Putting the agility into software delivery with IBM ® Rational® Team Concert™

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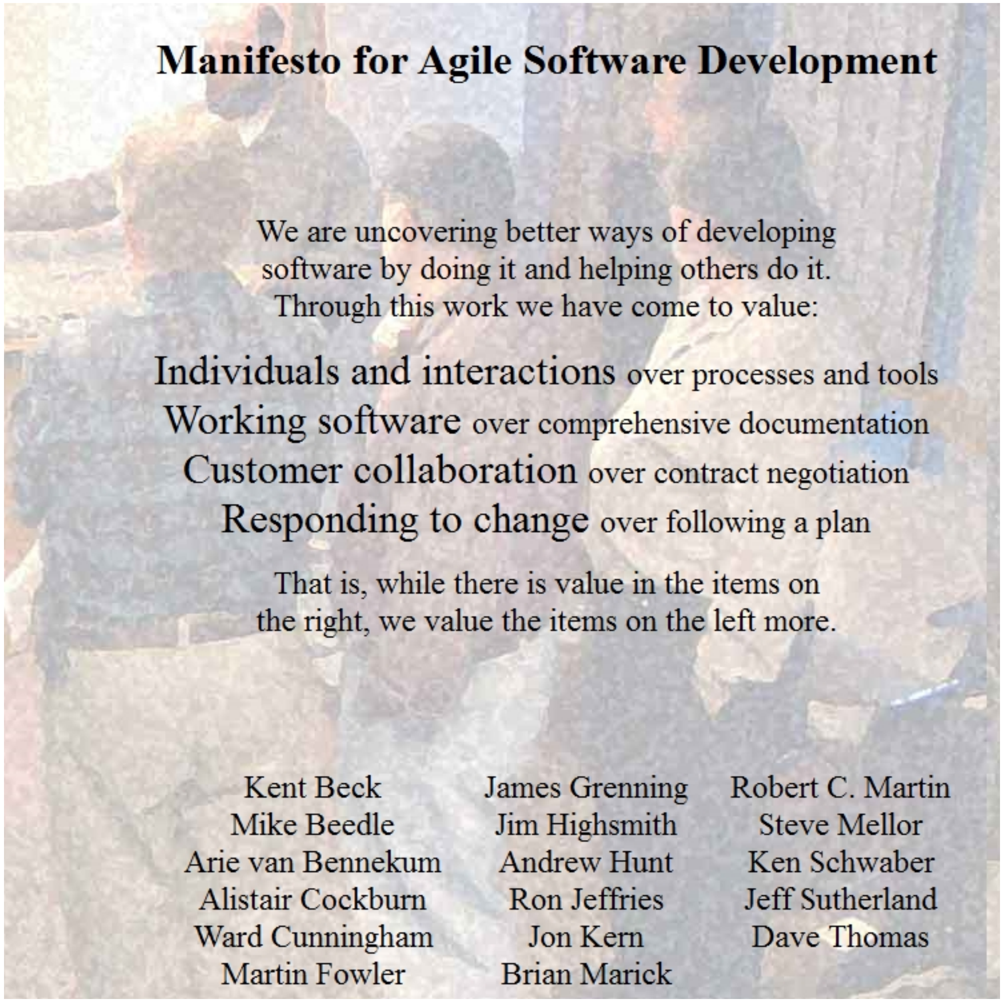
Agenda

What is Agile?

Agile @scale

Rational Team Concert for Agile Teams



Manifesto for Agile Software Development

We are uncovering better ways of developing
software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on
the right, we value the items on the left more.

Kent Beck
Mike Beedle
Arie van Bennekum
Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith
Andrew Hunt
Ron Jeffries
Jon Kern
Brian Marick

Robert C. Martin
Steve Mellor
Ken Schwaber
Jeff Sutherland
Dave Thomas

What *is* Agile?

- Agile is **not** about
  - No design
  - No documentation
  - Stand-up meetings
  - Rapid coding
  - Speed of delivery
  - Doing more with less…

What *is* Agile?

- For every stable development methodology, there need to be checks and balances

What you aim for

- ➢ Software that works
- ➢ Is delivered on time
- ➢ Responds to changes

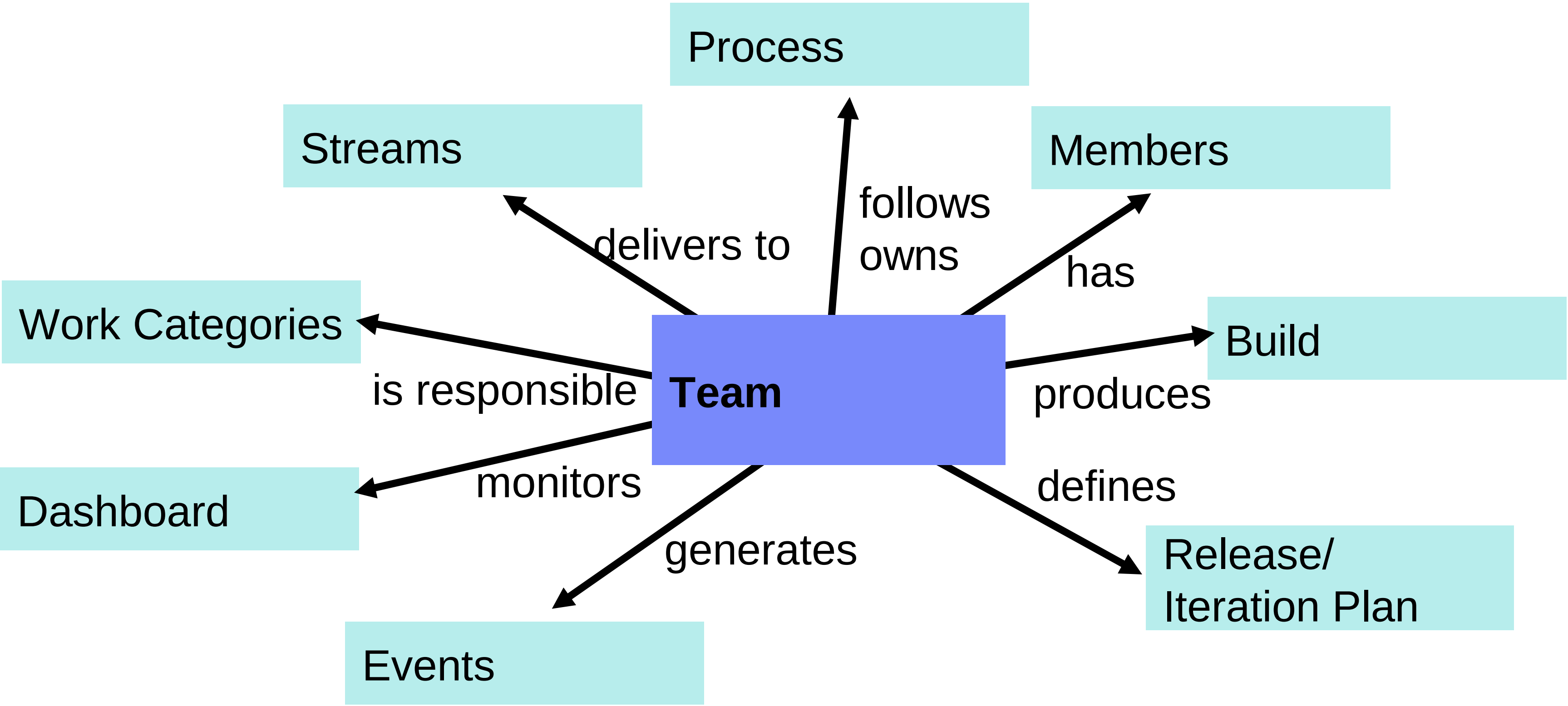
How you get to it

- ✓ Just enough design
- ✓ Iteration and Release Planning
- ✓ Evolving processes
- ✓ Continuous integration
- ✓ Test driven development
- ✓ Stakeholder collaboration throughout the cycle
- ✓ End of iteration demos
- ✓ Retrospectives

Agile Methodologies

- XP, Scrum, Lean, OpenUp
- All of them focus on
  - Incremental development
  - Self-organizing teams
  - Time-boxed iterations
  - Stakeholder Collaboration
  - Working software at the end of each iteration
  - Continuous integration and testing

Agile Way of Working: Team Centric


Team

Process

follows
owns

Streams

delivers to

Members

has

Work Categories

is responsible

Build

produces

Dashboard

monitors

defines

Release/
Iteration Plan

generates

Events

Teams are self-tuned but share a common rhythm

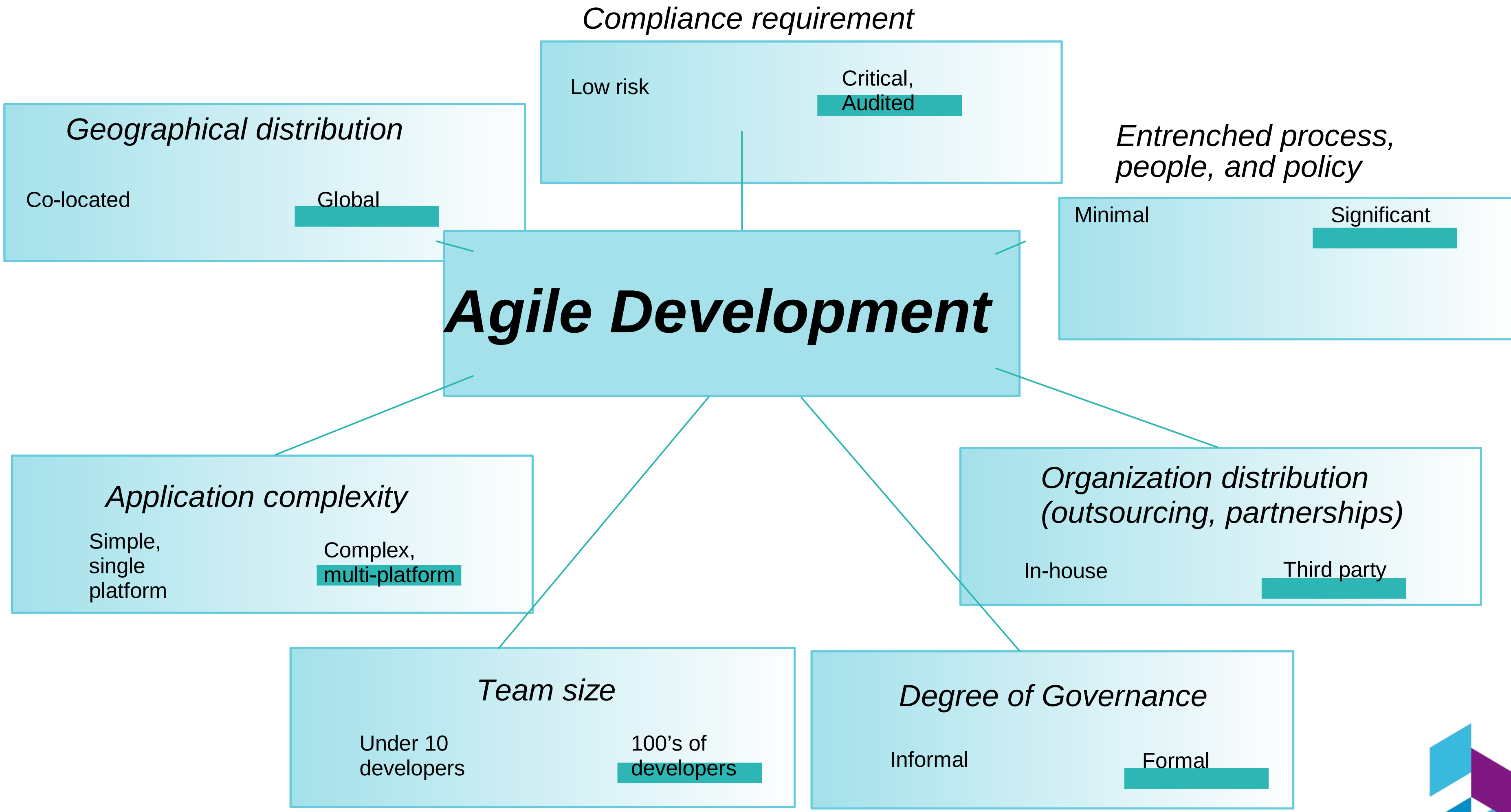
Agenda

What is Agile?

Agile @scale

Rational Team Concert for Agile Teams

What is Agile @ Scale?



Agile Development

Compliance requirement

Low risk — Critical, Audited

Geographical distribution

Co-located — Global

Entrenched process, people, and policy

Minimal — Significant

Application complexity

Simple, single platform — Complex, multi-platform

Organization distribution (outsourcing, partnerships)

In-house — Third party

Team size

Under 10 developers — 100's of developers

Degree of Governance

Informal — Formal

Challenges with Agile @ Scale

Agile works really well for small, near-located teams developing fairly straightforward solutions

Many organizations have succeeded with applying agile techniques on a handful of projects

How to address these challenges in adopting agile across different project teams?

- You need to hire coaches and mentors experienced in agility@scale
- **You need tooling that will evolve to meet your needs as your agile strategy grows**

Being Agile @ Scale

- Optimize your agile teams through
  - Real-time planning
  - Traceability
  - In-context collaboration
  - Development Intelligence
  - Continuous Improvement
- Get up and running quickly
- Extend as your needs evolve
- Support heterogeneous development across multiple platforms and technologies

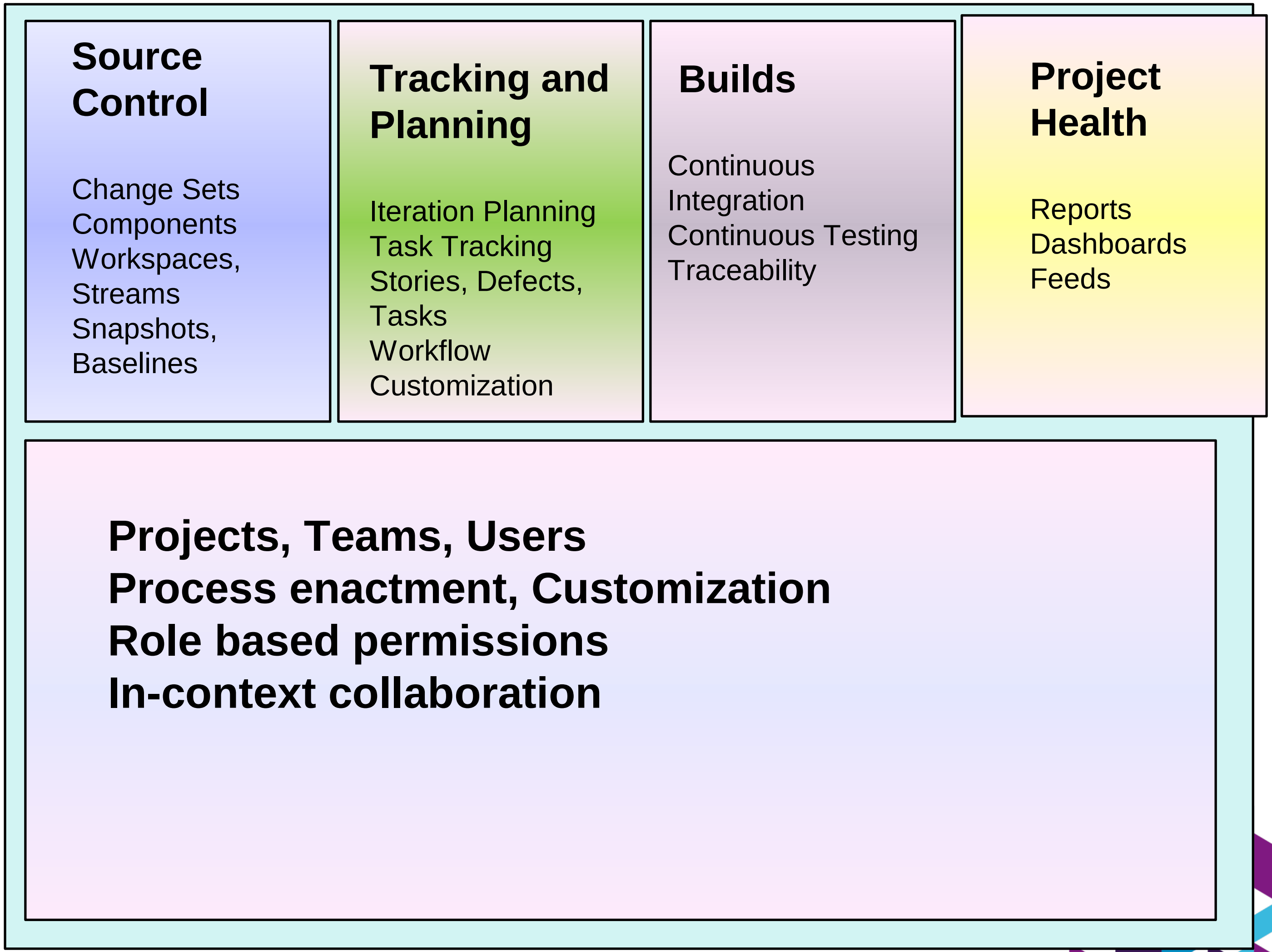
Choosing the right tools

Outline

- What is Agile?
- Agile @scale
- Rational Team Concert for Agile Teams

Rational Team Concert

- Collaboration in Context
- Team First
- Process
- Transparency



Source Control

Change Sets
Components
Workspaces, Streams
Snapshots, Baselines

Tracking and Planning

Iteration Planning
Task Tracking
Stories, Defects, Tasks
Workflow Customization

Builds

Continuous Integration
Continuous Testing
Traceability

Project Health

Reports
Dashboards
Feeds

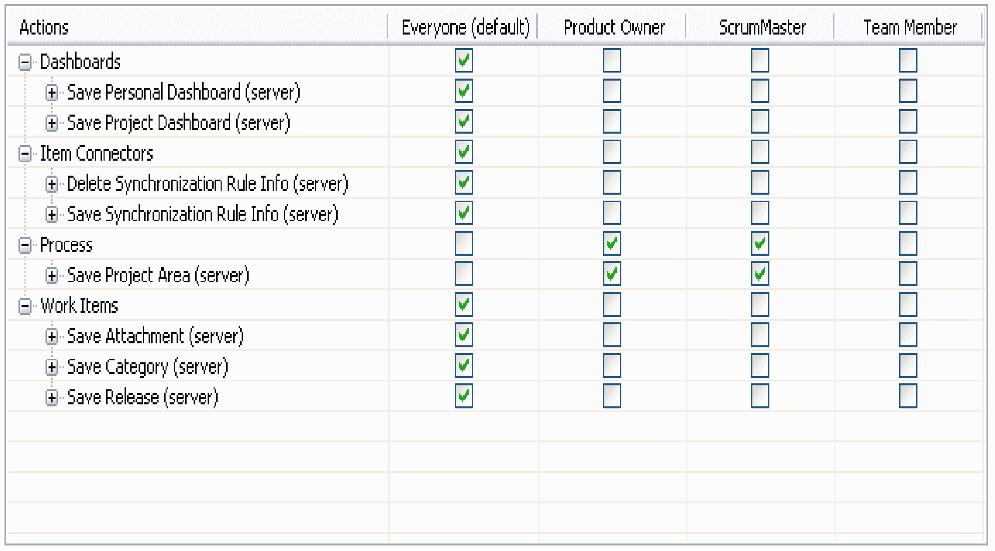
Projects, Teams, Users
Process enactment, Customization
Role based permissions
In-context collaboration

Rational Team Concert – A single tool, many capabilities

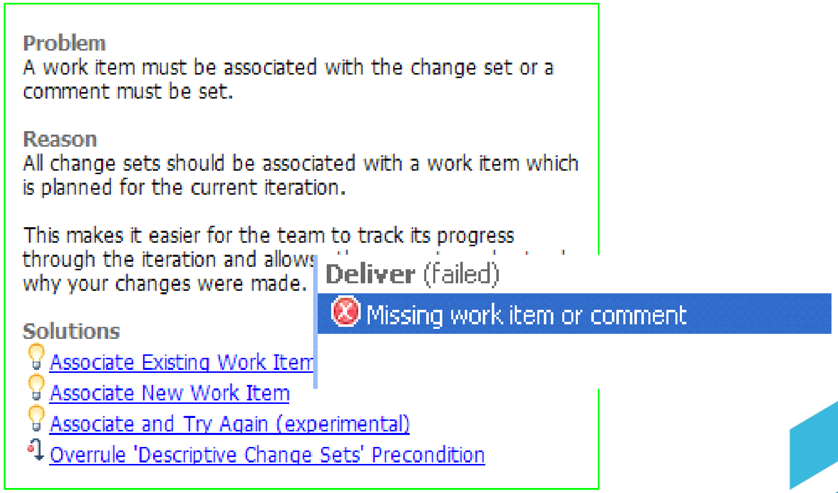
- Process simplified
  - Predefined process templates : scrum, Open-up
  - Customize as required
- Track your tasks
  - Linked and customizable work items
- Manage your sources
  - Create, undo, share, update, review, suspend, resume, patch
- Be Team aware
  - Feeds and Dashboards
- Keep builds healthy
  - Continuous build and integration with support for technology of your choice
- Runs anywhere
  - From Linux to Windows, Mac to mainframe, Eclipse to Visual Studio
- Open for Integration
  - OSLC

Process

- Each project team follows a **process**
  - different processes for different projects
- Process manifested through:
  - artifact types and their states
  - preconditions and follow-up actions on operations manipulating artifacts
  - artifact change events
  - roles and permissions
- Described with **Process templates**
- Process can evolve as project
- progresses
- **Automatic Process enforcement at various levels**
- Work item types



Actions	Everyone (default)	Product Owner	ScrumMaster	Team Member
⊟ Dashboards	☑	□	□	□
⊞ Save Personal Dashboard (server)	☑	□	□	□
⊞ Save Project Dashboard (server)	☑	□	□	□
⊟ Item Connectors	☑	□	□	□
⊞ Delete Synchronization Rule Info (server)	☑	□	□	□
⊞ Save Synchronization Rule Info (server)	☑	□	□	□
⊟ Process	□	☑	☑	□
⊞ Save Project Area (server)	□	☑	☑	□
⊟ Work Items	☑	□	□	□
⊞ Save Attachment (server)	☑	□	□	□
⊞ Save Category (server)	☑	□	□	□
⊞ Save Release (server)	☑	□	□	□



Problem
A work item must be associated with the change set or a comment must be set.

Reason
All change sets should be associated with a work item which is planned for the current iteration.

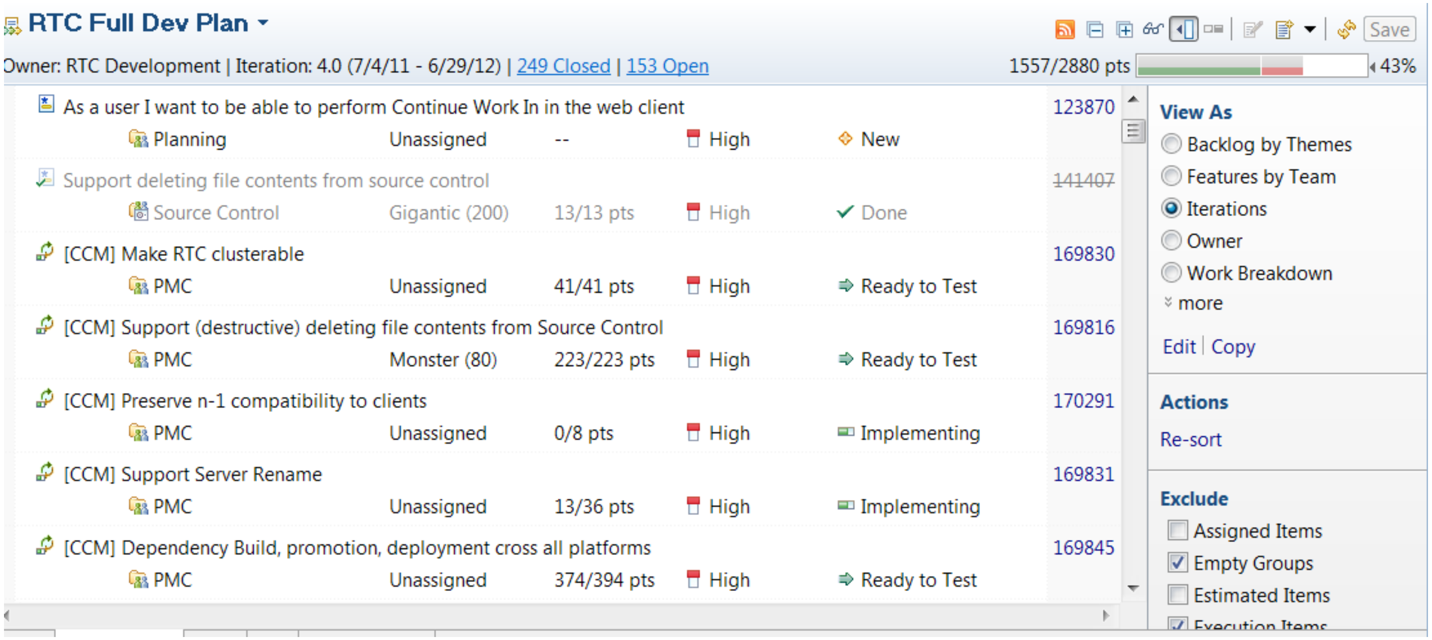
This makes it easier for the team to track its progress through the iteration and allows
why your changes were made.

Solutions
- Associate Existing Work Item
- Associate New Work Item
- Associate and Try Again (experimental)
- Overrule 'Descriptive Change Sets' Precondition

Deliver (failed)
⊗ Missing work item or comment

Planning and Tracking Iterations

- Release plan defines
  - Rhythm
  - Themes and features
  - Coarse grained
  - Visible to all stakeholders
- Release Backlog
- High level view of project progress



RTC Full Dev Plan ▾ Save

Owner: RTC Development | Iteration: 4.0 (7/4/11 - 6/29/12) | 249 Closed | 153 Open 1557/2880 pts 43%

As a user I want to be able to perform Continue Work In in the web client						123870
	Planning	Unassigned	--	High	New	
Support deleting file contents from source control						~~141407~~
	Source Control	Gigantic (200)	13/13 pts	High	✓ Done	
[CCM] Make RTC clusterable						169830
	PMC	Unassigned	41/41 pts	High	Ready to Test	
[CCM] Support (destructive) deleting file contents from Source Control						169816
	PMC	Monster (80)	223/223 pts	High	Ready to Test	
[CCM] Preserve n-1 compatibility to clients						170291
	PMC	Unassigned	0/8 pts	High	Implementing	
[CCM] Support Server Rename						169831
	PMC	Unassigned	13/36 pts	High	Implementing	
[CCM] Dependency Build, promotion, deployment cross all platforms						169845
	PMC	Unassigned	374/394 pts	High	Ready to Test	

View As
○ Backlog by Themes
○ Features by Team
● Iterations
○ Owner
○ Work Breakdown
more
Edit | Copy

Actions
Re-sort

Exclude
□ Assigned Items
☑ Empty Groups
□ Estimated Items
☑ Execution Items

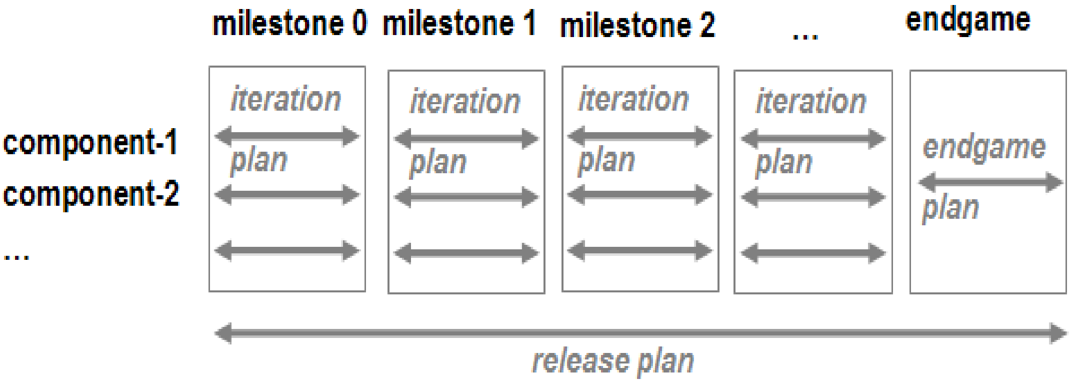
Planning and Tracking Iterations

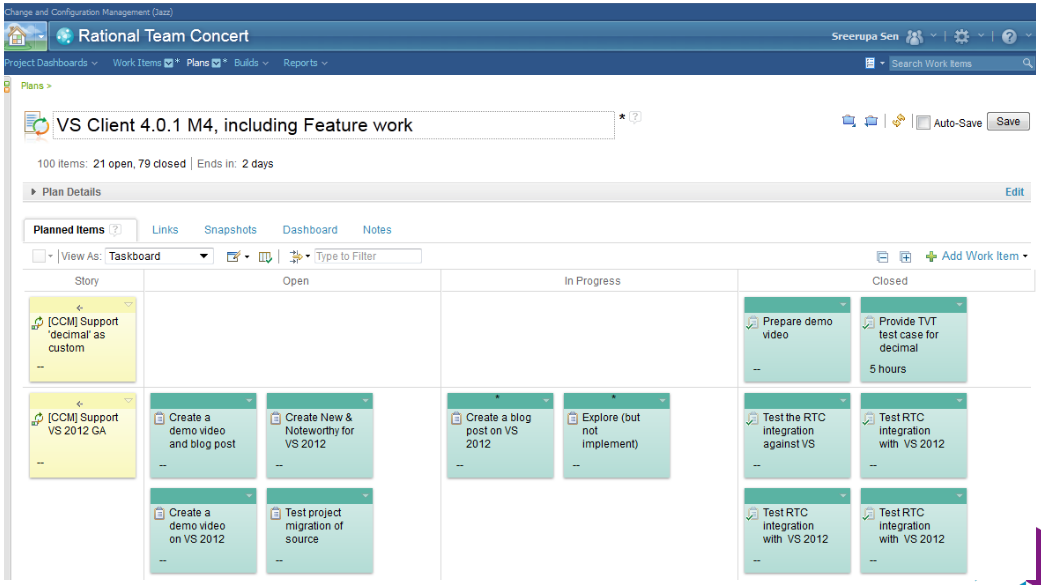
- Iteration plan
  - per team/component
  - stories, tasks, enhancements, defects

  ⇒Fine grained

  ⇒Flexible

  ⇒Various views
- Changes in work items are reflected in the plan.
- Keeps the plan synchronized with overall project status





VS Client 4.0.1 M4, including Feature work

100 items: 21 open, 79 closed | Ends in: 2 days

Plan Details

Planned Items | Links | Snapshots | Dashboard | Notes

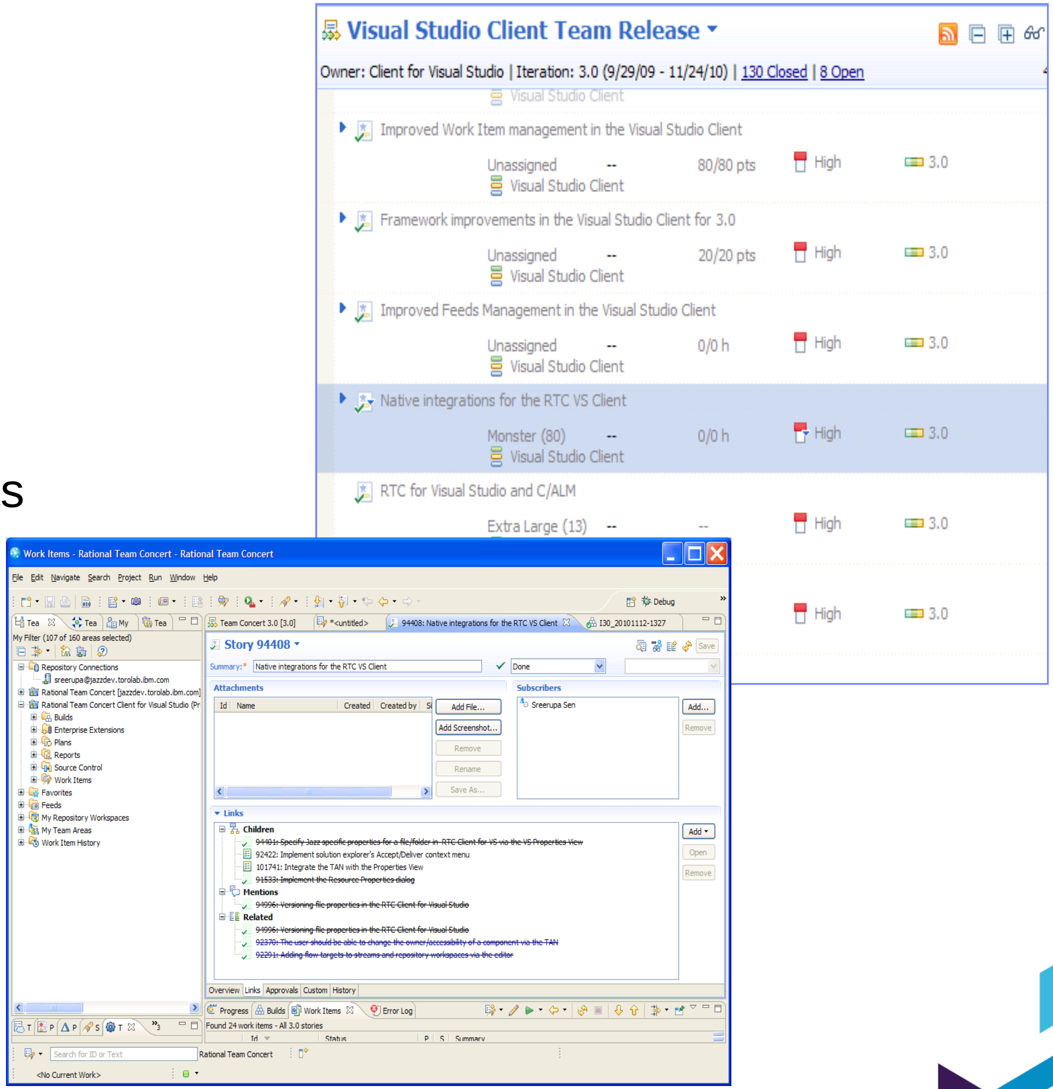
View As: Taskboard

Type to Filter

Story	Open		In Progress		Closed	
[CCM] Support 'decimal' as custom --					Prepare demo video --	Provide TVT test case for decimal 5 hours
[CCM] Support VS 2012 GA --	Create a demo video and blog post --	Create New & Noteworthy for VS 2012 --	Create a blog post on VS 2012 --	Explore (but not implement) --	Test the RTC integration against VS --	Test RTC integration with VS 2012 --
	Create a demo video on VS 2012 --	Test project migration of source --			Test RTC integration with VS 2012 --	Test RTC integration with VS 2012 --

Tracking work in distributed teams

- Plan Item (Feature) or Story
- Stakeholder inputs
- Cross team decisions
- High level design
- Broken down into Execution Items
- Execution items
- Enhancements, Tasks, Defects
- Link to your requirements, source code, test cases and builds



Visual Studio Client Team Release

Owner: Client for Visual Studio | Iteration: 3.0 (9/29/09 - 11/24/10) | 130 Closed | 8 Open

Visual Studio Client

Improved Work Item management in the Visual Studio Client					
	Unassigned Visual Studio Client	--	80/80 pts	High	3.0
Framework improvements in the Visual Studio Client for 3.0					
	Unassigned Visual Studio Client	--	20/20 pts	High	3.0
Improved Feeds Management in the Visual Studio Client					
	Unassigned Visual Studio Client	--	0/0 h	High	3.0
Native integrations for the RTC VS Client					
	Monster (80) Visual Studio Client	--	0/0 h	High	3.0
RTC for Visual Studio and C/ALM					
	Extra Large (13)	--	--	High	3.0
				High	3.0

Work Items - Rational Team Concert - Rational Team Concert

My Filter (107 of 160 areas selected)

- Repository Connections
  - sreerupa@jazzdev.torolab.ibm.com
- Rational Team Concert [jazzdev.torolab.ibm.com]
- Rational Team Concert Client for Visual Studio (Pr
  - Builds
  - Enterprise Extensions
  - Plans
  - Reports
  - Source Control
  - Work Items
- Favorites
- Feeds
- My Repository Workspaces
- My Team Areas
- Work Item History

Story 94408

Summary:* Native integrations for the RTC VS Client   Done

Attachments

Id	Name	Created	Created by	Si

Subscribers

Sreerupa Sen

Links

Children
- ~~94401: Specify Jazz specific properties for a file/folder in RTC Client for VS via the VS Properties View~~
- 92422: Implement solution explorer's Accept/Deliver context menu
- 101741: Integrate the TAN with the Properties View
- ~~91533: Implement the Resource Properties dialog~~

Mentions
- ~~94996: Versioning file properties in the RTC Client for Visual Studio~~

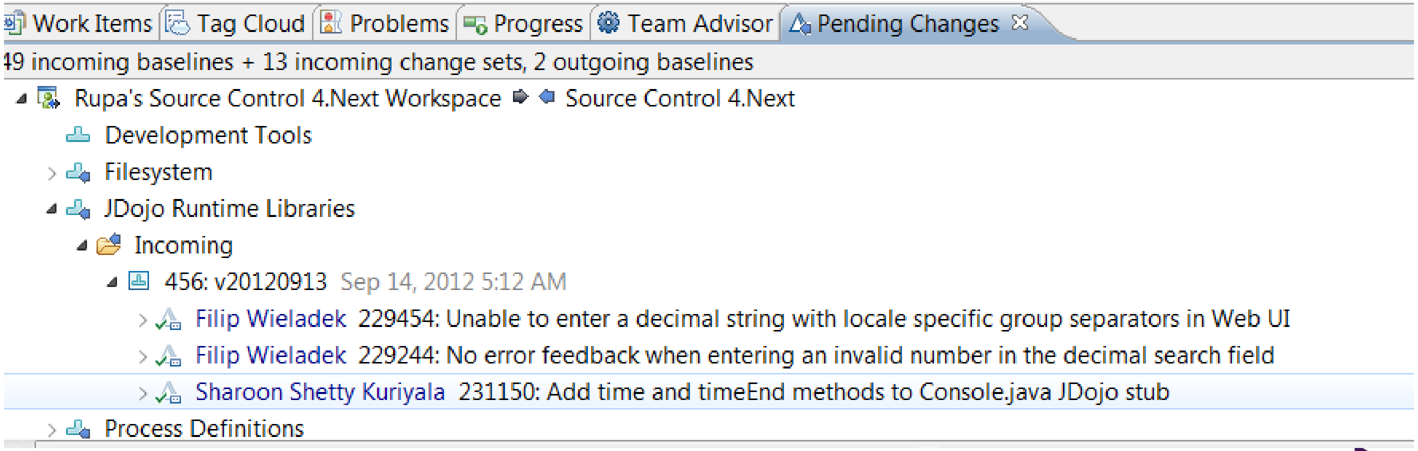
Related
- ~~94996: Versioning file properties in the RTC Client for Visual Studio~~
- ~~92370: The user should be able to change the owner/accessibility of a component via the TAN~~
- ~~92291: Adding flow targets to streams and repository workspaces via the editor~~

Found 24 work items - All 3.0 stories

Id	Status	P	S	Summary

Parallel Development with SCM

- RTC SCM supports several levels of parallel development:
  - Stream
  - Personal Repository workspace
  - Sandbox local to client system
- Collaboration based on Change sets:
  - Flowing changesets
- Traceability
  - Change sets get attached to work items
  - Get included in builds



49 incoming baselines + 13 incoming change sets, 2 outgoing baselines

```
Rupa's Source Control 4.Next Workspace ⇨ ⇦ Source Control 4.Next
  Development Tools
  Filesystem
  JDojo Runtime Libraries
    Incoming
      456: v20120913  Sep 14, 2012 5:12 AM
        Filip Wieladek  229454: Unable to enter a decimal string with locale specific group separators in Web UI
        Filip Wieladek  229244: No error feedback when entering an invalid number in the decimal search field
        Sharoon Shetty Kuriyala  231150: Add time and timeEnd methods to Console.java JDojo stub
  Process Definitions
```

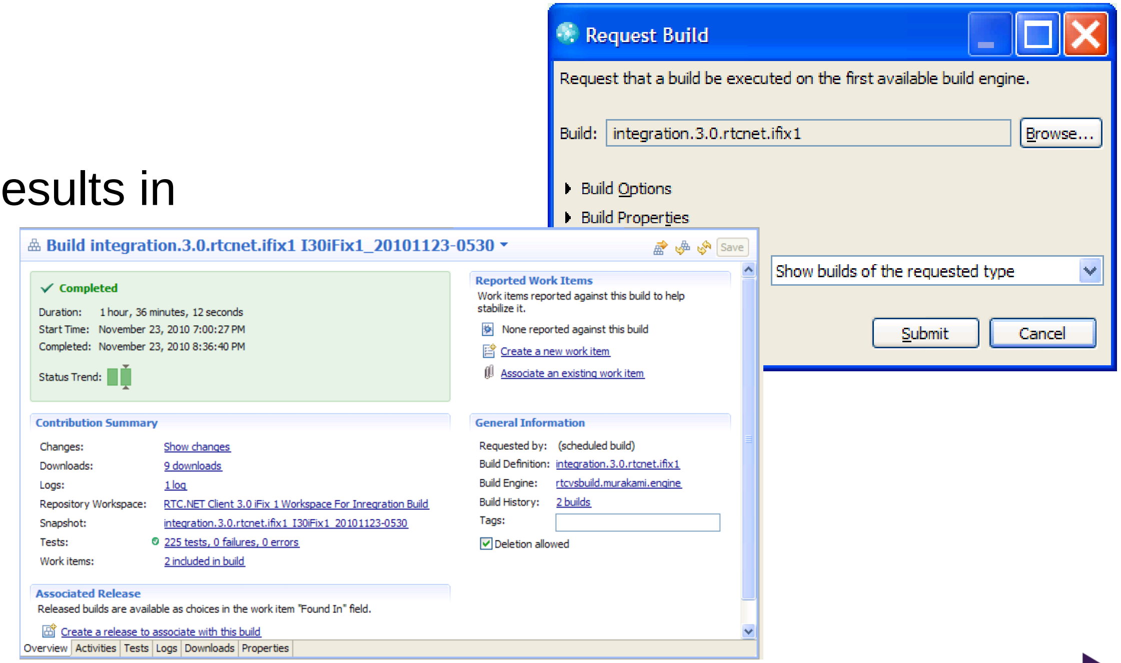
Isolation Levels – Isolate Work not people

- Repository workspaces - Provides individual isolation
  - changes visible only to you unless shared with team
  - collaborate on a change with someone else
- Streams
  - Provides team isolation.
- Suspend and Resume
  - Provides task level isolation for personal work.
- Team areas
  - Provides process isolation.

Demo

Continuous Integration with builds

- Team of Team
  - Scheduled integration builds
  - Cross-component
  - Continuous integration builds
- For each Team
  - Continuous builds
  - Always green
- For a Developer
  - Personal builds
- Unit tests, Compilation results in builds



Request Build

Request that a build be executed on the first available build engine.

Build: integration.3.0.rtcnet.ifix1

Show builds of the requested type

Build integration.3.0.rtcnet.ifix1 I30iFix1_20101123-0530

✓ Completed

Duration: 1 hour, 36 minutes, 12 seconds
Start Time: November 23, 2010 7:00:27 PM
Completed: November 23, 2010 8:36:40 PM
Status Trend:

Contribution Summary

Changes: Show changes
Downloads: 9 downloads
Logs: 1 log
Repository Workspace: RTC.NET Client 3.0 iFix 1 Workspace For Inregration Build
Snapshot: integration.3.0.rtcnet.ifix1_I30iFix1_20101123-0530
Tests: 225 tests, 0 failures, 0 errors
Work items: 2 included in build

Associated Release

Released builds are available as choices in the work item "Found In" field.

Create a release to associate with this build

Reported Work Items

Work items reported against this build to help stabilize it.

None reported against this build

Create a new work item

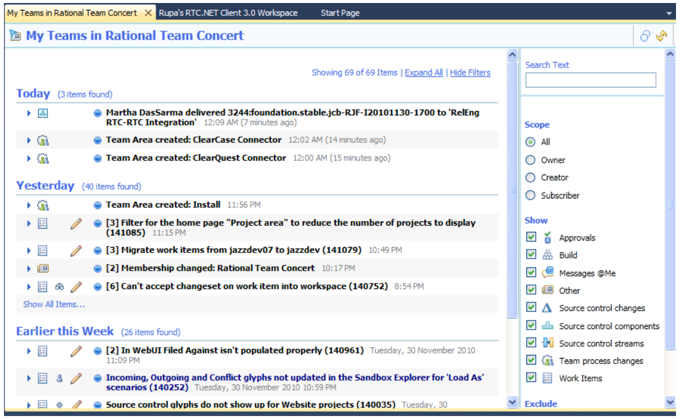
Associate an existing work item

General Information

Requested by: (scheduled build)
Build Definition: integration.3.0.rtcnet.ifix1
Build Engine: rtcvsbuild.murakami.engine
Build History: 2 builds
Tags:
☑ Deletion allowed

Transparency with Feeds, Dashboards, Reports

- Team event notifications
  - Build events
  - Source Control changes
  - Work item changes
  - Team Process changes
- Dashboards
  - Live project status
  - For all stakeholders
- Reports



My Teams in Rational Team Concert | Rupa's RTC.NET Client 3.0 Workspace | Start Page

My Teams in Rational Team Concert

Showing 69 of 69 Items | Expand All | Hide Filters

Today (3 items found)

- **Martha DasSarma delivered 3244:foundation.stable.jcb-RJF-I20101130-1700 to 'RelEng RTC-RTC Integration'** 12:09 AM (7 minutes ago)
- **Team Area created: ClearCase Connector** 12:02 AM (14 minutes ago)
- **Team Area created: ClearQuest Connector** 12:00 AM (15 minutes ago)

Yesterday (40 items found)

- **Team Area created: Install** 11:56 PM
- **[3] Filter for the home page "Project area" to reduce the number of projects to display (141085)** 11:15 PM
- **[3] Migrate work items from jazzdev07 to jazzdev (141079)** 10:49 PM
- **[2] Membership changed: Rational Team Concert** 10:17 PM
- **[6] Can't accept changeset on work item into workspace (140752)** 8:54 PM

Show All Items...

Earlier this Week (26 items found)

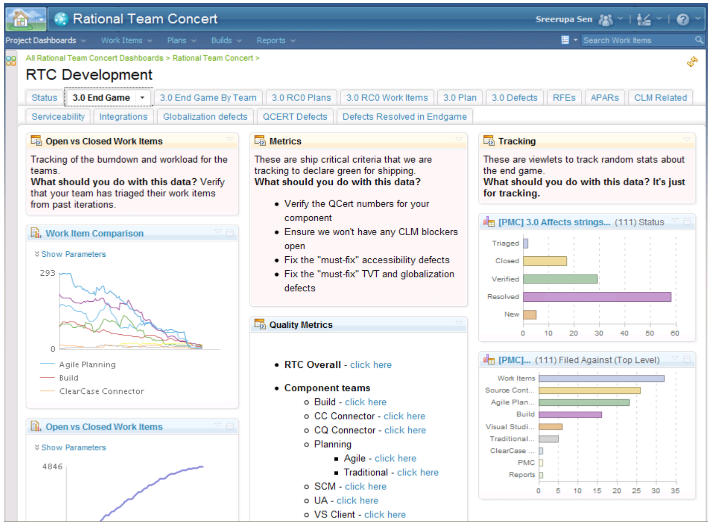
- **[2] In WebUI Filed Against isn't populated properly (140961)** Tuesday, 30 November 2010 11:09 PM
- **Incoming, Outgoing and Conflict glyphs not updated in the Sandbox Explorer for 'Load As' scenarios (140252)** Tuesday, 30 November 2010 10:59 PM
- **Source control glyphs do not show up for Website projects (140035)** Tuesday, 30

Search Text

Scope
● All
○ Owner
○ Creator
○ Subscriber

Show
☑ Approvals
☑ Build
☑ Messages @Me
☑ Other
☑ Source control changes
☑ Source control components
☑ Source control streams
☑ Team process changes
☑ Work Items

Exclude



All Rational Team Concert Dashboards > Rational Team Concert >

RTC Development

Status | 3.0 End Game | 3.0 End Game By Team | 3.0 RC0 Plans | 3.0 RC0 Work Items | 3.0 Plan | 3.0 Defects | RFEs | APARs | CLM Related

Serviceability | Integrations | Globalization defects | QCERT Defects | Defects Resolved in Endgame

Open vs Closed Work Items

Tracking of the burndown and workload for the teams.
What should you do with this data? Verify that your team has triaged their work items from past iterations.

Work Item Comparison

Show Parameters

Open vs Closed Work Items

Show Parameters

Metrics

These are ship critical criteria that we are tracking to declare green for shipping.
What should you do with this data?

- Verify the QCert numbers for your component
- Ensure we won't have any CLM blockers open
- Fix the "must-fix" accessibility defects
- Fix the "must-fix" TVT and globalization defects

Quality Metrics

- **RTC Overall** - click here
- **Component teams**
  - Build - click here
  - CC Connector - click here
  - CQ Connector - click here
  - Planning
    - Agile - click here
    - Traditional - click here
  - SCM - click here
  - UA - click here
  - VS Client - click here

Tracking

These are viewlets to track random stats about the end game.
What should you do with this data? It's just for tracking.

[PMC] 3.0 Affects strings... (111) Status

[PMC]... (111) Filed Against (Top Level)

Links

- https://jazz.net
  - Product downloads, demo videos, tutorials

Summary

- Scaling agile methodologies to geographically distributed teams has its challenges
- Rational Team Concert is a single tool with multiple capabilities
- Provides planning, source control, work items and builds
- Process enforced at various levels and customzied according to your needs
- Track your project progress with release and iteration plans.
- Link source code, work items and builds
- Project transparency with feeds, dashboards and reports

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