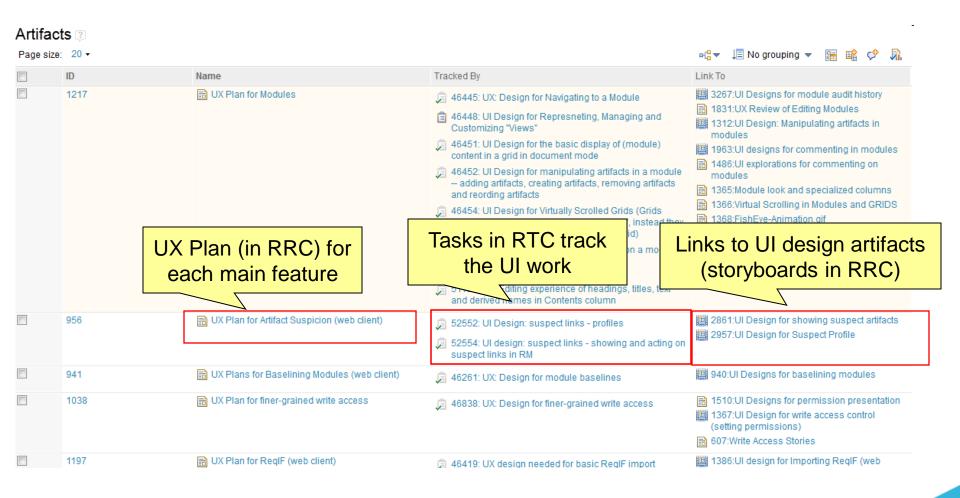
Supporting artifacts related to design and implementation







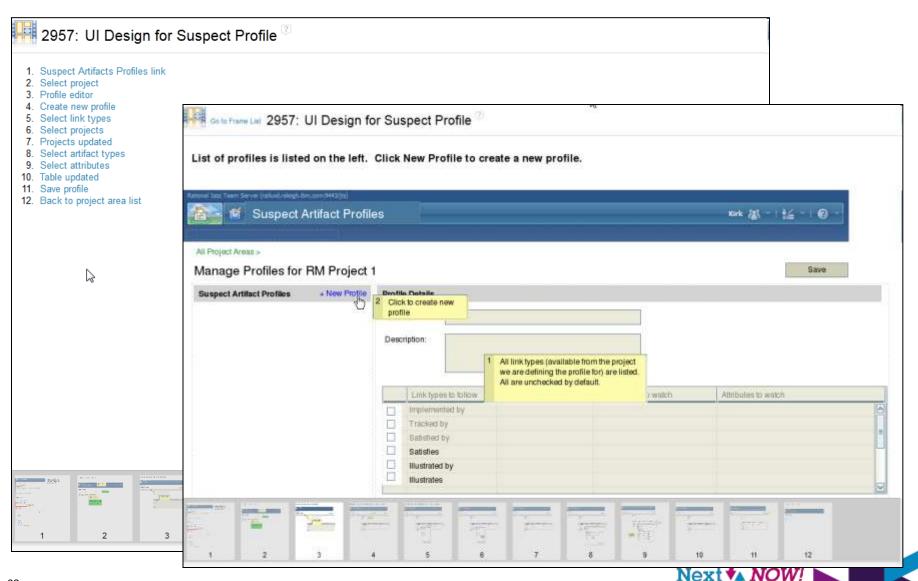
Suspect Artifacts – UX Design





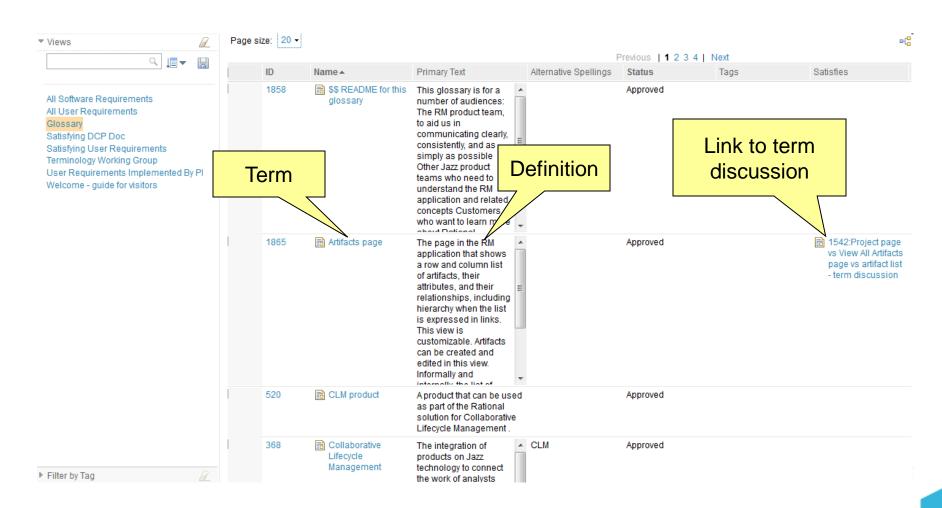


Suspect Artifacts – UI Design Storyboard





Glossary and Terminology Discussions



Read more at jazz.net (https://jazz.net/library/article/812)









Key benefits experienced by the team

Increased th	e rang	je and	depth of			
stakeholder participation						

Elicited more and better feedback before code was written

-In requirements

–In feature design

Less churn / rework

Converged faster on the "right" requirements

Identified gaps and clarified misunderstandings more quickly

Better productivity through lower cost, higher value communication Developers and testers communicated better among themselves, especially across component teams.







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