Surf the collaborative application life cycle web with IBM Rational Jazz

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Agenda

- What is (Collaborative) Application Lifecycle Management?
- What is Jazz / Jazz platform?
- Solutions based on Jazz
  - Requirements Management
  - Quality Management
  - Configuration Management
  - Change Management
  - Build Management
  - Agile Planning
What is Application Lifecycle Management (ALM)?

- In its simplest form, ALM is really just the integration and coordination of **people**, **tools**, **information**, and **process**.
A more grounded definition of ALM

The coordination of development life-cycle activities, including requirements, modeling, development, build, and testing, through:

1) Process Automation - Enforcement of processes that span these activities.
2) Traceability - Management of relationships between development artifacts used or produced by these activities.
3) Reporting - Reporting on progress of the development effort as a whole.
What does this mean?

- ALM is a discipline as well as a product category.
- ALM doesn’t support specific life-cycle activities; rather, it keeps them in sync.
- ALM doesn’t live in practitioner tools; it lives in the integrations between them.
- A collection of development life-cycle tools is not necessarily ALM.
Islands of people, process & information

Collaboration is fundamentally difficult

Little to no project visibility
Data locked in proprietary APIs
Poor process and workflow integration
High maintenance and administration costs
Persistent functional, geographic and organizational silos
Persistent challenges of software delivery
Silos of people, process, and projects

“Only 34% of software projects are deemed successful, costing $300B annually.”

“Only 22% of executives felt that their IT and business strategy were tightly integrated.”

Requirement-induced delays cost US businesses over $30B annually.

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1 CHAOS Chronicles v 12.3.9, The Standish Group, June 30, 2008
3 US Dept. of Congress, Planning Report, 2002
Answers the commonly asked questions…

Which requirements are addressed in this iteration?

Are all of the requirements tested?

What’s the quality of the high priority requirements?

What defects are reported against which requirements?

How can I recreate the last version to do a patch?

What requirements am I implementing?

What test uncovered this defect, on which environment and what build?

How can I speed up my builds?

Are build times getting longer or shorter?

What changes occurred overnight?

Where are the bottlenecks in our processes?

How can I standardize when teams use different tools?

What automated tests have been run & with what result?

Can we pass an audit?

Are we ready to release?

What defects were resolved in this release?

What tradeoffs can we make to release on time?

What is the quality of the build?

What has changed that I need to test?

What defects were resolved since the last build?

Can we pass an audit?

What defects have been addressed since the last build?
Why has ALM been so hard?

*Islands of people, process and information*

- Little to no project visibility
- Data locked in proprietary APIs
- Poor process and workflow integration
- High maintenance and administration costs
- Persistent functional, geographic and organizational silos
We solve this with Collaborative ALM

- In its simplest form, ALM is really just the integration and coordination of **people**, **tools**, **information**, and **process**.
  - What about **Collaborative** ALM?

- Compare Software Delivery to an Orchestra
  - The musical director determines what will attract an audience (the business)
  - You have a group of musicians (your team members)
  - You have horn, drum, string players (software disciplines)
  - There’s a score that defines who plays when (process)
  - A conductor helps the players stay on track (process enactment)
  - The score has a beginning, middle, end (lifecycle)
  - An audience provides feedback on your performance (your users)

- Collaborative ALM helps you create a world class orchestra
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.
With Rational customers can break down organizational, functional and geographic barriers thru collaboration, automation and reporting.

Real-time, transparent access to project data, risks and progress

Integrated, loosely coupled Logic, User Interfaces
Data Models, Workflow Administration

Third-party products
Open Source Solutions
Product A
Product B
Product C
Product D

Process Workflow
HTTP/REST
Shared Platform Services

TEST TEAM
ARCHITECTURE
PROJECT A
PROJECT B
Open Commercial Development at jazz.net
Delivering greater openness and customer participation in the products they depend on for software delivery

- IBM is opening up the Rational Software Delivery Platform for greater ease of consumption, extensibility and integration to meet the unique usage needs of our customers.

- IBM is providing transparent, collaborative customer participation in the development of new Rational technologies through an open commercial community.

Open Commercial Community

Creating, maintaining, and enhancing innovative commercial software through an open transparent process that allows customers to participate directly in the development process.

Open Source Community

Creating, maintaining, and enhancing software through open, collaborative communities driving evolution of standards and common components.

Open source contribution of selected Jazz technology.
So then… what exactly is Jazz Foundation?

Jazz Foundation: A Platform for Collaborative Software Delivery

- Provides basic shared services to all Rational Jazz applications
- Provides Open Services for easy integration:
  - RESTful interfaces, OSLC
- Provides the infrastructure needed to deliver our vision for Collaborative Application Lifecycle Management (C/ALM)
An evolution of value for new and existing customers

The next generation of the IBM Rational Software Delivery Platform

Existing Offerings

New Offerings

Business Partner Offerings

Best Practice Processes

Search and Query

Dashboards

Team awareness

Events notification

In context collaboration

Security

JAZZ TEAM SERVER

Open Lifecycle Service Integrations

Client Integrations

- Eclipse
- Web 2.0
- Visual Studio

Server Integrations

- Existing IBM offerings
- Business Partner offerings
- Open source offerings

Powered by Jazz
Collaborative Application Lifecycle Management on Jazz

**Rational Project Conductor**
*Project Management*
Gantt Charts, Resource Planning, Integration

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

**Rational Team Concert**
*Collaborative software delivery*
Collaborative SCM, work item, build automation & iteration planning

**Rational Quality Manager and Test Lab Manager**
*Lifecycle quality management*
Coordinate quality assurance plans, processes and resources

**Rational Insight**
*Cross-project and -team reporting*
Performance management and measurement for integrated lifecycle intelligence

**Best Practice Processes**

**Future IBM Capabilities**
Your existing capabilities

**Business Planning & Alignment**

**Product & Project Management**

**Collaborative Lifecycle Management**

**Quality Management**
Reporting & Realtime KPIs

**3rd-Party Jazz Capabilities**

**Presentation: Mashups**

**Discovery**

**Query**

**Storage**

**Administration: Users, projects, process**

**OPEN SERVICES**
Austrian Press ;-)
Collaborative Application Lifecycle Management (CAL/M)
The common user interface elements in Jazz make it easy to use...

- **Common banners**
- **Dashboards in all products aid in transparency**
- **Rich hovers provide at-a-glance, in-context information**
- **Link Dialogs enable cross-repository linking**
...but also mean that tools could be seamlessly blended together to create powerful customized interfaces...
“IBM is one of the few vendors with credible offerings in almost all the requirements of ALM”

“IBM Rational is one of the first vendors to tell a story about integrating across the lifecycle”

“Jazz is a solid architectural foundation for further innovation”

We rate IBM as a Strong Positive because of its current market strengths and breadth of portfolio”

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As of 11 December 2008
IBM Rational Requirements Composer
Requirements Composer

Rich Authoring Environment

- Glossaries
- Use Cases
- Sketching/Storyboarding
- UI

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

RequisitePro

- Integrate requirements across the application lifecycle

Process Sketching
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
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…
And then Capture And Connect The Web Of Information

Unify The Multiple Perspectives to ensure alignment to changing business objectives

Use Rich-text, Images, and links to capture and organize structured and unstructured information

Capture the Current and Propose a Future State with Business Process Diagrams

Remove Ambiguity on Business and Technology Terminology with Shared Glossaries

Visualize the User Experience with User Interface Sketches and Storyboards

Collaborate in real-time using Wiki-like discussions, to quickly achieve sign-off.

Build Use Case Models and Elaborate on the Processes, Actors and Activities

And then Capture And Connect The Web Of Information
IBM Rational Quality Manager
Centralized test management hub allowing full lifecycle support across all types of testing and platforms.
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

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**Open and extensible on Jazz**

- 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

Development projects contained in those components

Individual user server workspaces

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
- Identify work items and change sets that went into the build
- Historical view of the build queue with status
- Supports Ant and command line build tools
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

Transparency, collaboration and control via customizable dashboards

- Clearly understand team goals
- Risks, issues, challenges surfaced at both the team and project level
- Real-time status
Dashboards and reporting

Trending by project or by individual team

Team member details

Current milestone status

Getting Started with Work items Team Wiki

Current Work Item Plans (2)
Current Iteration: 0.6 RC1
Foundation & Work Items
Foundation & Work Items

Work Item Event Log (15 new)
- WebUI - Hide comment is confusing - lost work (51725) 10 minutes ago
- Indexing slow on attachment with long lines (48006) 15 minutes ago
- User photo lost when creating new user (40910) 15 minutes ago
- (3) Deliver new csvicon (52856) 15 minutes ago

Work Item Builds
- Succeeded: continuous.workitem.jazz C20080424-0748 10 minutes ago
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
Collaborative Application Lifecycle Management on Jazz

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  - Project Management
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**Best Practice Processes**

- **Future IBM Capabilities**
- **Your existing capabilities**

**Presentations:**
- Mashups

**Discovery:**
- Members

**Query:**
- Projects, Process

**Storage:**
- Users, projects, process

**3rd-Party Jazz Capabilities**

**OPEN SERVICES**
Rational User Group Austria

Meeting on Nov 11th (9-13Uhr) – IBM Forum

- High Availability Implementation von ClearCase auf einem Linux Cluster
  Michael Schindler - Allianz Elementar Versicherungs-AG

- Erfolgreiche Implementierung von RD Power und RTC Power bei der UniCredit Leasing Austria
  Andreas Nicoladoni, IT Application Development UniCredit Leasing Austria

- Open EGL - Eine Programmiersprache geht in Richtung Open Source
  Ing. Alexander L. Pawlik - Geschäftsführer CWI Softwaremigrations GmbH

http://www.rational-ug.org/groups.php?groupid=119
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
Optional