Jazz and beyond

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Agenda

- Jazz Platform
- (Software) Asset Management
- Modeling/Development
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- Jazz Platform
- (Software) Asset Management
- Modeling/Development
The Jazz project
People working together to deliver great software

Jazz is a project and technology for transforming how people work together to deliver greater value and performance from their software investments.

- A major investment by IBM to create a scalable, extensible team collaboration foundation.
- IBM’s vision of the future of software delivery—globally distributed, fluid and dynamic.
- An evolution of the Rational portfolio, which will evolve to support Jazz technology over time.
- A community at Jazz.net—where you can see Jazz-based products being built.
An evolution of value for new and existing customers

The next generation of the IBM Rational Software Delivery Platform
Austrian Press ;-)
Evolution of value in collaborative ALM

Best Practice Processes

2008
- Rational Requirements Composer
- Rational Team Concert
- Rational Quality Manager

2009
- Rational Insight
- Project Management

On-going
- Business Partner & IBM Offerings

Open Lifecycle Service Integrations

Client Integrations
- Eclipse
- Web 2.0
- Visual Studio
- Others to come… (Microsoft SharePoint, Microsoft Project, Lotus Quickr, etc.)

Server Integrations
- Rational ClearCase 7.1
- Rational ClearQuest 7.1
- Rational Build Forge 7.1
- Rational Asset Manager 7.1
- Subversion
Introducing the first wave of new Jazz offerings

**Team Concert**
*Innovation Through Collaboration*
Unify by “thinking & working” in unison with real-time project health

**Requirements Composer**
*Business Expert Collaboration*
Elicit, capture, elaborate, discuss and review requirements

**Quality Manager**
*Collaborative Business-driven Quality*
Coordinate quality assurance plans, processes and resources

**Best Practice Processes**
**Open Lifecycle Service Integrations**

**Rational Team Concert**
**Rational Requirements Composer**
**Rational Quality Manager**
**Business Partner Jazz Offerings**

**Search and Query**
**Dashboards**
**Collaboration**
**Security**

**Rational**
ClearQuest
ClearCase
Build Forge
Requisite Pro
Asset Manager
“During the current economic environment, ALM, at its best, can enhance the productivity of teams and provide management with a more accurate view of project status.”

“Savings also stem from the reduction of unnecessary rework and better alignment of projects with business needs.”

“These benefits result in better control of costs and risks in development projects across the spectrum of applications that run the business, grow the business or transform the business.”

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As of 11 December 2008

Gartner MarketScope for Application Life Cycle Management, Jim Duggan, Matt Light, Thomas E. Murphy, December 17, 2008

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IBM Rational Requirements Composer
Requirements Composer

Rich Authoring Environment
- Use Cases
- Glossaries
- UI Sketching and Storyboarding
- Process Sketching
- Rich Text Requirements

Web Review and Approval
- Wiki style interface
- Categorize / Tag
- Comment
- Review / Approve

Collaboration Server
- Share work instantly
- Users / teams / authorizations
- Linking between all artifacts
- Versioning

Rational RequisitePro
- Integrate requirements across the application lifecycle
Requirements Composer – Capabilities

**Rich text capture**
- Organize the web of information into documents
- Create and link requirements
- Link across documents and external sources
- Embed diagrams and sketches

**Collaboration**
- Attach comments to virtually any element
- Comment threads for conversational context
- Host reviews within the working environment

**Web interface support**
- View and comment on all artifacts
- Participate in reviews
- Search and query
Requirements Composer – Capabilities

Business processes
- Sketch processes in BPMN notation
- Link tasks and decision points to:
  - UI sketches to automated tasks
  - Use cases to tasks
  - Business rules to decision points
- Processes can be moved to WebSphere Business Modeler

UI sketches and storyboards
- Elicit and validate user experience requirements
- Quickly assemble UI storyboards
- Easily update storyboards over project iterations
- Link any element to almost anything
Requirements Composer – Capabilities

Use Cases

- Create informative diagrams
- Elaborate with rich document descriptions
- Link use cases with:
  - UI sketches and storyboards
  - Process sketches
  - …

Glossaries

- Promote consistency, clarity and correctness
- Link glossary terms to any textual content
- Maintain multiple glossaries
  - Enterprise, project, client
  - Industry-specific
- Synonyms, related terms, search, more…
IBM Rational Team Concert
Software innovation through collaboration

- **Real time, in-context team collaboration**
  - Make software development more automated, transparent and predictive
- **"Think and work in unison"**
  - Integrated source control, work item and build management
- **Assess real-time project health**
  - Capture data automatically and unobtrusively
- **Automate best practices**
  - Dynamic processes accelerate team workflow
  - Out-of-the-box or custom processes
- **Unify software teams**
  - Integrate a broad array of tools and clients
  - Extend the value of ClearQuest and ClearCase
  - Visual Studio Client
  - Support for System z and System i servers

**Open and extensible on**
- Collaborate in context
- Right-size governance
- Day one productivity

**IBM Rational Team Concert**
- transparent integrated presence
- wikis OPEN real-time reporting
- chat automated hand-offs Web 2.0
- custom dashboards automated data gathering
- EXTENSIBILITY Eclipse plug-ins services
- architecture FREEDOM TO CREATE
Source code management

Integrated stream management solution

- Identifies components in those streams and the baselines available for the team

Individual user server workspaces

- Development projects contained in those components

Working with Change Sets
Work items

- Predefined, custom and personal queries
- Subscribe to work items you're interested in
- Integrated discussion threads
- Query results

Understands and persists work item’s relationship to SCM and build artifacts
Builds

Create build definitions for team and private builds

Create local or remote build servers

Supports Ant and command line build tools

Identify work items and change sets that went into the build

Historical view of the build queue with status
Enables process awareness and guidance

- **Team Advisor**
  - Rules can be run when delivering changes to enforce team or organizational standards
  - Helps ensure higher quality results through enforcement of agreed-upon standards
  - Rules are configurable
  - “Quick Fixes” can be specified to simplify corrective action
  - Process rules can be defined, refined “on the fly”, enabling continual improvements
  - Out of the box processes include OpenUP, Scrum, The Eclipse Way, etc
Iteration Planning

Understand how well you are progressing against your targets in real-time.

Plan and execute iterations while managing team and individual load.

Drag-and-drop work items to change owners/create child parent relationships.
In-context collaboration

Team Awareness
Shows team members and their online status
Shows what they are working on

Team Central
- News & events
- Build status
- What’s being worked on
- Changes
Configurable (RSS feeds)
Personalizable

Collaborate in Context
Dashboards

- Clearly understand team goals
- Transparency, collaboration and control via customizable dashboards
- Risks, issues, challenges surfaced at both the team and project level
- Real-time status

Development

- Endgame Has Started
- Jazz Development Description
- Current Development Plans
- Jazz Development Event Log

Risks, issues, challenges surfaced at both the team and project level
Dashboards and reporting

- Trending by project or by individual team
- Team member details
- Current milestone status
How we use Rational Team Concert

- 2-way Xeon Server running application server (WAS) and another running DB2
- Jazz Project – Using bi-weekly iteration builds
  - Jazz and Rational Team Concert self hosting since 4Q06
- Global team in 7 locations in NA Europe and India
- ~100 developers, plus jazz.net webclient access
- Repro > 10G, 66K files, 43K work items
- Established “Rhythm”
- Over 10 internal Rational development teams leveraging Rational Team Concert
- 25+ Other Rational teams using Rational Team Concert
Agenda

- Jazz Platform
- (Software) Asset Management
- Modeling/Development
What is a Software Asset?

- **A Software Asset is**
  - a collection of Artifacts
  - which provides a solution to a requirement or business/mission need
    - for one or more contexts
    - with instructions for usage
    - and variability points

- **What are Artifacts?**
  - Workproducts from the software process
    - Requirements, Designs & Models (including enterprise and systems architecture), Source code, Data, Tests, User Interfaces, Documentation, Service Interfaces, Estimates and so on…

- **Kinds of assets**
  - Applications, components, patterns, software that runs systems or products, services, frameworks, templates, …
Asset Type Example: Services are assets consisting of numerous components; all need to be maintained, traced, and easily located

- **Asset types can be created to handle any asset**

- **An asset type specifies:**
  - Type name, description
  - Required artifacts
  - Required relationships
  - Attributes (optional or required)
  - Which categories are allowed

- **Validation of asset type constraints will be run on asset submission**

**Example asset types representing a service**
Rational Asset Manager Overview

✓ RAM is a development time software asset management repository
  • Uses the Reusable Asset Specification to define, create and modify assets
  • Provides asset type specific search & governance
  • Measures asset reuse in development

✓ Handles any kind of asset
  • Applications, components, patterns, services, frameworks, templates, …

✓ Benefits:
  • Reduce software development and operational costs
  • Improve quality by facilitating the reuse of approved & proven assets
  • Integrated with other Rational and SWG tools
Introducing IBM Rational Asset Manager

- Collaborative asset management to identify and manage assets & ROI best practices
- Manages assets across their lifecycle from design/creation to consumption/change
- Manages service creation & reuse across service oriented architectures (SOA) projects
- Leverages an extensive library of process best practices for asset creation & reuse in Rational Method Composer (ABS, SOA, GDD, etc.)

![Asset Management Lifecycle Diagram](image-url)
Agenda

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Introducing: IBM Rational Architecture & Construction Solution v7.5

For architects, designers and developers who are targeting JEE, SOA, and IBM WebSphere runtimes including WebSphere Application Server and WebSphere Portal Server.

For architects and designers who code (or review code) in Java, C++, XML...

For data architects

For Java, JEE, Web, Web Services, and SOA developers who are targeting IBM WebSphere runtimes including WebSphere Application Server and WebSphere Portal Server.

For…
- Solution, software, & enterprise architects
- Business analysts, and systems analysts
...who do not code and prefer (or are mandated) to work with UML or UML dialects

For architects, and designers who code (or review code) in Java, C++, XML...

For architects, designers and developers who are targeting JEE, SOA, and IBM WebSphere runtimes including WebSphere Application Server and WebSphere Portal Server.

For architects and designers who code (or review code) in Java, C++, XML...

For architects, designers and developers who are targeting JEE, SOA, and IBM WebSphere runtimes including WebSphere Application Server and WebSphere Portal Server.

Eclipse

Rational Data and Application Modeling Bundle
For data-centric software architects and data architects who work with one another on data-intensive applications

Rational Data Architect

Rational Software Modeler

Rational Software Architect Standard Edition

Rational Software Architect

Rational Application Developer for WebSphere Software

Rational Application Developer for WebSphere Software

Rational Modeling Extension for Microsoft® .NET

As hosted by RSM, RSA SE, or RSA4WS
For architects and designers who code (or review code) in C# and wish to extend the value propositions of Rational tools to the support of .NET solution architectures
Model Driven Development
Delivering innovation and collaboration

- Modeling is the standard approach in engineering to
  - Manage Complexity
  - Mitigate Risk
- Software development is the same as every other kind of engineering in this respect
- Code and other artifacts can be derived from models

Well, maybe you shouldn’t’

But then, maybe you should

Maybe you have to
Tools that help you automate

**JPA/EJB 3.0 Transformations**
- Transformations are extensions of UML-to-Java and Java-to-UML
  - Contain full UML-to-Java/Java-to-UML functionality
  - 4 new transformations:
    - UML-to-JPA
    - UML-to-EJB 3.0
    - JPA-to-UML
    - EJB 3.0-to-UML
- New profile tooling:
  - JPA transformation profile
  - EJB 3.0 transformation profile

**JPA Transformations:**
- New JPA transformation profile and supporting profile tools
- UML-to-JPA
  - Extends UML-to-Java transformation
  - Generates JPA annotations for Entity classes
  - Supports reapply via JMerge
    - New JMerge rules to handle merging of annotations
  - Supports replacement of UML elements
  - Supports generation of traceability links
- **JPA-to-UML**
  - Extends Java-to-UML
  - Supports fuse of target model
  - Both transformations extendable
Model compare & merge

Model differences & conflicts

Description of selected difference or conflict

Diagram view of selected difference or conflict for contributor

Choose view type
Comprehensive JEE 5 tools
Introducing a simplified programming model

**Annotations:** *An intuitive and convenient approach to development*
- Insert *annotations* directly into a plain old Java object (POJO)
- Specify deployment and code information right in your code

**EJB 3.0:** *Reduced code and deployment complexity*
- Use annotations for deployment and security
- Simpler lookup process for EJBs
- Reduced number of implemented interfaces

**JPA:** *A simplified programming model for persistence*
- Simplified Java API that can be leveraged with EJB 3.0 or POJOs
- Implements the best features of Hibernate, JDO, TopLink, and other persistence methods
Simplify development with Visual Editing tools

- Visually layout annotated JPA and EJB 3.0 classes
- Palette tools created specifically for working with JPA and EJB 3.0 artifacts
- Create and edit relationships visually
- Set properties directly in the diagram

Point and click database mappings
Design Dynamic Page with Rational page Designer

- Simplified Navigator hides the complexity of J2EE
- Construct pages by dragging and dropping rich web components from a customizable Palette
- The Data View lets you configure and drag and drop data to automatically create a data bound UI
- WDO accesses and updates data without writing any code!
- Page templates separate out common page elements in a single template file
- Property views allow easy customization of the selected component
- The Quick Edit View allows scripting of client or server side events in Java or Java Script.
- Code assist writes the code for you!

Web Application Development is Drag and Drop Simple!

- Rapid UI Creation
- Simple Data Access with WDO/SDO
- Instant binding of UI to Data
- Quick Server-side event scripting (with Java Server Faces)
Agenda

- Jazz Platform
- (Software) Asset Management
- Modeling
- Development
Additional resources

- Find out more about Rational Team Concert
  http://ibm.com/rational/rtc
- Download the trial and participate in the open commercial development project
  http://jazz.net
- Explore Rational Team Concert tutorials, demos and other developer learning resources
  http://ibm.com/developerworks/spaces/jazz
- Learn more about the Jazz technology and the future IBM Rational product roadmap
  http://ibm.com/rational/jazz/roadmap
Additional resources

- Rational Asset Manager
  http://www-01.ibm.com/software/awdtools/ram/

- Rational Software Architect
  http://www-01.ibm.com/software/awdtools/swarchitect/websphere/