

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

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Contents

- 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 ☺



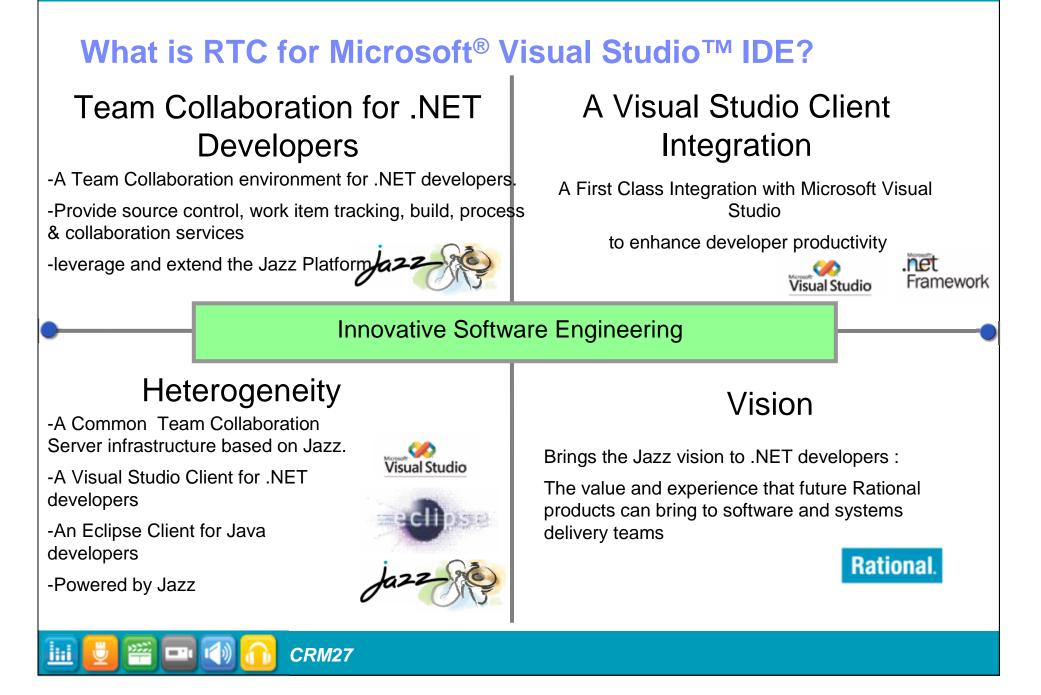


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RTC for Microsoft[®] Visual Studio[™] IDE

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.

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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

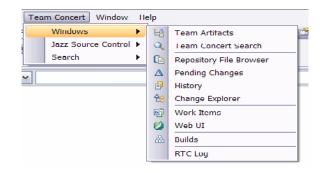
- Artifacts management
 - Repository connections, Project areas, streams, workspaces, components
- Work items management
- Build management

Team Concert Window He	elp	
Windows >	1	👻 🔩 🚰 🐋 1
Jazz Source Control 🕨	**	Check-in
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	•	Add to Ignore List
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	1	Show History

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

RTC.NET Client - Microsoft Visual Studio

File Edit View Project Build Debug Data Tools Test ReSharper Team Concert Window Help



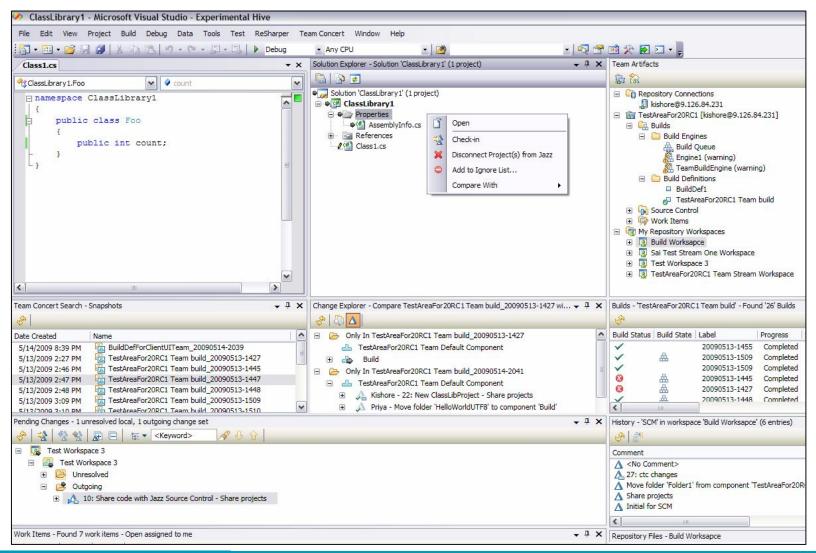
Source control management







RTC Visual Studio[™] at a glance

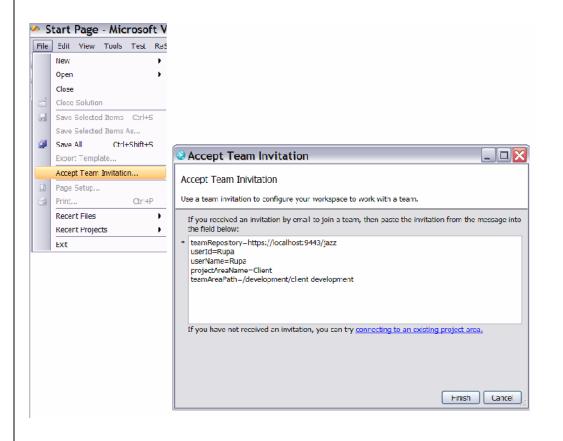






Getting initiated is a breeze...

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

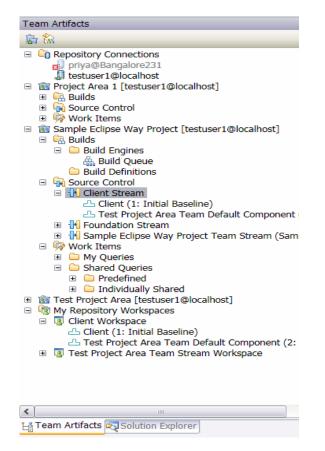
- Once you choose Jazz as your source control provider
 - A Source Control node will appear under each project area that you've connected to
 - Expanding Source Control will show you your team's streams and components
 - My Repository Workspaces will be populated with any existing repository workspaces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

Options	? 🔀
Environment Projects and Solutions Source Control Plug-in Selection Text Editor Database Tools Debugging Device Tools HTML Designer Office Tools Team Concert Test Touls Text Templating Windows Forms Designer Workflow Designer	Plug-In Selection: Specifies the source control plug-in to use with Microsoft Visual Studio and allows changes to plug-in specific options. Current source control plug-in: None None Jazz Source Control
	OK Cancel



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

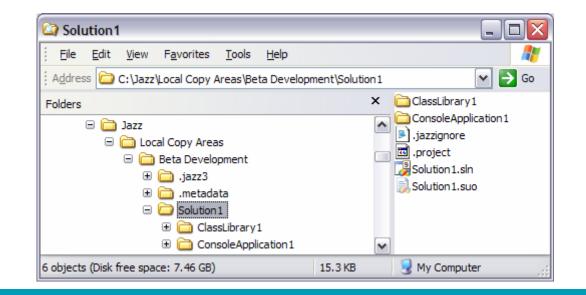
- To start checking in your sources to the repository, you need to share your solution
- A solution is shared into a Jazz component
 - The Microsoft recommended way is to have the physical file layout follow the solution structure
 - The solution file sits is in a root folder

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The projects are in sub-folders

Solution Explorer	- † X
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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

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Multi-component development with Partitioned Solutions

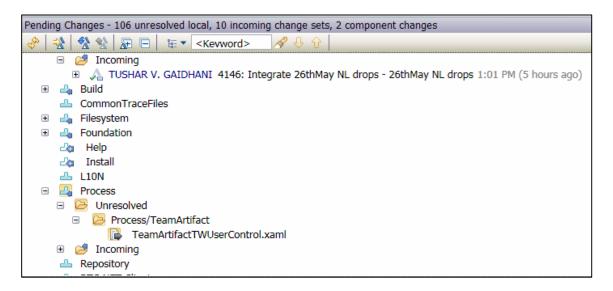
- Each component corresponds to a solution.
 - A project may be included in multiple solutions
 - A project is created in it's "home" solution
 - And referenced by dependent components/projects in other solutions, via project references.
- Separate solution files let you work in smaller sub-systems fairly 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.

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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





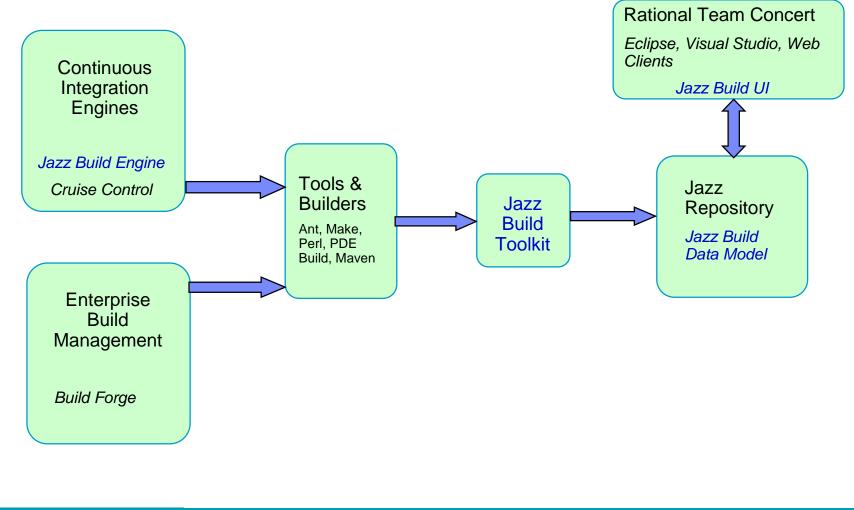
Building your projects/solutions

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

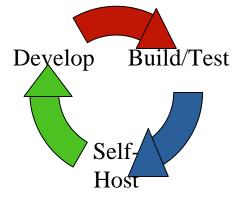
- We've been self-hosting in the RTC client in Visual Studio since October 2008
 - We started with
 - A plain vanilla Visual Studio IDE for development and
 - The RTC Eclipse Client for our Jazz Needs
 - As we integrated SCM, Work Items, Builds into Visual Studio we went to the Eclipse Client less and 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 selfhost.
- 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-selfhostdevelop 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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Teams not restricted to

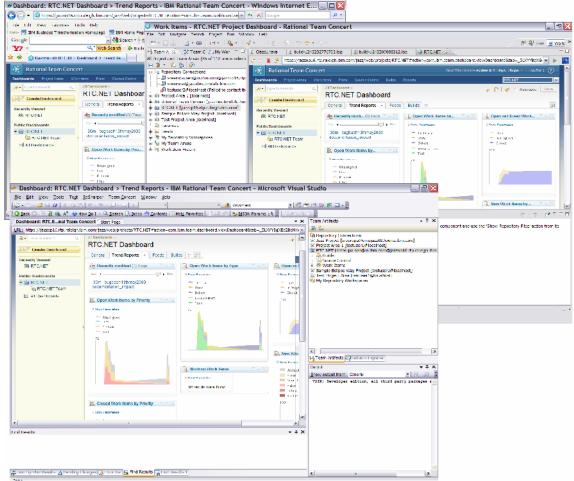
- Single Physical location
- Single Operating System
- Single Platform
- Single IDE
- Single Programming language





Homogeneity in Heterogeneous Teams

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





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Homogeneity in Heterogeneous Teams

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- Same Process
- Same Builds Infrastructure
- Same Work Items and related information
 - Discussions
 - **Builds**

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- Approvals
- Attached change sets

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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



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