



Heterogeneous Development using Rational® Team Concert™ Eclipse and Rational® Team Concert™ For Microsoft® Visual Studio™ IDE

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Rational. software

CRM27

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- What is the Rational® Team Concert™ For Microsoft® Visual Studio™ IDE?
- A quick tour
- Self-hosting: **Real teams, Real insights**
- Homogeneity in heterogeneity
 - ▶ Any resemblance to the RTC Eclipse Client is purely intentional 😊

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What is RTC for Microsoft® Visual Studio™ IDE?

Team Collaboration for .NET Developers

- A Team Collaboration environment for .NET developers.
- Provide source control, work item tracking, build, process & collaboration services
- leverage and extend the Jazz Platform



A Visual Studio Client Integration

A First Class Integration with Microsoft Visual Studio
to enhance developer productivity



Innovative Software Engineering

Heterogeneity

- A Common Team Collaboration Server infrastructure based on Jazz.
- A Visual Studio Client for .NET developers
- An Eclipse Client for Java developers
- Powered by Jazz



Vision

Brings the Jazz vision to .NET developers :
The value and experience that future Rational products can bring to software and systems delivery teams

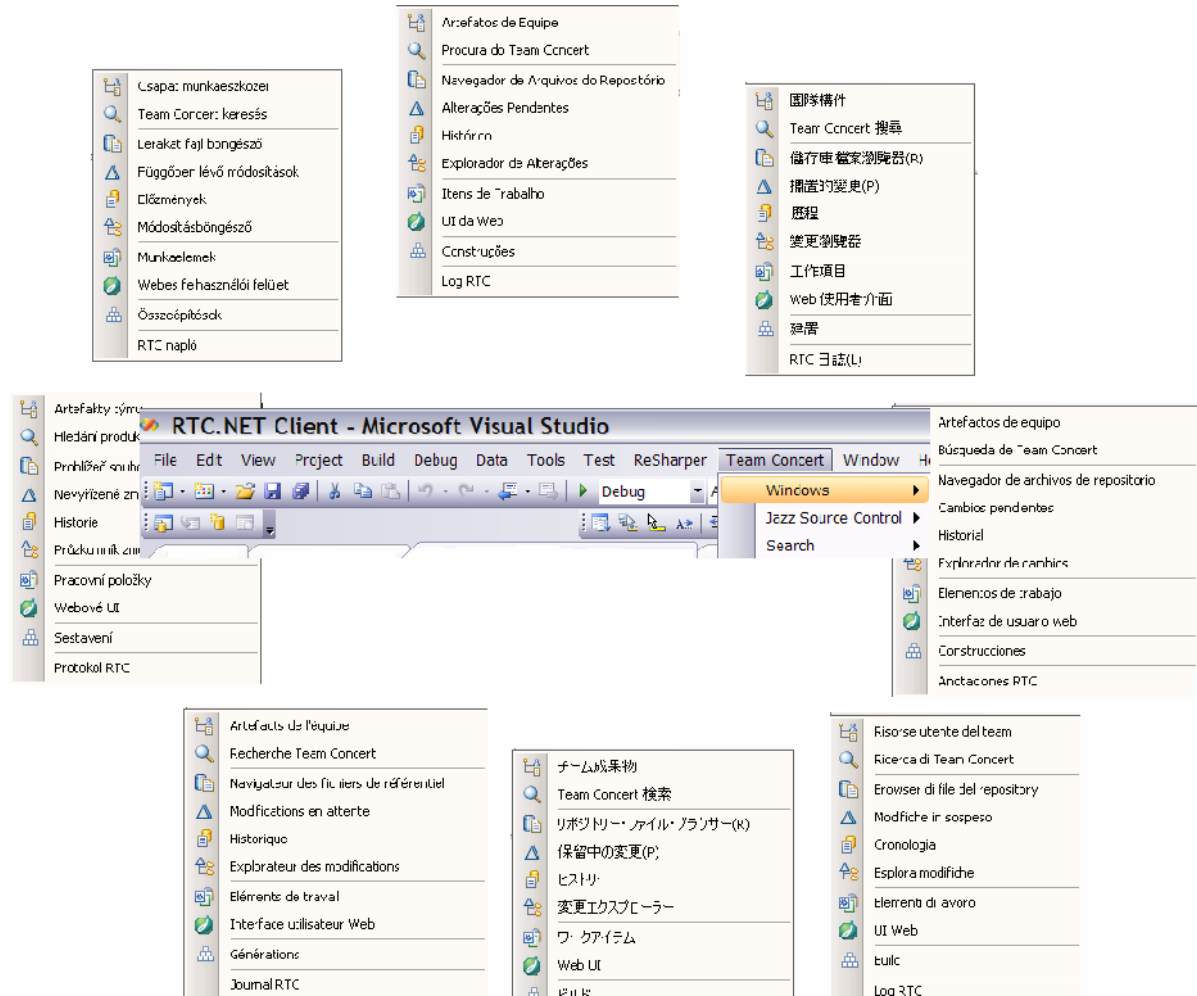
Rational.

RTC for Microsoft® Visual Studio™ IDE

- **Natively implemented in Visual Studio**
 - ▶ **A first class integration into Visual Studio**
- An extension of the Visual Studio IDE
 - ▶ Integrates into Solution Explorer, Options pages, Toolbars, Menus, Tool Windows
 - ▶ Integrates into Visual Studio as a source control provider
 - ▶ Integrated Help
- Supports Visual Studio 2005 and 2008
- Developed using WPF, the latest Microsoft UI technology
- **The first Jazz client written in C#**
- Follows Visual Studio international settings

Internationalization

- Available in all group 1 languages.



Installs and Downloads

- Installable via IBM Installation Manager
- Downloadable from jazz.net
 - ▶ <https://jazz.net/downloads/rational-team-concert/milestones/2.0RC2>
 - ▶ 1.0.1.1, weekly integration builds, betas...

Focus

- Caters to teams developing in .NET
- Currently provides
 - ▶ SCM integration with VS.NET artifacts
 - ▶ Work Items integration
 - ▶ Build Integration
- **Emphasis on Developer use cases**
- Long term goals
 - ▶ Instant messaging
 - ▶ Iteration planning
 - ▶ Client side Advisors
- **Supports heterogeneous teams in conjunction with RTC Eclipse**

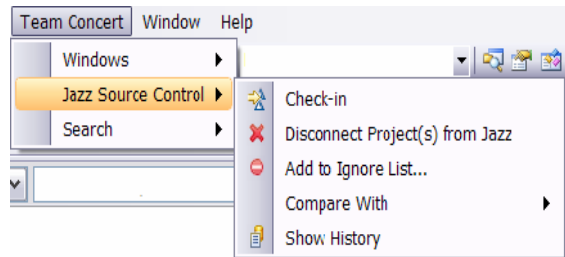
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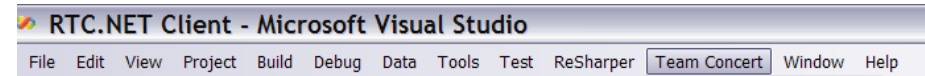
RTC Visual Studio™ at a glance

Visual Studio IDE extended with Jazz/RTC capabilities for

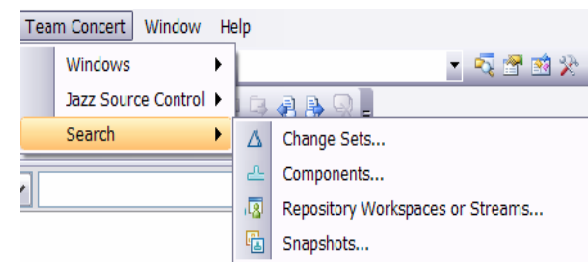
- ▶ Artifacts management
 - Repository connections, Project areas, streams, workspaces, components
- ▶ Work items management
- ▶ Build management



- ▶ Repository search
 - Change sets, components, streams and workspaces, snapshots



- ▶ Source control management



RTC Visual Studio™ at a glance

The screenshot displays the Microsoft Visual Studio IDE with the following components:

- Code Editor:** Shows the source code for `ClassLibrary1.Foo`:

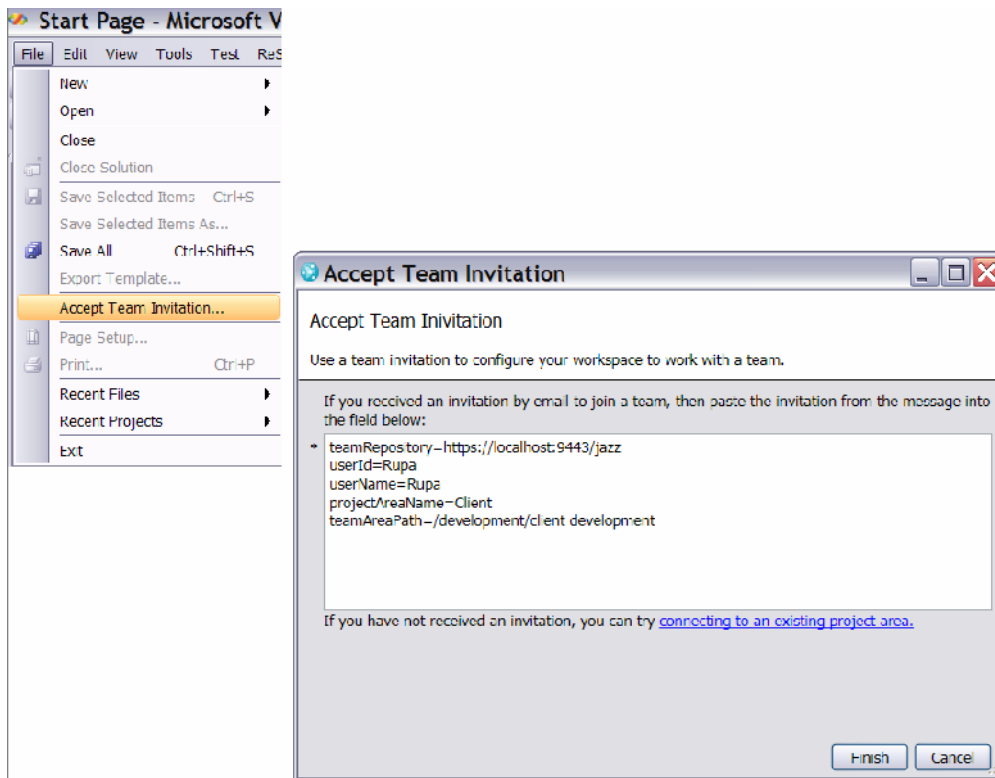

```
namespace ClassLibrary1
{
    public class Foo
    {
        public int count;
    }
}
```
- Solution Explorer:** Shows the project structure for 'ClassLibrary1' (1 project), including 'Properties', 'AssemblyInfo.cs', 'References', and 'Class1.cs'. A context menu is open over 'Class1.cs' with options: Open, Check-in, Disconnect Project(s) from Jazz, Add to Ignore List..., and Compare With.
- Team Artifacts:** Displays a tree view of repository connections and builds, including 'TestAreaFor20RC1 Team build'.
- Team Concert Search - Snapshots:** A table listing snapshots with columns for Date Created and Name.

Date Created	Name
5/14/2009 8:39 PM	BuildDefForClientUITeam_20090514-2039
5/13/2009 2:27 PM	TestAreaFor20RC1 Team build_20090513-1427
5/13/2009 2:46 PM	TestAreaFor20RC1 Team build_20090513-1445
5/13/2009 2:47 PM	TestAreaFor20RC1 Team build_20090513-1447
5/13/2009 2:48 PM	TestAreaFor20RC1 Team build_20090513-1448
5/13/2009 3:09 PM	TestAreaFor20RC1 Team build_20090513-1509
5/13/2009 3:10 PM	TestAreaFor20RC1 Team build_20090513-1510
- Change Explorer:** Shows a comparison view for 'TestAreaFor20RC1 Team build_20090513-1427' with components like 'Only In TestAreaFor20RC1 Team build_20090513-1427' and 'Build'.
- Builds:** A table showing build status and progress.

Build Status	Build State	Label	Progress
✓	Build	20090513-1455	Completed
✓	Build	20090513-1509	Completed
✓	Build	20090513-1509	Completed
✗	Build	20090513-1445	Completed
✗	Build	20090513-1427	Completed
✓	Build	20090513-1448	Completed
- Pending Changes:** Shows 1 unresolved and 1 outgoing change set for 'Test Workspace 3'.
- Work Items:** Shows 7 work items, including '10: Share code with Jazz Source Control - Share projects'.
- History:** Shows SCM history for 'Build Workspace' with entries like '<No Comment>', '27: ctc changes', and 'Move folder 'Folder1' from component 'TestAreaFor20RC1'.

Getting initiated is a breeze...

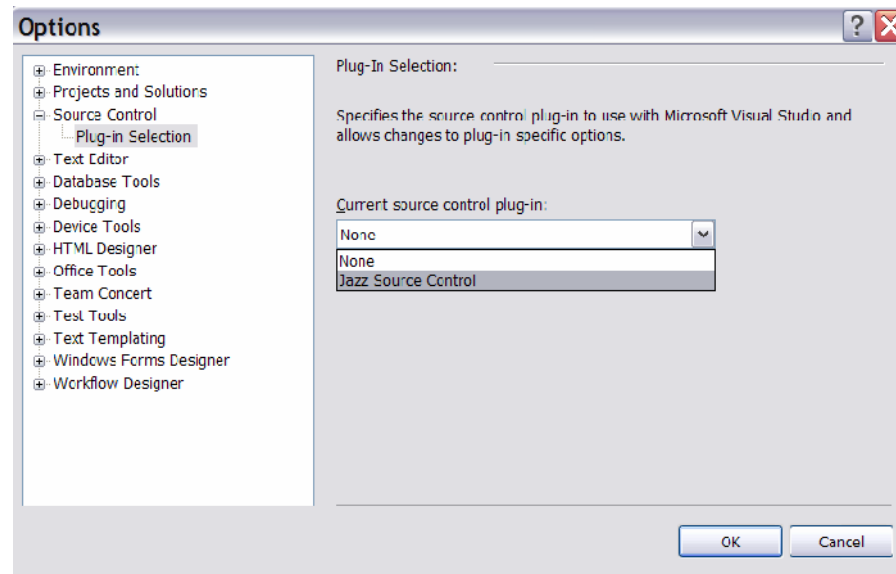
When your team lead adds you to a team, you get an email.



All you need to do is to paste the contents of the mail into the Accept Team Invitation dialog box.

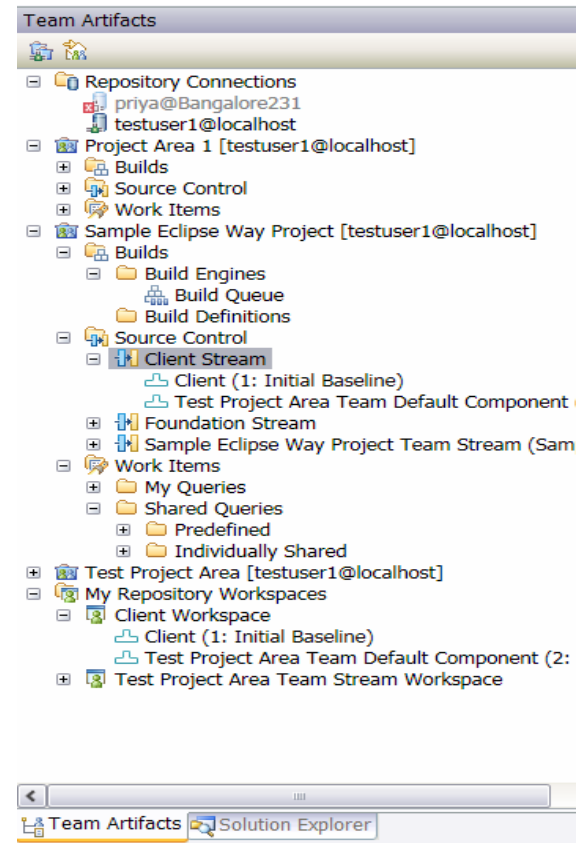
Activating Jazz Source Control

- Once you choose Jazz as your source control provider
 - ▶ A Source Control node will appear under each project area that you've connected to
 - ▶ Expanding Source Control will show you your team's streams and components
 - ▶ My Repository Workspaces will be populated with any existing repository workspaces that you may have.



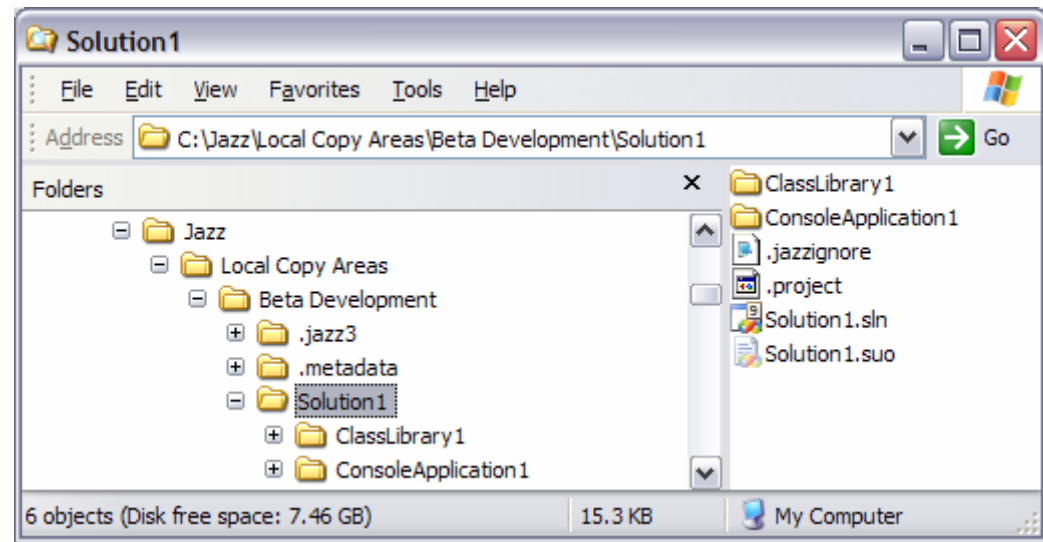
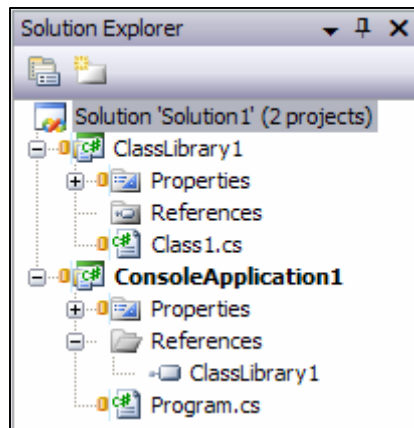
Exploring your Repository : Team Artifacts

- The Team Artifacts Tool Window is your window into the jazz repository
- Use the Team Artifacts Window to
 - ▶ Connect to Project Areas
 - ▶ Create and manage
 - Streams
 - Components
 - Workspaces
 - Snapshots
 - Work Items
 - Queries
 - Build Requests



Sharing a solution

- To start checking in your sources to the repository, you need to share your solution
- A solution is shared into a Jazz component
 - ▶ The Microsoft recommended way is to have the physical file layout follow the solution structure
 - The solution file sits in a root folder
 - The projects are in sub-folders



Organizing your source code

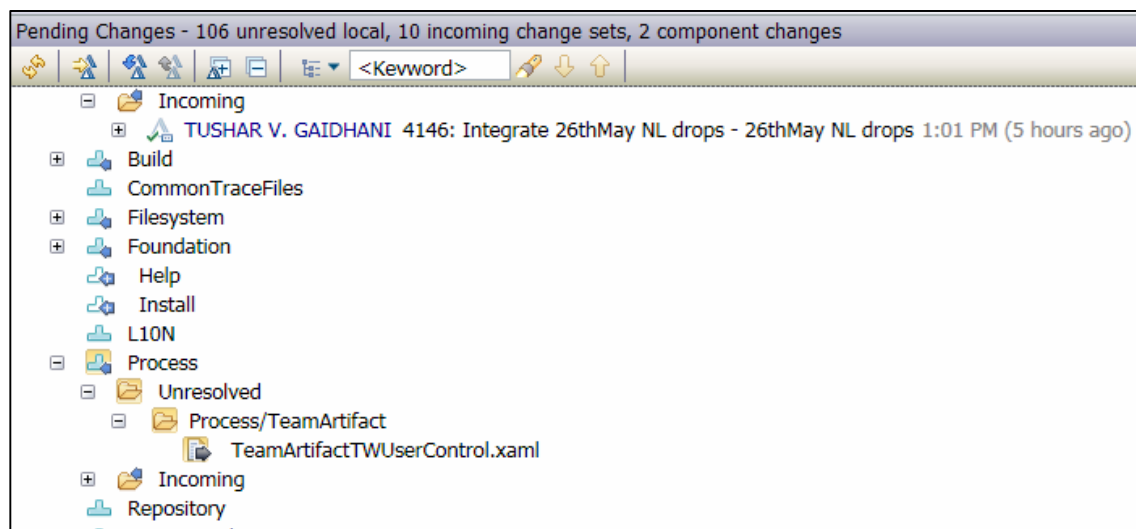
- We support and recommend the best practices outlined by Microsoft team development literature
 - ▶ <http://msdn.microsoft.com/en-us/library/ms998208.aspx>
- Use a single jazz component/solution in simple cases
 - ▶ Does not scale well
 - ▶ Project dependencies result in frequent rebuilds of multiple projects event for minor changes
- Use a partitioned solution approach for scalable component based development

Multi-component development with Partitioned Solutions

- Each component corresponds to a solution.
 - ▶ A project may be included in multiple solutions
 - ▶ A project is created in it's "home" solution
 - ▶ And referenced by dependent components/projects in other solutions, via project references.
- Separate solution files let you work in smaller sub-systems fairly independently.
 - ▶ Each sub-system corresponds to a jazz component.
 - Scalable
 - ▶ Rebuilds less frequently
- Having project references ensures that you always have the latest sources for components you depend on.
- You can have a master solution for system-wide builds.
- **We followed the partitioned solution approach for the RTC Client for Microsoft Visual Studio.**

Keeping in sync: Pending Changes

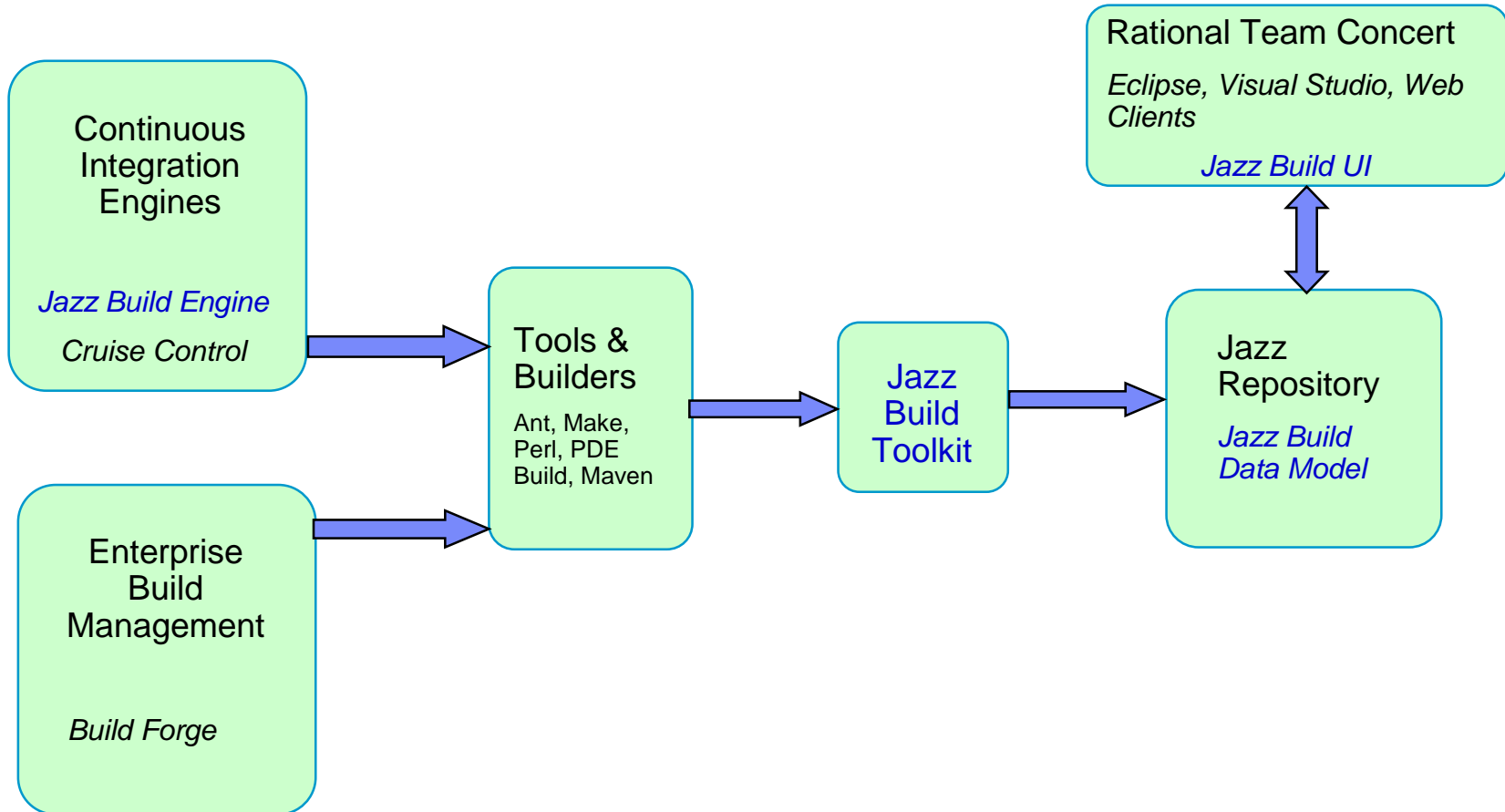
- Your window to your team's source code changes
- Lets you check in, deliver, suspend, resume, discard, reverse change sets
 - ▶ Resolve merge conflicts
 - ▶ Create snapshots and baselines



Building your projects/solutions

- Jazz Builds are now accessible from Visual Studio IDE
- Developers can now do the following
 - ▶ Request Builds
 - ▶ Request Personal Builds
 - ▶ Monitor Build Activity
 - ▶ See Details of Individual Build and download associated artifacts
 - ▶ Create a repository workspace or stream from a given build

The Jazz Build Environment



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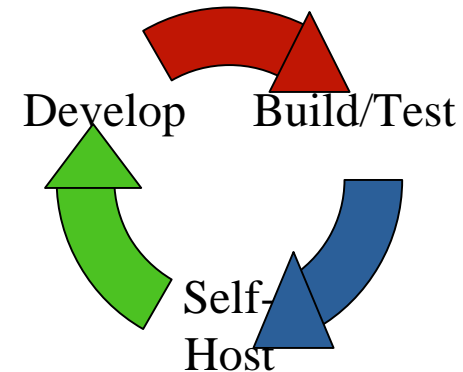
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Self-hosting in RTC for Microsoft® Visual Studio™ IDE

- We've been self-hosting in the RTC client in Visual Studio since October 2008
 - ▶ We started with
 - A plain vanilla Visual Studio IDE for development and
 - The RTC Eclipse Client for our Jazz Needs
 - ▶ As we integrated SCM, Work Items, Builds into Visual Studio we went to the Eclipse Client less and less
 - ▶ **Since March 2009, we exclusively use the RTC VS Client for our day to day development**
- **Real teams, Real Insights, Real Results!**

Self-hosting (contd.)

- At the completion of each iteration, we self-host.
- Our continuous and integration builds are Jazz builds
- We've integrated our builds with Microsoft's unit testing framework
 - ▶ Each build runs through all the unit tests
- We follow the develop-build-test-selfhost-develop cycle



Real teams, Real Insights

- As we developed using the RTC Client for Visual Studio, we added features
 - ▶ Based on our self-hosting experiences
 - ▶ Improving the user experience for the Visual Studio developer

When we faced the music...

- Visual studio specific processing for SCM operations
 - ▶ Warnings for incomplete change set check-ins, to avoid build breaks
 - For example if you're checking in a new file, but forgot the associated project
 - ▶ Automatic reloading of multiple project files while accepting changes from other users
 - ▶ Filtering in Pending Changes: searching for specific files in your change sets or the change sets of your team
 - ▶ Project can be part of multiple solutions, but physically associated with one.
 - We let you share it from any location and also detect and warn you about it.

And...

- Background execution of long repository operations
 - ▶ enabling you to continue your work in Visual Studio in the meantime
- Support for code refactoring
 - ▶ Renaming a file preserves its history in the repository
 - ▶ Moving file(s) within a project preserves history as well
 - ▶ Moving top level folders across components preserves history
- Support for compare/merge
 - ▶ Automatic merge in most cases
 - ▶ UI-aided conflict resolutions

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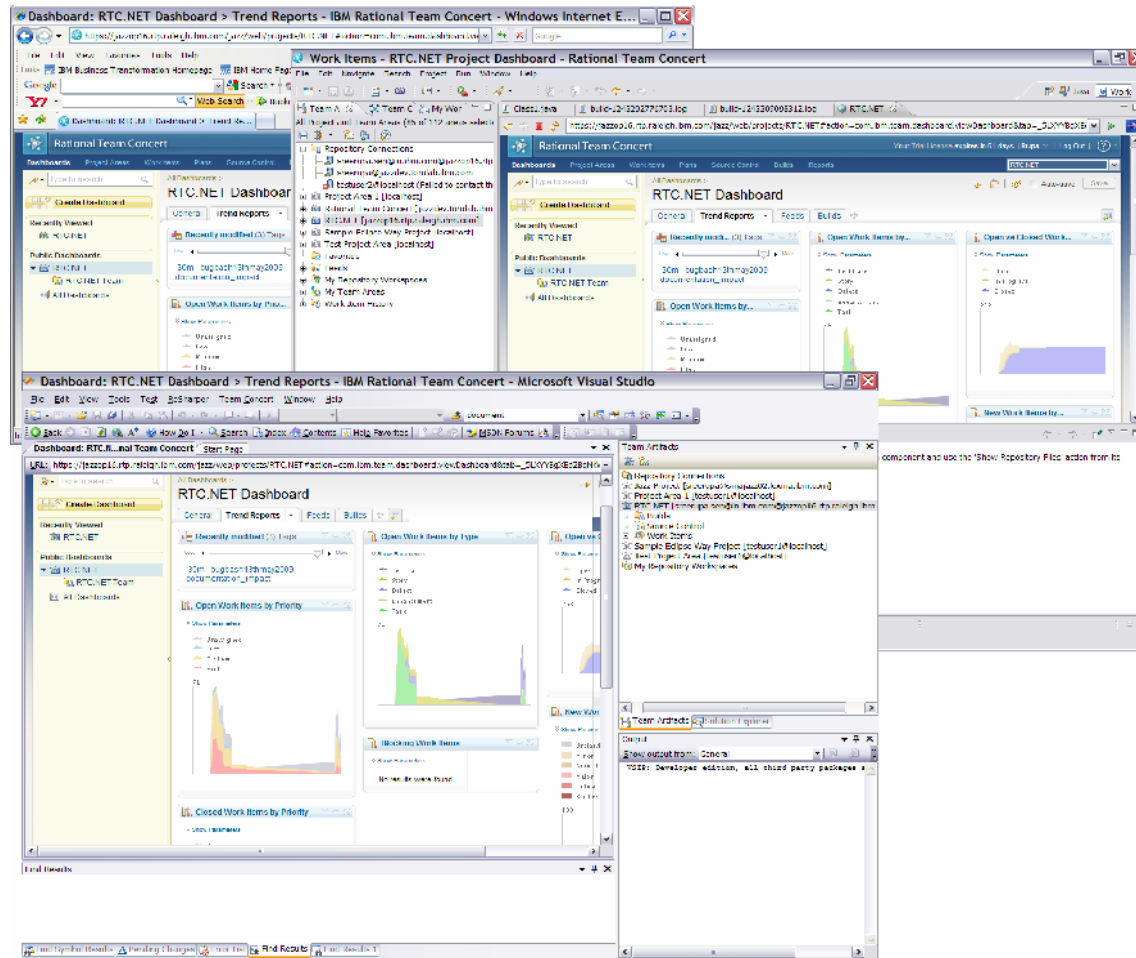
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Teams not restricted to

- Single Physical location
- Single Operating System
- Single Platform
- Single IDE
- Single Programming language

Homogeneity in Heterogeneous Teams

- One repository for all your artifacts
- Which means you share
 - ▶ Same Project and Team
 - ▶ Same Dashboard



Our commitment

- People will work in the area of technology best suited to the requirements...

... Rather than being restricted by their infrastructure.

- RTC clients will preserve the flavor of your favorite IDE
 - ▶ They are non-intrusive.
 - ▶ They're natively implemented for Eclipse and for Microsoft Visual Studio.
 - ▶ They are first class integrations into the IDEs that they extend.
- Barring environment specific needs, the over all look and feel will be homogeneous across RTC clients in different IDEs
 - ▶ Should you switch from one IDE to the other, you will not get lost

The demo scenario

- Network Time Protocol
 - ▶ Server is in Java
 - ▶ Client is in C#

- Like any project
 - ▶ Defects move across components
 - ▶ There are lots of discussions between team members
 - ▶ The same process holds: same approval rules, same delivery rules, same permissions...

Demo

Coming Soon: Feeds

Edit View Debug Tools Test ReSharper Team Concert Window Help
 Start Page Feeds - Team Concert ManagedThreadId

My Teams in RTC.NET

Showing 35 of 35 Items | [Expand All](#)

Today (1 items found)

- [2] Clear history page in Tools->Options->TeamConcert is unavailable in installed RTC client (4151) 6:25 AM (2 hours ago)

Sunday, May 31, 2009 6:25 AM

Sandeep Kohli changed:

Summary	Clear history page in Tools->Options->TeamConcert is ent availableunavailable in installed RTC client
---------	--

Friday, May 29, 2009 10:45 PM

Lalitha K Kishore changed:

Status	New → Resolved
Resolution	Unresolved → Fixed
Resolved By	Unassigned → Lalitha K Kishore

Yesterday (6 items found)

- Add a General options page for Team Concert with a Clear Preferences option (3971) 11:36 AM
- [2] Requester name is shown as "ADMIN" in the build result page (4129) 11:34 AM
- [3] Fetching build results taking a lot of time (4130) 11:34 AM
- Workspace/stream picker does not return sorted data (4115) 11:34 AM
- [7] Undo from pending changes does not work at file level (4176) 2:31 AM

[Show All Items...](#)

Earlier this Week (28 items found)

Search Text

Exclude

 News Older one day
 Read News

Team Artifacts

- Repository Connections
 - sandeep.kohli@in.ibm.com@jazzop16.rtp.raleigh
- RTC.NET [sandeep.kohli@in.ibm.com@jazzop16.rtp.raleigh]
 - Builds
 - Build Engines
 - Build Definitions
 - 1.0.1.1 integration.rtcnet
 - continuous.rtcnet
 - imtest.rtcnet
 - integration.rtcnet
 - jlemieux.personal
 - L10N.test.integration.rtcnet
 - L10N.test.rtcnet
 - UIAutomation
 - Source Control
 - Work Items
 - Feeds
 - My Teams in RTC.NET (30) [jazzop16.rtp.raleigh]**
 - My Work Item Changes (72) [jazzop16.rtp.raleigh]
 - Build Events for My Teams (43) [jazzop16.rtp.raleigh]
 - My Repository Workspaces

Error List: 0 Errors, 0 Warnings, 0 Messages
 Properties | Error List | Pending Changes | Output | Find Results 1 | Team Artifacts | Solution Explorer | Class View

My Teams in RTC.NET

Properties

General

Link:

Title:

Settings

Update feed automatically

Update interval in seconds:

Reload feed automatically on startup

Limit

Limit number of items

Maximum number of items:

Limit age of items

Days to keep news items:

Ok Cancel

Questions

Thank YOU

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