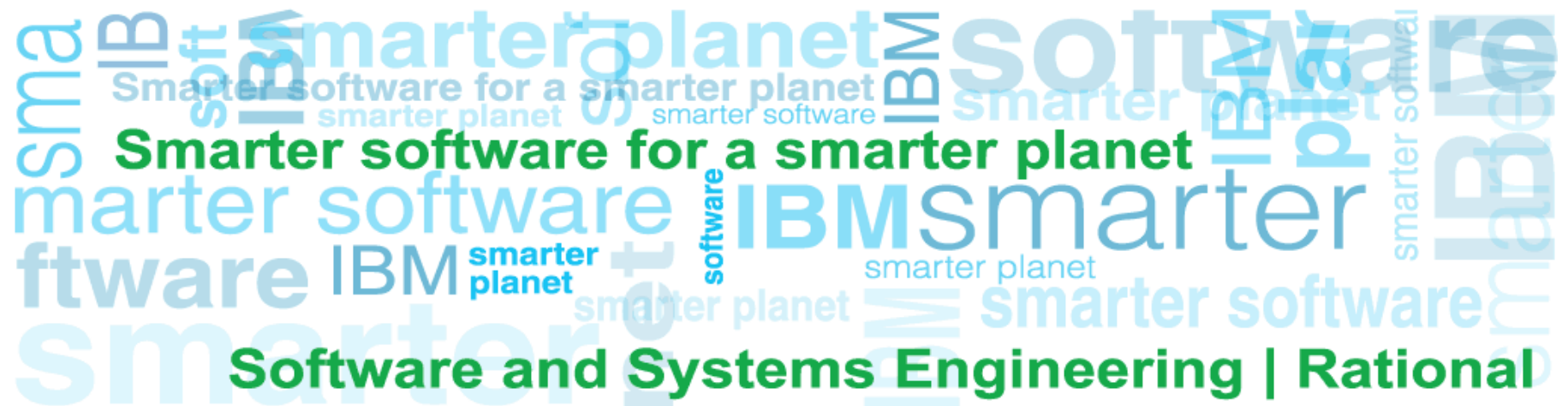




ClearCase Connectors



Agenda

- Why connect to Rational Team Concert?
- Connectors to change/configuration management systems
- Who should use which connectors?
- ClearCase Bridge features
- ClearCase Synchronizer/Importer features
- Tips and tricks for setting up synchronization
- RTC next release
- References
- Q&A

Disclaimer: The information on the new product is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information on the new product is for informational purposes only and may not be incorporated into any contract. The information on the new product is not a commitment, promise, or legal obligation to deliver any material, code or functionality. The development, release, and timing of any features or functionality described for our products remains at our sole discretion.

Why would you connect to Rational Team Concert?

SCM

- Change sets
- Streams
- Components
- Parallel development
- GDD
- *ClearCase Connector*

Work Items

- Defects, Enhancements
- Task tracking, planning
- Queries
- Approvals
- Iteration planning
- *ClearQuest Connector*

Build

- Work Item and Change Set Traceability
- Supports Ant, Maven and Command line Tools
- Personal Builds
- *Integration with Build Forge*

- Project, Teams, Users
- Process enactment, customization, permissions
- In-context Collaboration, Events, Presence
- Reporting, Dashboards (project, team, personal)

Jazz Team Server

Rational Team Concert

Issue/Risk: You Don't Have Effective Oversight

Solution: Web Based Project and Portfolio Dashboards

Jazz Project Description

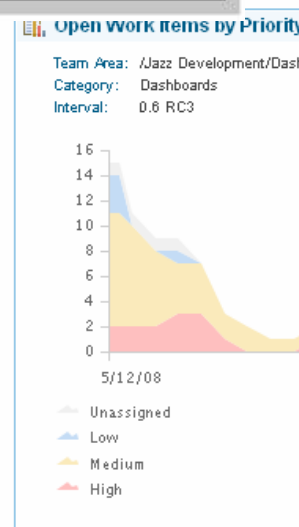
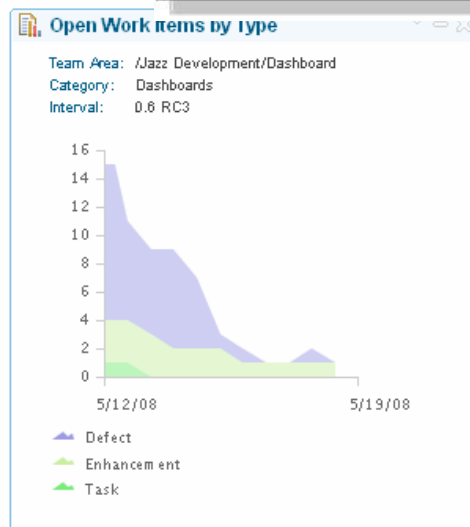
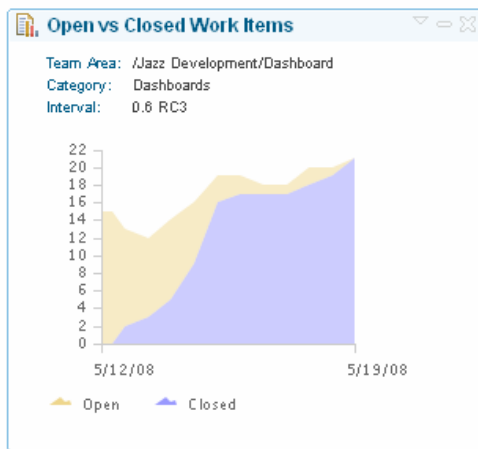
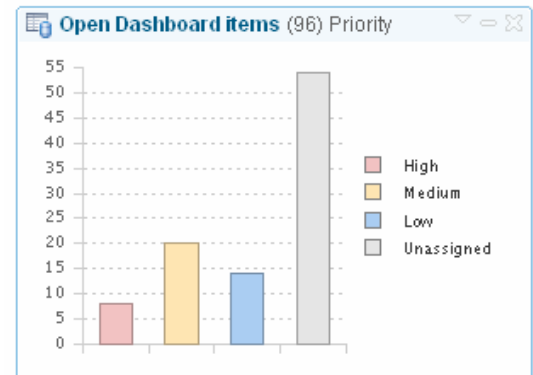
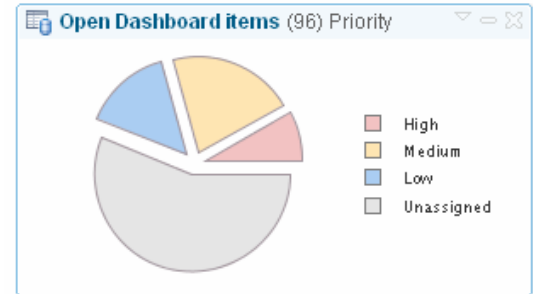
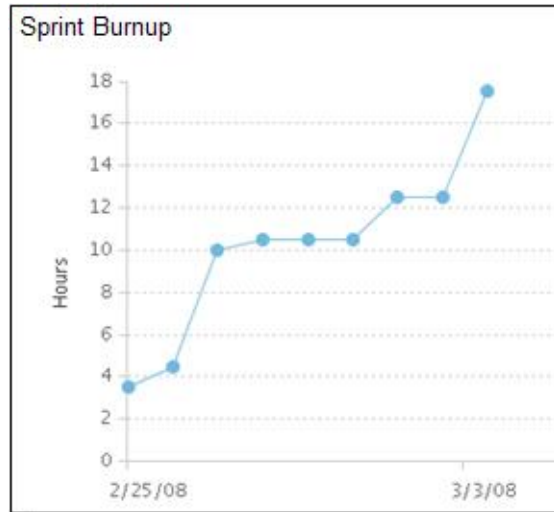
Process enabled team collaboration platform

The goal of the Jazz project is to build a scalable, extensible team collaboration platform for seamlessly integrating tasks across the software lifecycle. The new technology is called the Jazz Platform. The Jazz project is defining the overall architecture of the Jazz Platform, and building an initial set of Jazz components that plug in to the Jazz Platform.

The work in the Jazz project is divided into development work and maintenance work. Development work produces a consecutive line of releases. Maintenance work produces bug fix releases of the released produced by the development work.

Development as well as maintenance work is overseen by the PMC. The team members listed in this project area constitute the PMC.

- Jazz Project Members (11)**
- CQ Connector Account connector
 - Dejan Glozic dashboardadmin
 - Erich Gamma dashboardadmin, projectadmin, PMC, contributor
 - Jean-Michel Lemieux dashboardadmin, projectadmin, PMC, contributor
 - John Vasta connectoradmin
 - Kai-Uwe Maetzel PMC, contributor
 - Kevin Haaland PMC, contributor
 - Kim Moir projectadmin
 - Peter Klenk PMC, contributor
 - Scott Rich PMC, contributor
- Page 1 of 2



Open Dashboard items (96) Priority

High(8) Medium(20) Low(14)
Unassigned(54)

Open Dashboard items (96) Priority

Priority	Count
High	8
Medium	20
Low	14
Unassigned	54

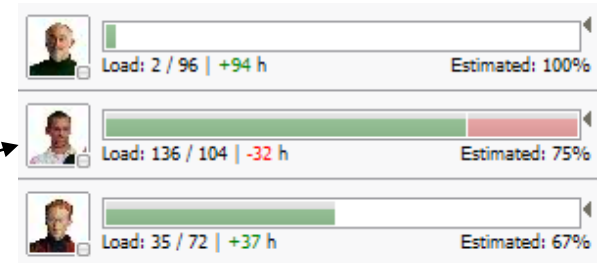
Team Concert Planning is Directly Linked to Execution

- NOT just a disconnected spreadsheet
 - With brittle cross product integration
 - Synchronization issues for admins...backup
 - No web access for non-developers
- NOT just a planning tool
 - Designed for project leads
 - Not connected to execution of scm and builds
 - No process control
- With Rational Team Concert
 - Live work load bars show who is overbooked ...
 - Live progress status bars show Individual and Team progress
 - All planning is 100% Web based so all can access it
 - Full process control
 - Engages development in planning to produce better predictability

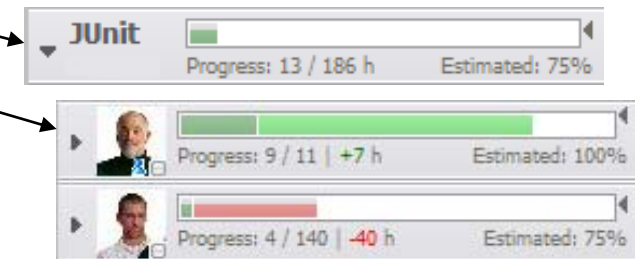
Priority	Created Date	Days Open	Assigned To	Changed Date	Days Since Last Update
75	4/6/2009 8:34 AM	12	Aaron Bjork	5/19/2009 8:20 AM	1
75	4/6/2009 8:34 AM	12	Jim Reynolds	5/19/2009 8:20 AM	1
187	5/4/2009 6:53 AM	12	Loi L...	5/19/2009 8:20 AM	1
189	4/16/2009 6:59 AM	24	...	5/12/2009 8:31 AM	6
383	5/4/2009 6:53 AM	12	...	5/12/2009 8:39 AM	6
385	5/4/2009 6:53 AM	12	...	5/12/2009 8:39 AM	6
389	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
396	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
399	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
402	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
403	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
404	5/4/2009 6:53 AM	12	...	5/12/2009 8:31 AM	6
398	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1
400	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1
403	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1
202	4/16/2009 7:41 AM	12	...	5/12/2009 8:39 AM	6
203	4/16/2009 7:41 AM	12	...	5/4/2009 6:53 AM	12
206	4/16/2009 7:41 AM	12	...	5/4/2009 6:52 AM	12
207	4/16/2009 7:41 AM	12	...	5/4/2009 6:53 AM	12
73	4/6/2009 8:30 AM	12	...	5/4/2009 6:53 AM	12
82	4/6/2009 8:34 AM	12	...	5/4/2009 6:53 AM	12
86	4/6/2009 8:34 AM	12	...	5/4/2009 6:53 AM	12
87	4/6/2009 8:34 AM	12	...	5/4/2009 6:53 AM	12
200	4/16/2009 7:41 AM	12	...	5/4/2009 6:52 AM	12
388	5/4/2009 6:53 AM	12	...	5/12/2009 8:39 AM	6
187	4/16/2009 6:59 AM	12	...	5/19/2009 8:20 AM	1
188	4/16/2009 6:59 AM	12	...	5/19/2009 8:20 AM	1
390	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1
384	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1
386	5/4/2009 6:53 AM	12	...	5/19/2009 8:20 AM	1



Work Load Bar



Progress Bar



Other products built on the Jazz Platform (from jazz.net)

Current Jazz offerings

Some Jazz offerings are built from the ground up using Jazz technology and developed right here at jazz.net. These Jazz offerings include:

Rational Team Concert

A collaborative work environment for developers, architects and project managers with unified work item, source control and build management, process management and iteration planning.

Rational Quality Manager

A web-based test management environment for quality professionals that provides a customizable solution for test planning, workflow control, tracking and reporting.

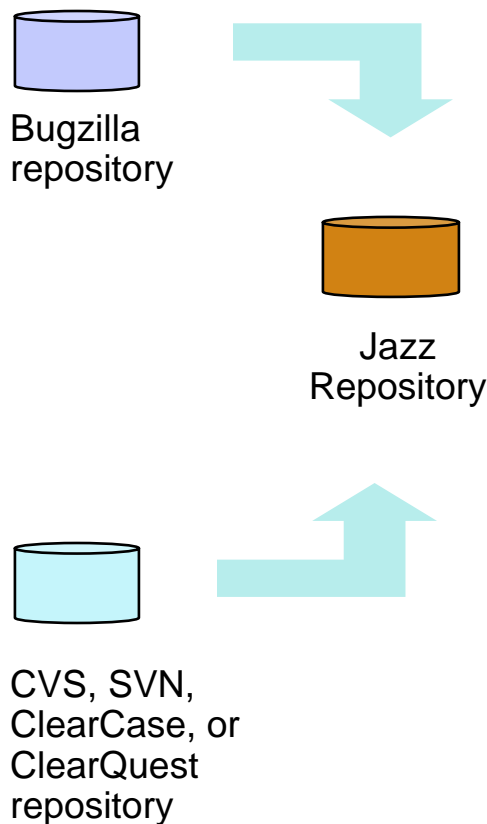
Rational Requirements Composer

A requirements solution that helps teams to define requirements more effectively and use them efficiently across the project lifecycle to gain better business outcomes through light-weight requirements practices.

Types of Connectors to Rational Team Concert

Import

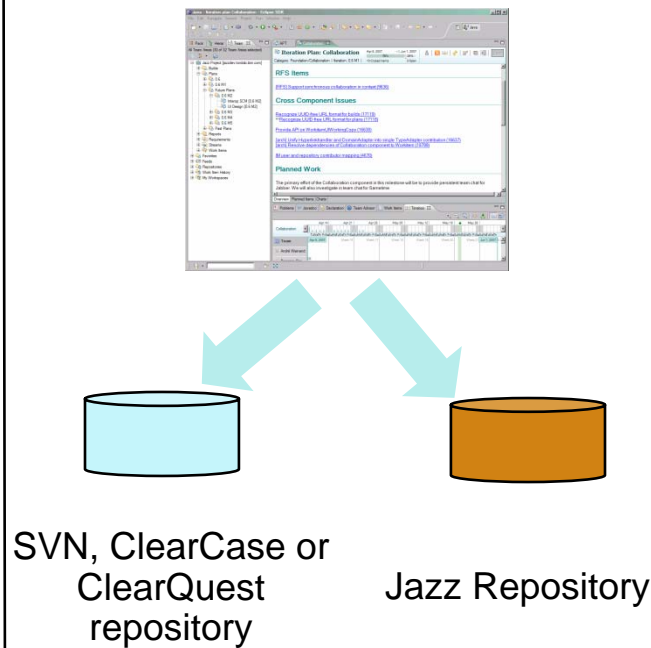
One way data migration



Bridge

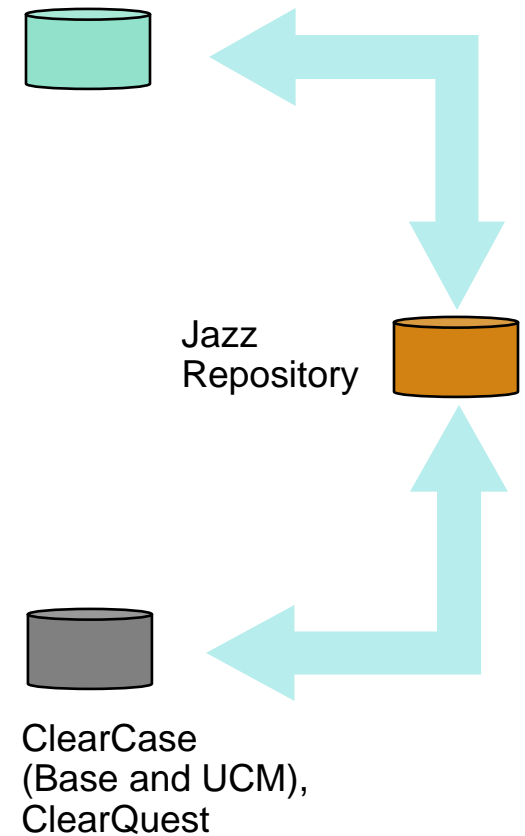
ClearCase Bridge links work items with ClearCase versions, UCM activities.

ClearQuest Bridge links work items with ClearQuest records.



Synchronizers

Two way data synchronization



Who should use a bridge? A synchronizer?

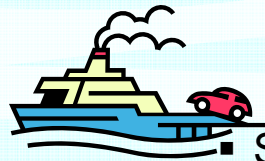
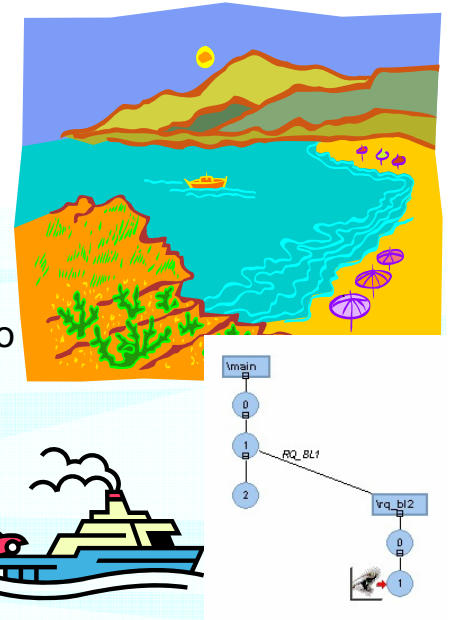
- Bridge is for users/organizations who want to...
 - Use change / configuration management tool alongside Jazz-based products
 - Easily create and navigate relationships between objects in different repositories

- Synchronizer is for users/organizations who want to...
 - Serve “Agile Islands” in large enterprise ClearCase / ClearQuest deployment
 - Some teams want to work entirely in Rational Team Concert
 - Do release engineering from ClearCase
 - Do request Management from ClearQuest
 - Have different audiences for the same data (e.g. customer support)

Who should use the ClearCase Synchronizer?

Scenario:

- ClearCase is the enterprise software configuration management system
- Product integration and release are performed in ClearCase repositories
- Small/medium teams responsible for specific components (“agile islands”) may opt to use Rational Team Concert to do work destined for a ClearCase branch or UCM stream



Synchronizer benefits for this scenario:

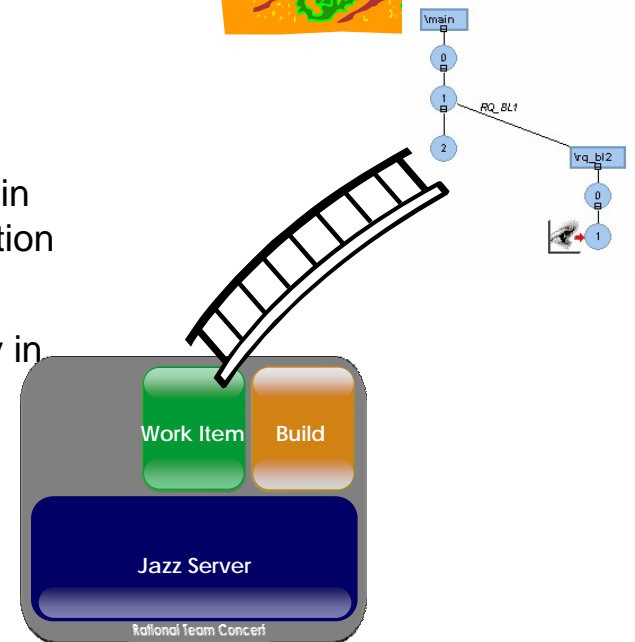
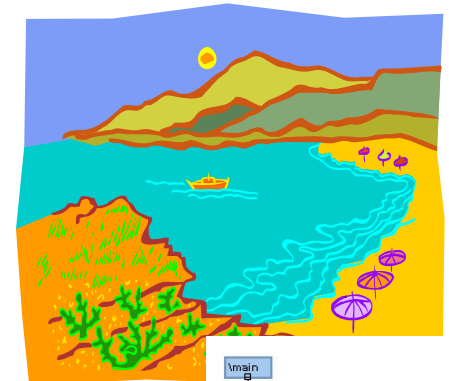
- Allows ClearCase customers to try Rational Team Concert with its full benefits without isolating trial users from the rest of the organization
- Allows customers to use either tool/repository
- Work can occur in parallel in both repositories
- Customers use standard Jazz/SCM merge tooling to resolve conflicts
- Supports both base ClearCase branches and UCM streams



Who should use the ClearCase Bridge?

- Scenario:
 - ClearCase is the enterprise software configuration management system
 - ClearCase customers don't necessarily want to (or can't) switch SCM systems to get the benefits of the other Jazz features

- Bridge benefits for this scenario:
 - Allows ClearCase/ClearQuest customers to benefit from many features in Rational Team Concert while continuing to use ClearCase for configuration management
 - Links ClearCase information with Jazz work items to provide traceability in both directions
 - No data to synchronize
 - Loosely coupled
 - Less restrictive than ClearQuest-enabled UCM
 - Can be used with ClearQuest Bridge



Who should use the ClearCase Importer?

- Scenario:
 - Customer wants to move from using ClearCase as the enterprise software configuration management system to Jazz source control
- Importer benefits for this scenario:
 - Allows ClearCase customers (who want to) to move to Rational Team Concert with its full benefits
 - Based on synchronizer technology; imports baseline-to-baseline differences
 - Allows selection of historical data to be brought over
 - Supports import of both ClearCase UCM streams and base ClearCase branches

Limitation: CCLT is not natively supported; customers wanting to move from CCLT should work with their sales rep to get a temporary full ClearCase license for the purpose of importing

Availability of ClearCase Connectors to Rational Team Concert

- **Bridge**
 - Introduced in Rational Team Concert 2.0
 - Earliest ClearCase release supported: ClearCase 7.1.0.2 (works with 7.1.0.x, 7.1.x)
 - “Tolerates” earlier versions

- **Synchronizer**
 - Introduced in Rational Team Concert 1.0
 - Works with ClearCase 7.0, 7.0.1, 7.1.x

- **Importer**
 - Introduced in Rational Team Concert 2.0
 - Works with ClearCase 7.0, 7.0.1, 7.1.x

ClearCase Bridge

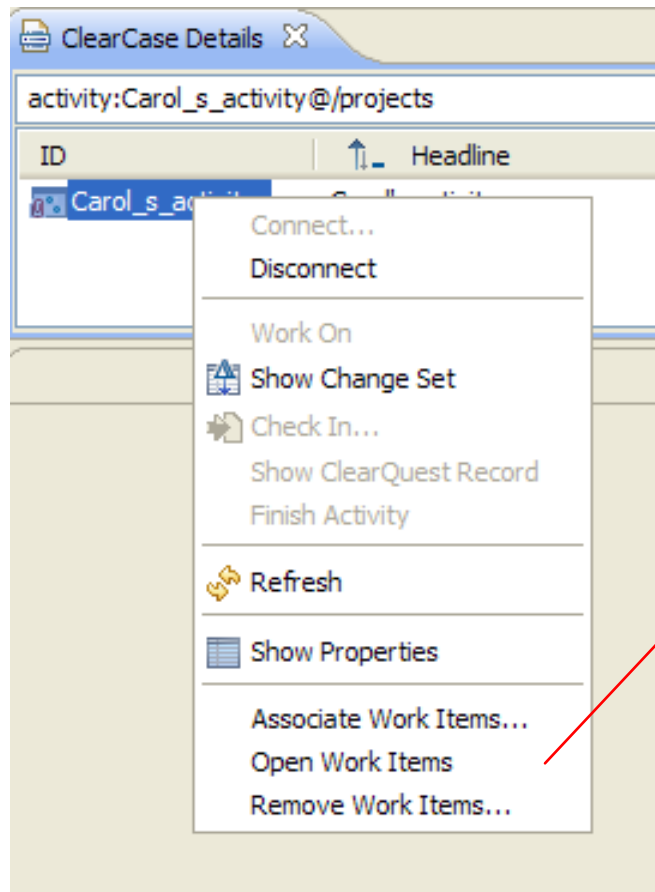
ClearCase Bridge features

- Links UCM activities with Jazz work items to provide traceability
- Links are navigable in both directions
- No special configuration is required
 - Just install CCRC and RTC Client in a single Eclipse instance, and ready to use
- Can use with ClearQuest bridge to link those work items to ClearQuest records
- Has look and feel of RTC SCM change-set/work item integration
 - Primary implementation focused around CCRC (“Unified Client”)
 - Unified Client is our future direction for a unified ClearCase interface
 - Current limitation: Unified Client currently supports only web views
- Links are also accessible from OSLC change management interface
 - OSLC interfaces can be used to write ClearCase triggers

New ClearCase Bridge features in Rational Team Concert 3.0

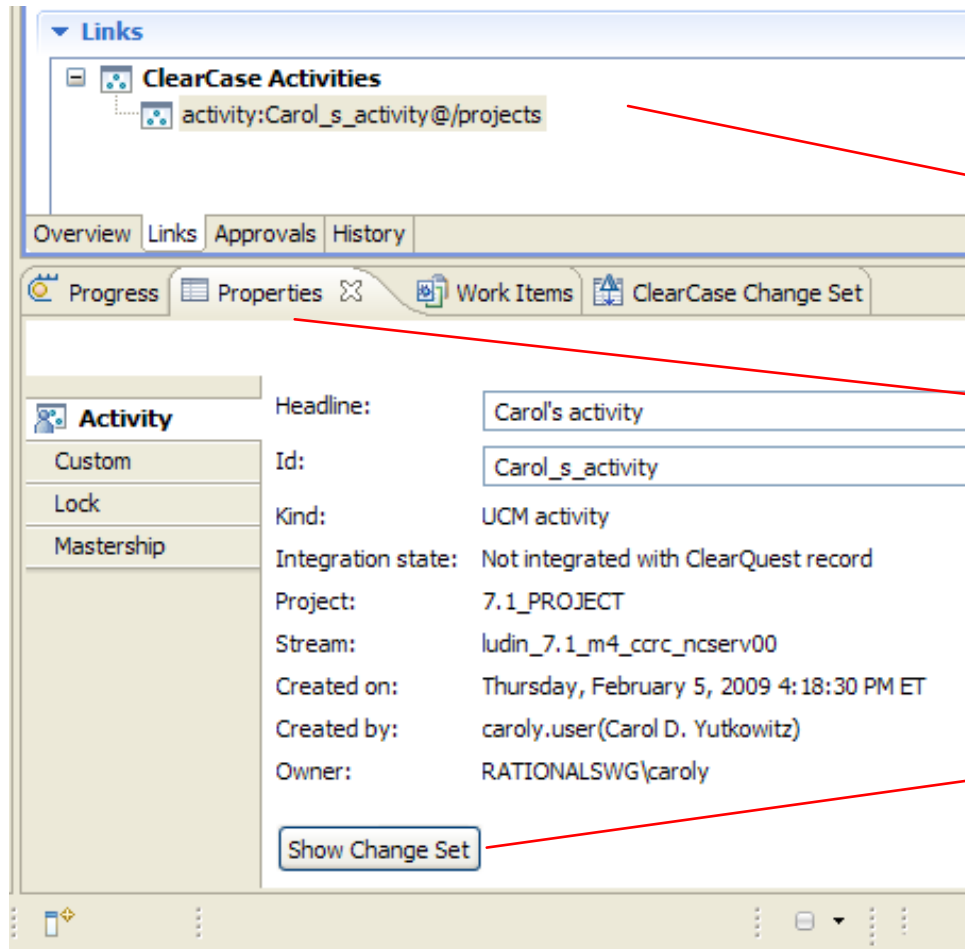
- (New!) Links base ClearCase versions with Jazz work items
- (New!) Jazz work item stands in for change-set in base ClearCase
- (New!) Auto-associates base ClearCase checkouts with current work item
- (New!) Supports dynamic views via ClearCase SCM Adapter
 - Like CCRC, SCM adapter is also Eclipsed base
 - SCM adapter supports dynamic views while CCRC currently does not

ClearCase Bridge user interface



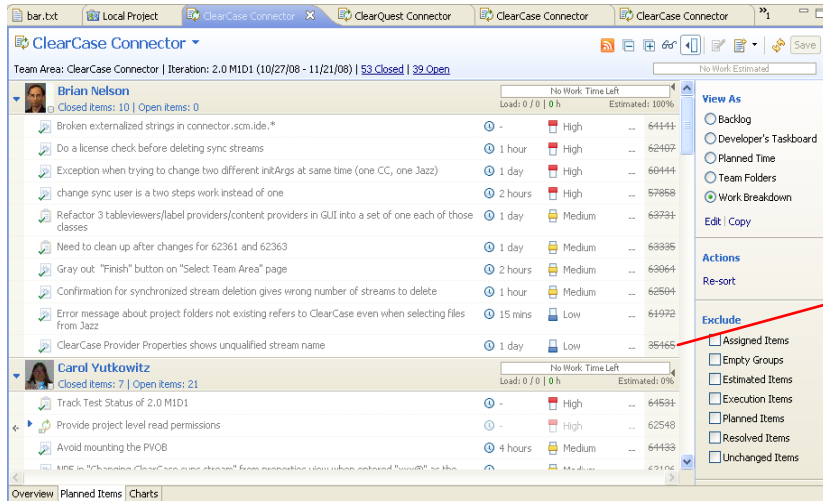
- Context menus on objects in ClearCase Unified Client are enhanced to allow ClearCase users to create and manage associations between ClearCase UCM activities (or base ClearCase versions) and Jazz work items.

ClearCase Bridge user interface

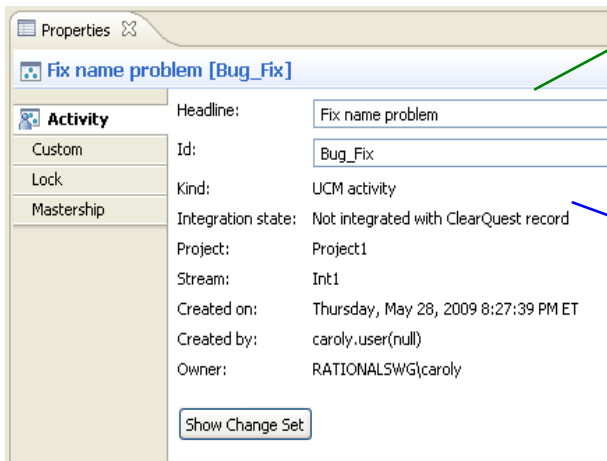
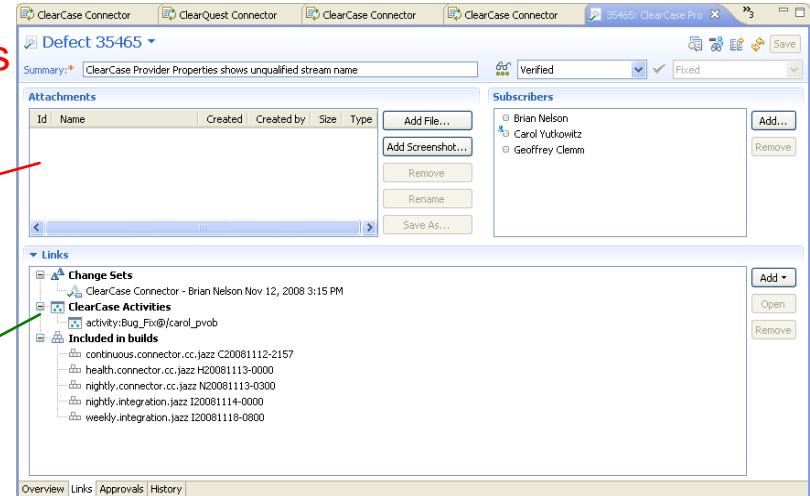


- References to ClearCase objects will also show up on the Links tab of their associated work items
- Opening a ClearCase link from a work item editor will show the ClearCase Unified Client activity / change-set properties
- Once a link has been created, it may be used in queries, dashboards, etc., just like any other work item link type.
- The activity properties display now also includes a button to show the activity change set.

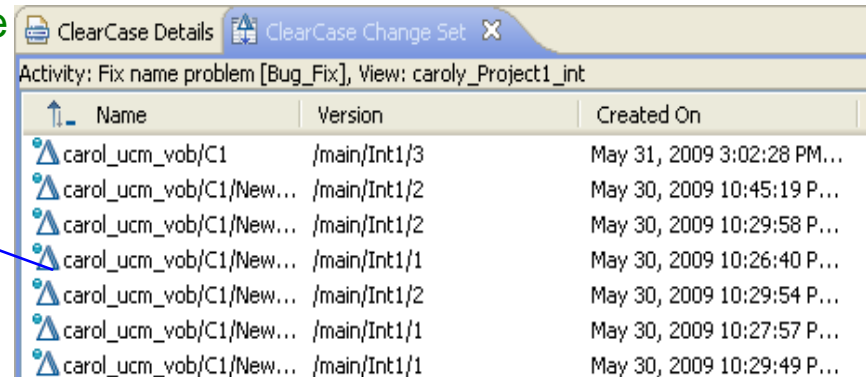
Linkage between plan items, work items and code



Agile Plan links to Work Items

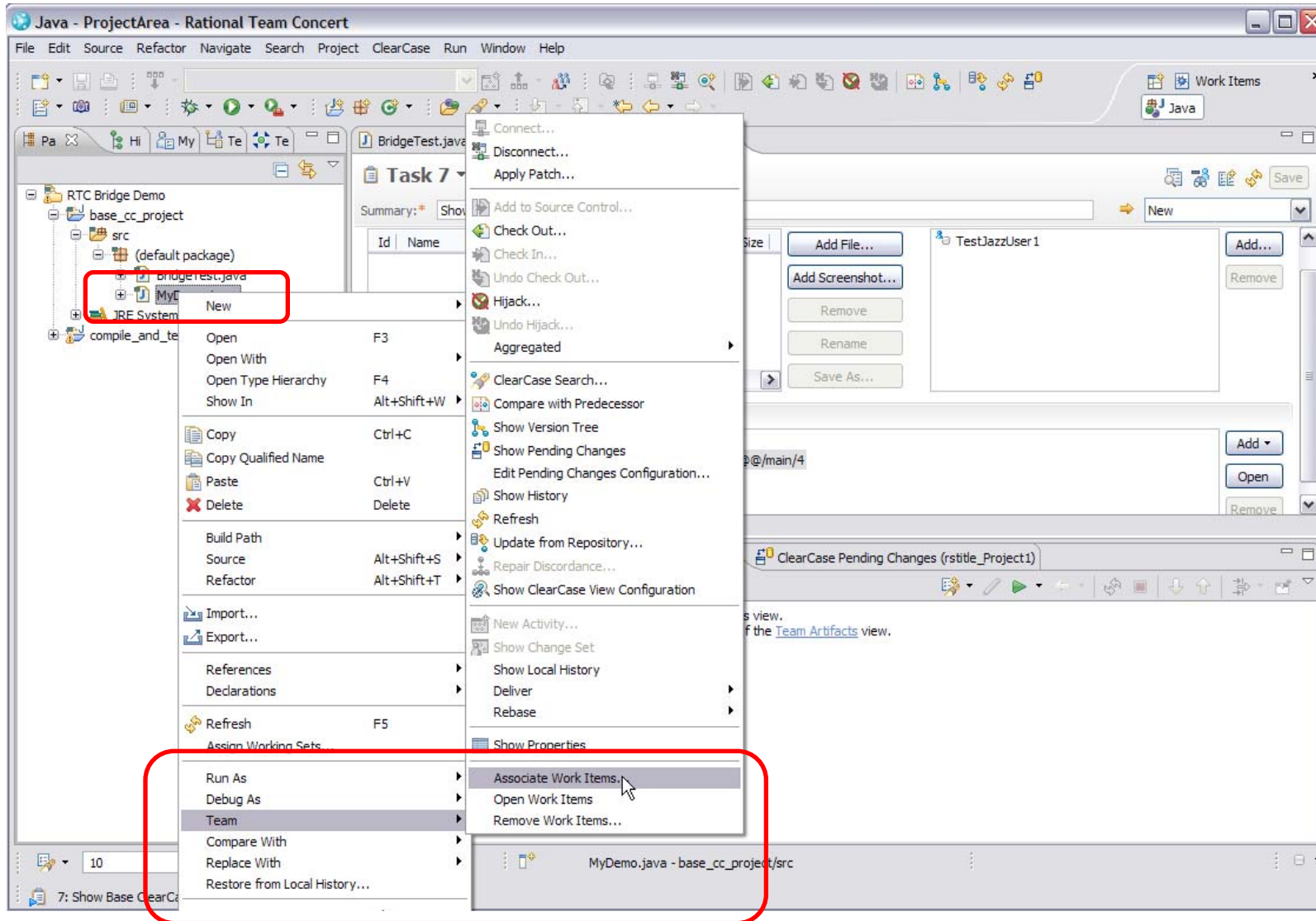


Work Items link to ClearCase activities



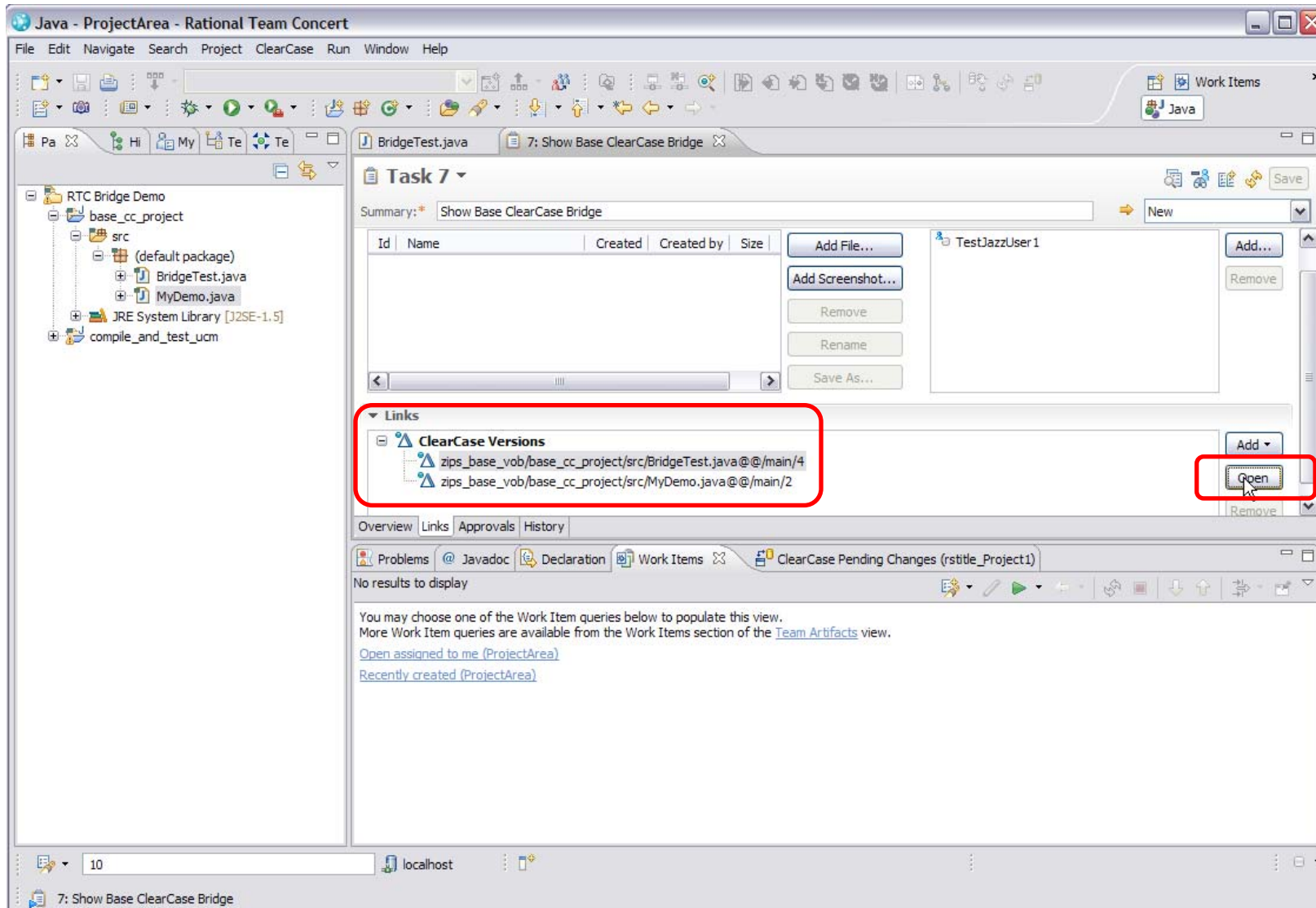
ClearCase activities link to change-sets

Base CC: association from Package Explorer (or CC History)

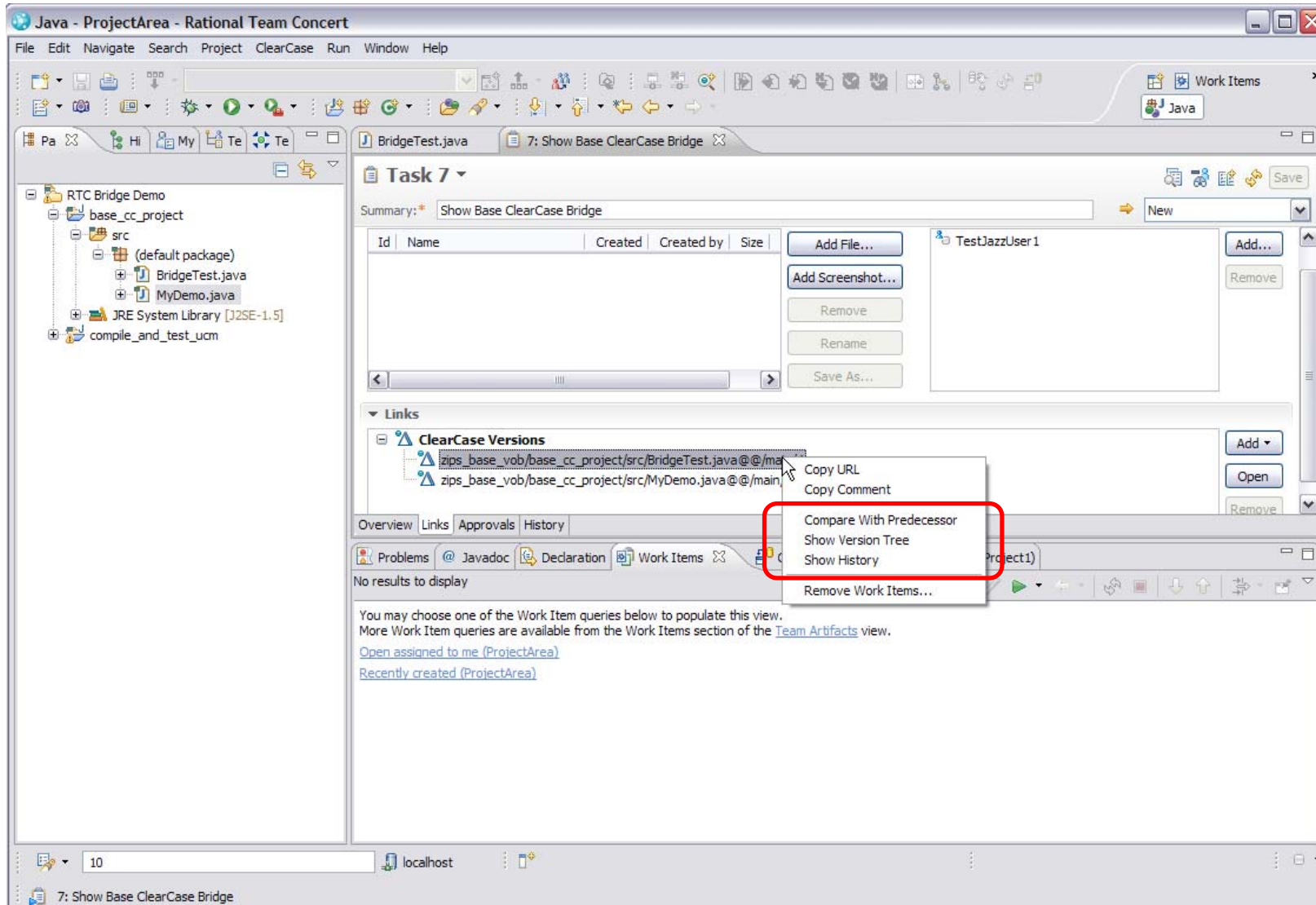


Base CC: ClearCase Versions links show up in work item

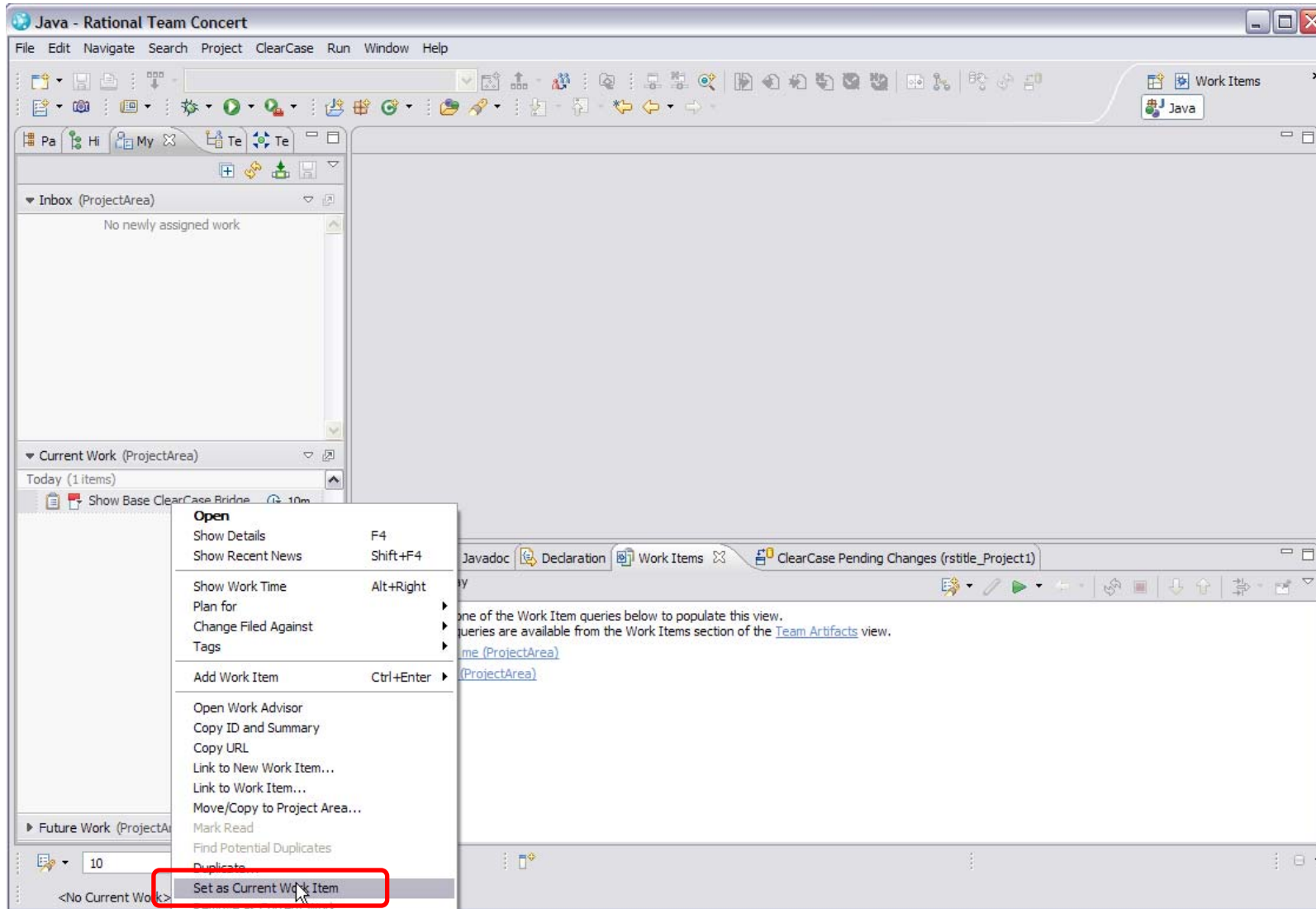
Base CC: **Open** opens source content for version



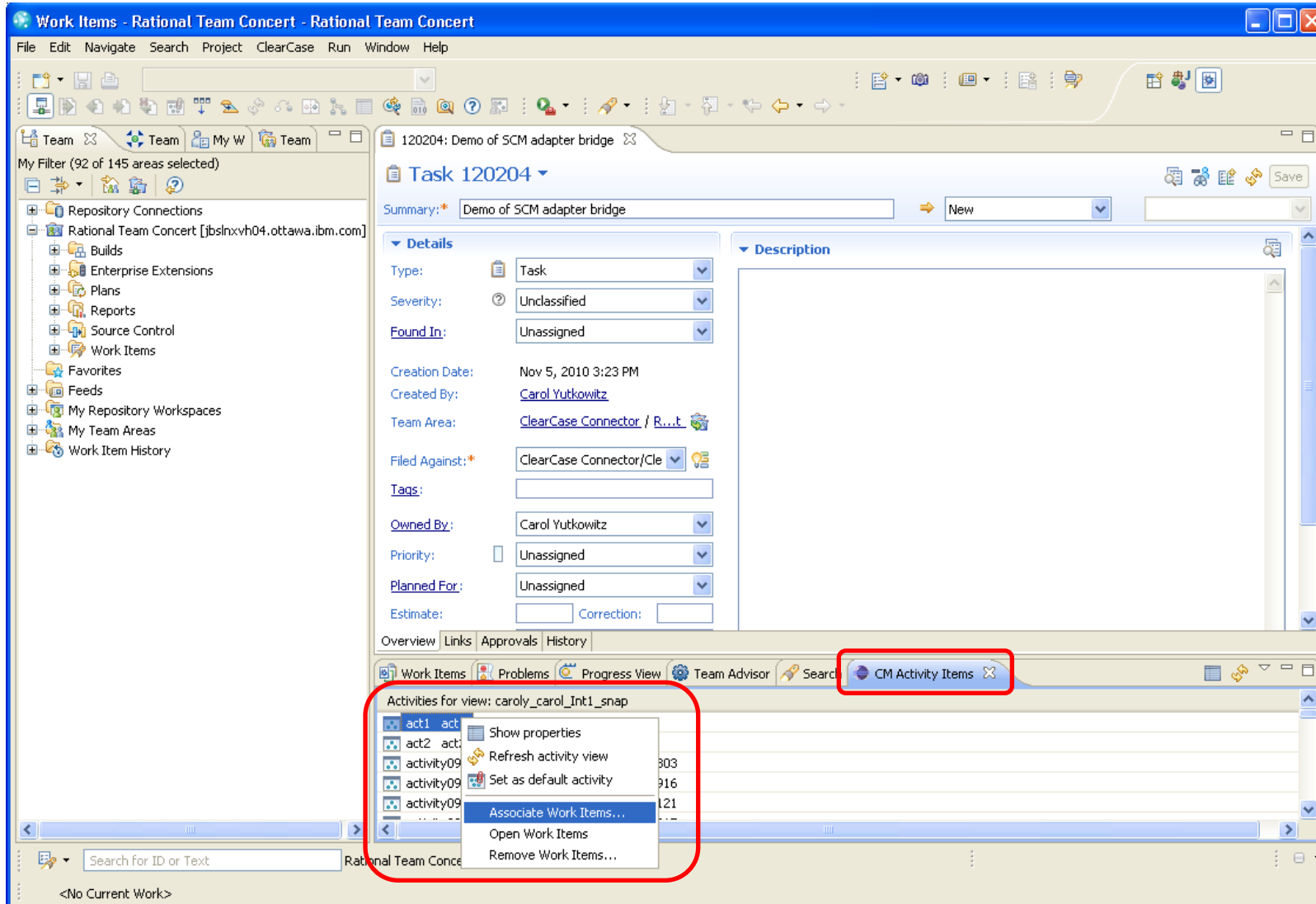
Base CC: can do ClearCase operations from link context menu



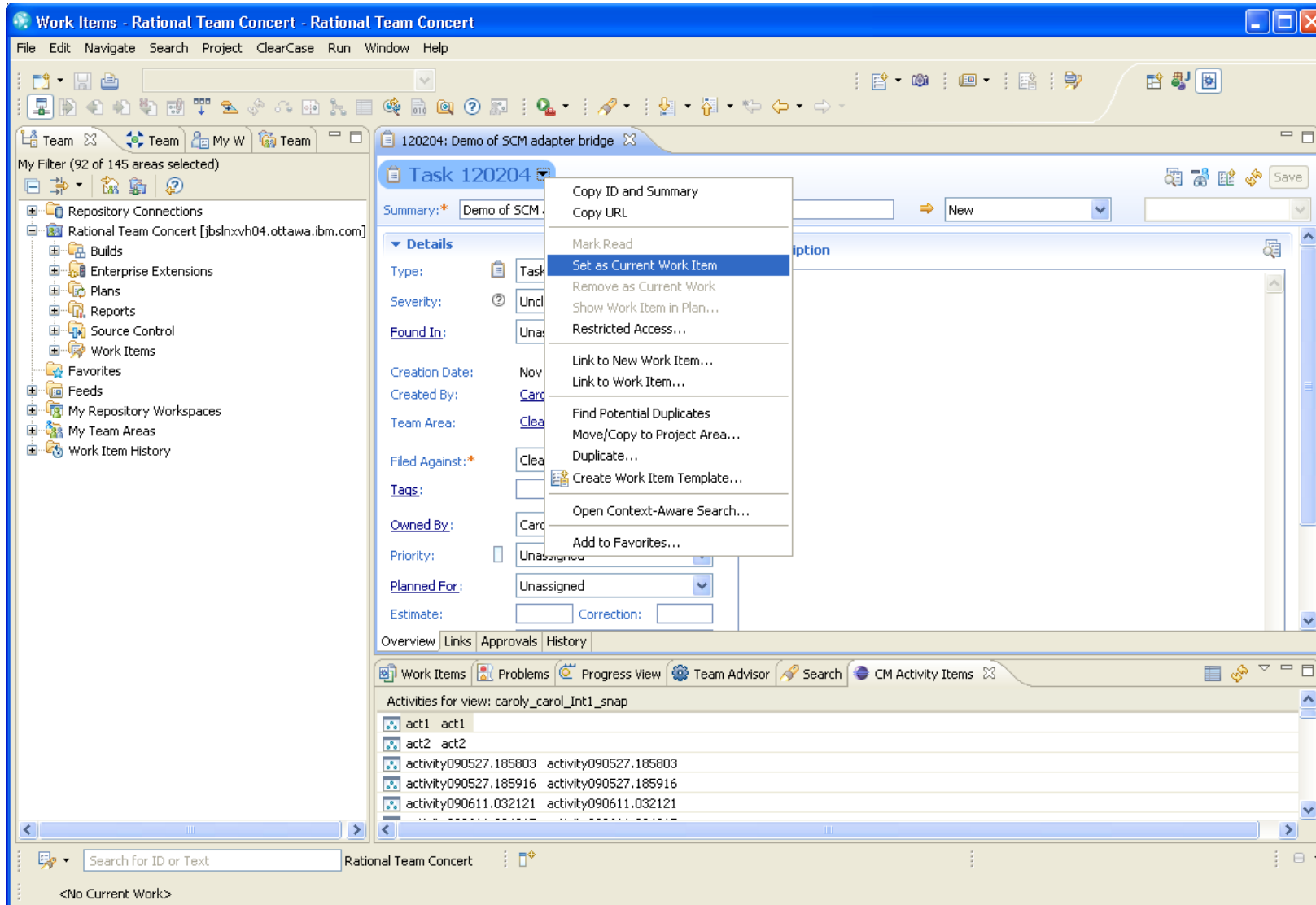
Base CC: association via current work item



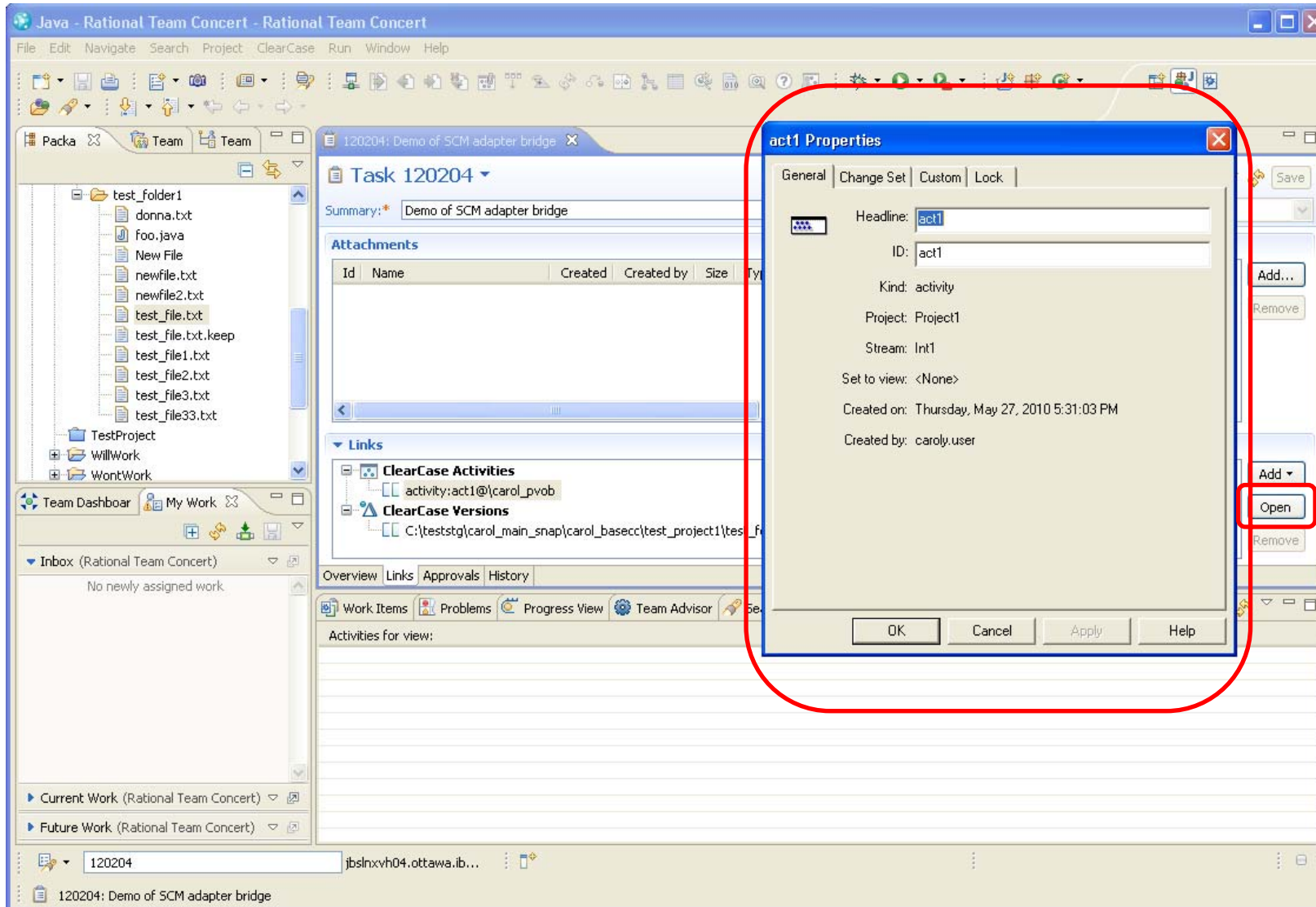
SCM adapter: new activities view and context menu items



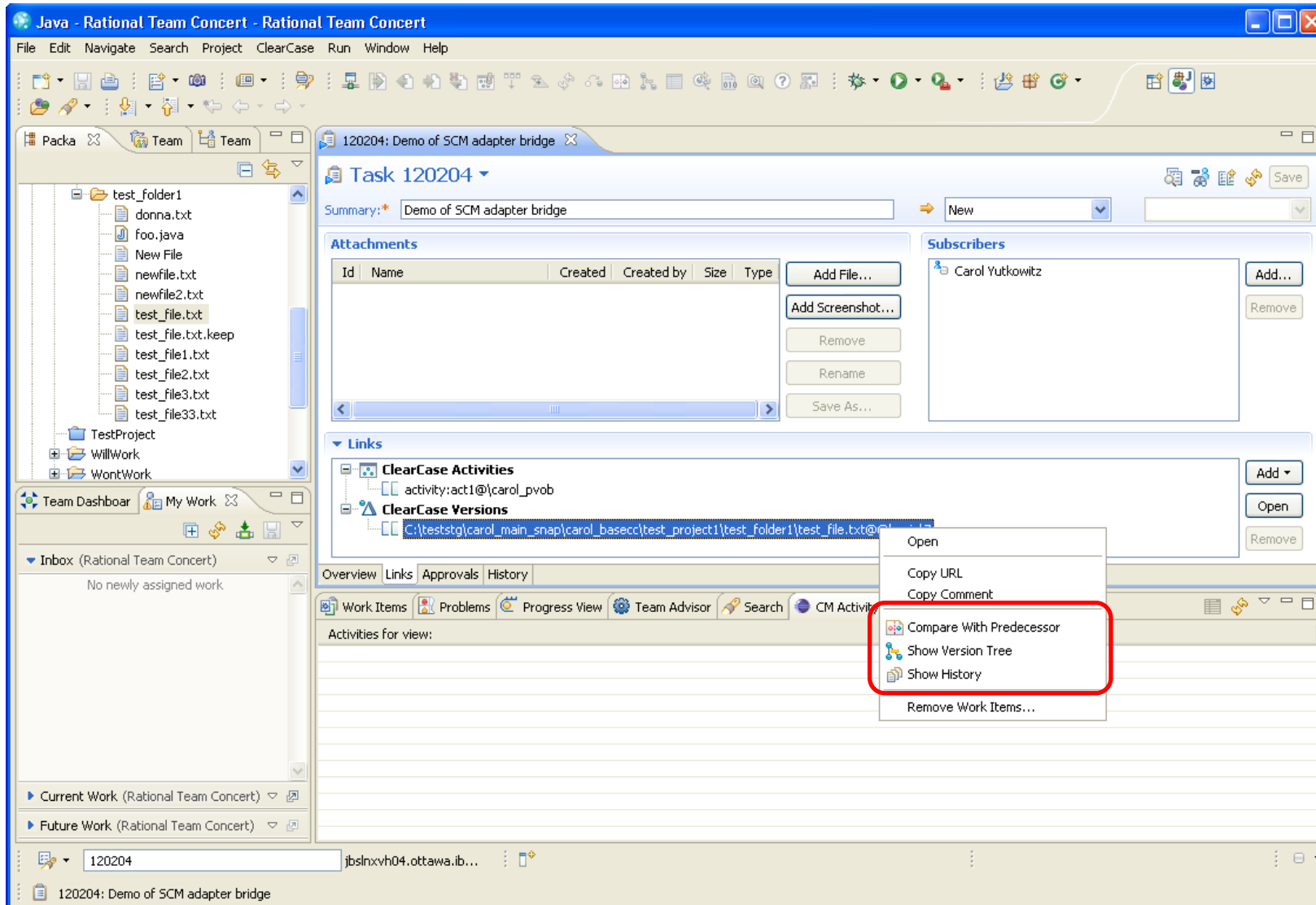
SCM adapter: base CC: both automatic and manual associations



SCM adapter: Open brings up native activity properties UI



SCM adapter: can do base CC operations from context menu



ClearCase Synchronizer / Importer

Synchronizer / Importer features

- It's not Multisite!
 - Not full version data and metadata synchronization/Import
- You don't have to synchronize the data you don't need
 - One-to-one stream synchronization for UCM, or one branch to one stream synchronization for base ClearCase
 - Pick folders (or files) to synchronize
- Scheduled synchronization, or synchronize when requested
- Importer allows historical data to be brought over
 - All or selected baselines for UCM
 - Ordered label types for base ClearCase
- Synchronizer resolves conflicts by Jazz/SCM merge tool

What's new in the ClearCase Synchronizer in RTC 3.0?

- Big performance improvements in import (some cases 3-8x faster)
- New command-line commands
 - ccc list syncEngine: List active sync engine processes on Linux
 - ccc add syncRoot: Add synchronization roots (new files and folders to synchronize)
- ClearCase Importer now creates baselines; synchronizer does not
- Tracing of ClearCase trigger execution
- Improved progress reporting in synchronization logs
- Other enhancements; see New and Noteworthy from previous 3.0 milestones

Tips and tricks for setting up synchronization

First, make sure the synchronizer is right for you

- Only use the synchronizer if some teams will be using the Source Control built in to Rational Team Concert
- Users who work exclusively in Rational Team Concert do not need to synchronize
- Don't choose the synchronizer just because you are using dynamic views
 - ClearCase and Rational Team Concert can coexist "side by side" (some teams at IBM use the products this way)
 - Many benefits in Rational Team Concert don't require linkage to ClearCase
 - Can consider incremental adoption of the bridge
- Summary: don't pay the overhead of synchronizing data if you don't need the data in two places

If deploying the synchronizer makes sense...

- Select the teams that will use Rational Team Concert
 - Synchronize the result of a component team's work rather than splitting up the team
- Set up the synchronization host/engine (ideally, on the VOB server)
- Test your configuration before adding all of the synchronization roots
 - Start out with just one or a few files
 - Then incrementally add roots

- Summary: plan carefully how you will divide the effort between Rational Team Concert and ClearCase and test your setup before diving in

Avoid large and expensive synchronizations that you don't need

- Don't choose as synchronization roots whole VOBs, whole components
 - Take advantage of the synchronizer's ability to do "partial VOB replication"
 - Don't synchronize more data than you need to
- Don't duplicate every branch and stream
 - E.g. if you're synchronizing so you can do release engineering from ClearCase, only synchronize the "release" branch / stream
- Consider whether files will be changing a lot on both sides
 - Speed of initial import is proportional to the number of files
 - Speed of synchronization after the initial import is proportional to the number of files with changes to synchronize
- Summary: synchronization of a large amount of data necessarily takes time. Plan to synchronize only what you need to have in two places

RTC next release and ahead...

- Bridge
 - Seamless integration with ClearCase “Next” release...
 - Integration with Unified ClearCase Client that supports dynamic view as well as web view!
 - ClearCase History view enhancement to show RTC work item icon over versions
 - ...
- Synchronizer/Importer
 - More performance improvements on initial import
 - Scalability improvements – 10K files, 50K files, 100K files importing!
 - Visual Studio project file conversion
 - ...

Tell us what you would like to see!

References

- Videos on jazz.net
 - All videos: <http://jazz.net/library/#type=video>
 - ClearCase Bridge video: <http://jazz.net/library/video/597>
- Rational Team Concert home page: <https://jazz.net/projects/rational-team-concert/>

- Articles
 - Deploying RTC in a ClearCase/ClearQuest environment:
 - <http://jazz.net/library/article/581>
 - <http://jazz.net/library/article/550>
 - Using the ClearCase Importer: <http://jazz.net/library/article/50>
 - How to consume the Rational Team Concert change management services:
 - <http://jazz.net/library/article/352>

- ClearCase Connector help on jazz.net (3.0)
 - <http://publib.boulder.ibm.com/infocenter/clmhelp/v3r0/index.jsp>

- Tech Tips on jazz.net: <http://jazz.net/library/#type=techtip>

Questions



www.ibm/software/rational

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