

Introducing Application Lifecycle Management on IBM Rational ClearQuest

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IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**



About Me

- Rational Support Team at IBM Hursley Development Laboratory near Winchester, UK
- IBM Software Group but not part of the Rational organisation
- Using ClearQuest for nearly 5 years and the ClearQuest Application Lifecycle Management Solution for about six months



Firstly, let's define some terms

IBM Rational **ClearQuest**

A customizable workflow management system which helps development teams organize and automate processes such as defect tracking.

ClearQuest **Schema**

A complete description of the process model for workflows which includes the description of states and actions and structure of the data.

ClearQuest **Package**

A set of schema components that can be added to an existing ClearQuest schema to provide additional features and functionality.

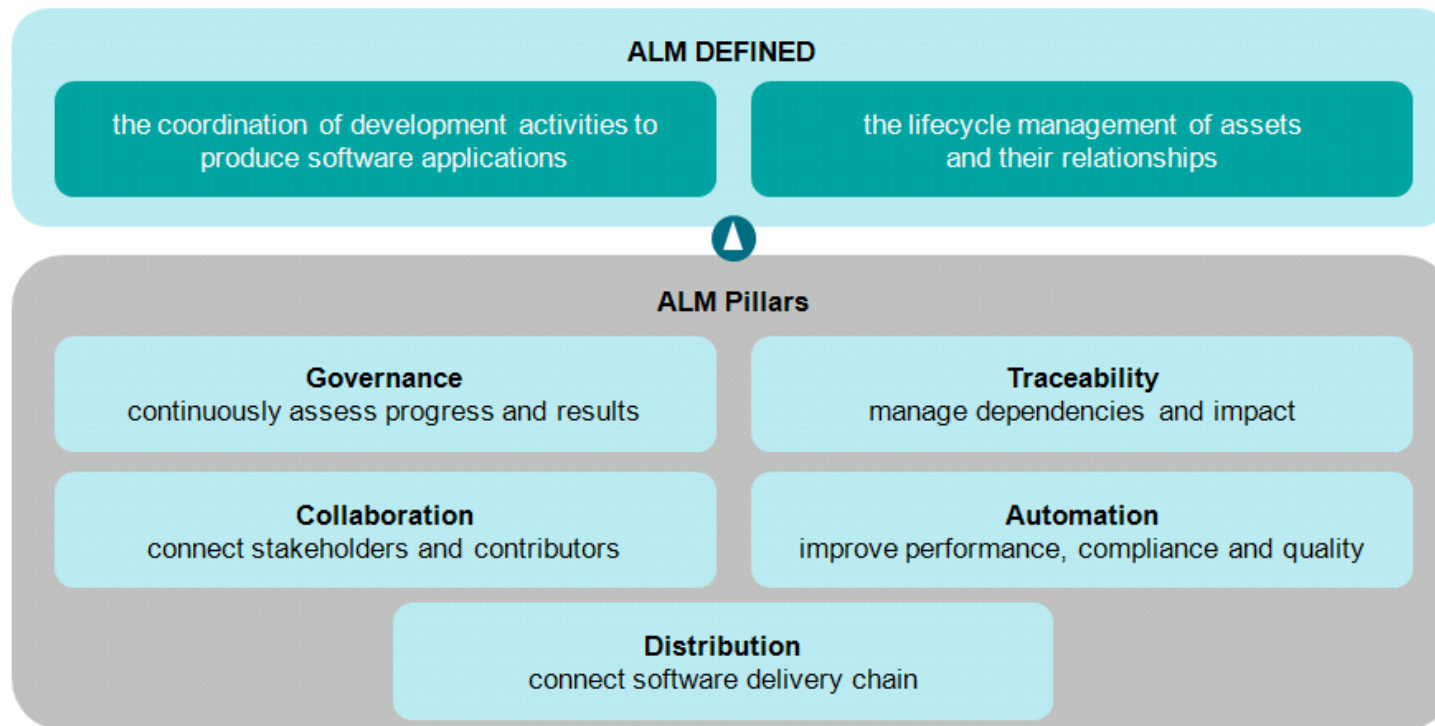
ClearQuest **Multisite**

A ClearQuest option which enables change management across multiple sites.

Tivoli

An organization within IBM Software Group who are currently implementing an organization wide Source Configuration Management and Change Management architecture based upon IBM Rational ClearCase and ClearQuest.

What is Application Lifecycle Management (ALM)?



Source: Pampino, Pierce

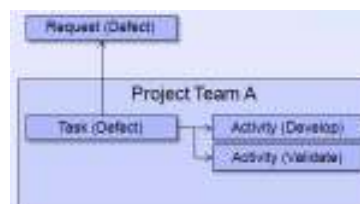
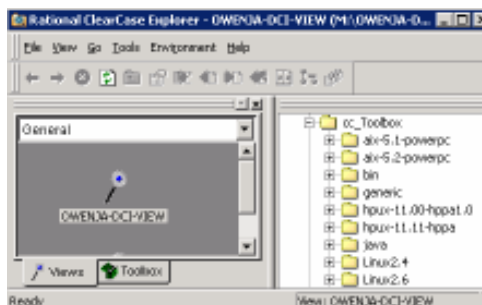
In 2007 we identified a need for an ALM solution which supported 6 key requirements

1. Move off 3rd party defect tracking solution
2. Geographically distributed development
3. Process flexibility across projects
4. Tighter integration with ClearCase
5. Seamless integration with other key tools
6. Compatibility with jazz

PHASE 1
Pilot

PHASE 2
Migrate

PHASE 3
Integrate

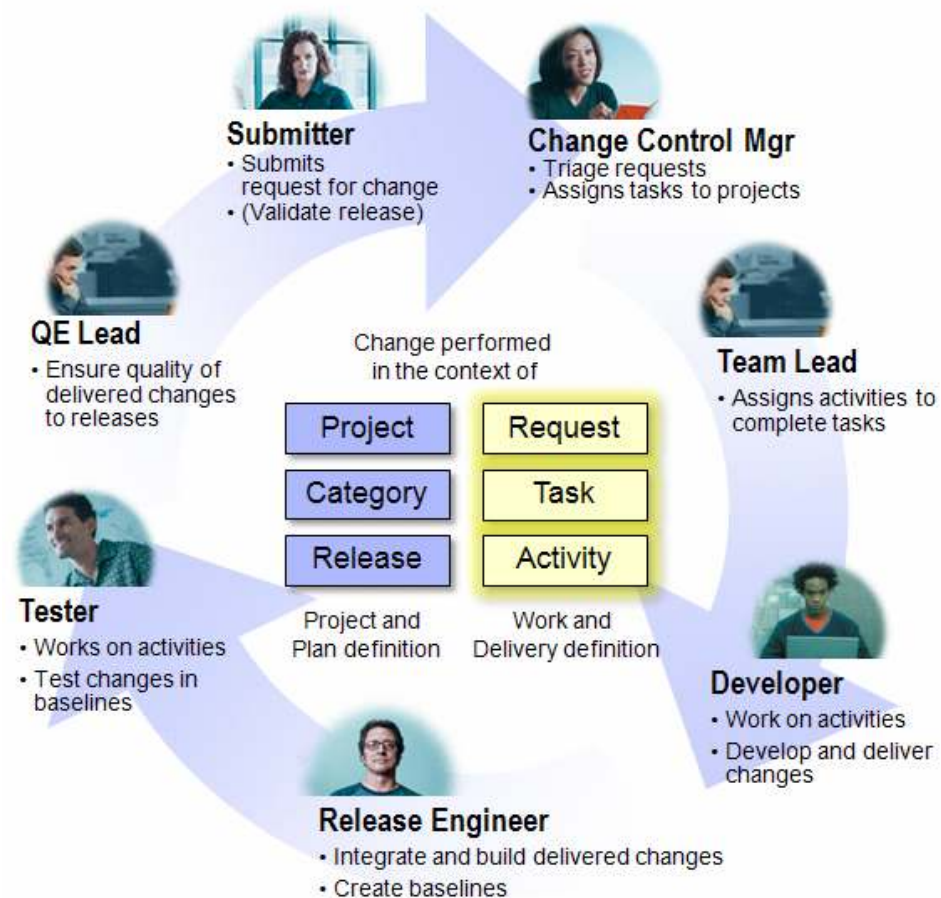


The ClearQuest ALM Solution appeared to fit the bill by providing role based, process driven support for the development process

Core concepts:

1. Projects handle context
2. Work is managed by request – task – activity
3. System-wide settings provide flexibility and consistency

The ALM Solution can be provided standalone or as packages applied to an existing ClearQuest schema



With the ClearQuest ALM Solution the project defines the context for work undertaken

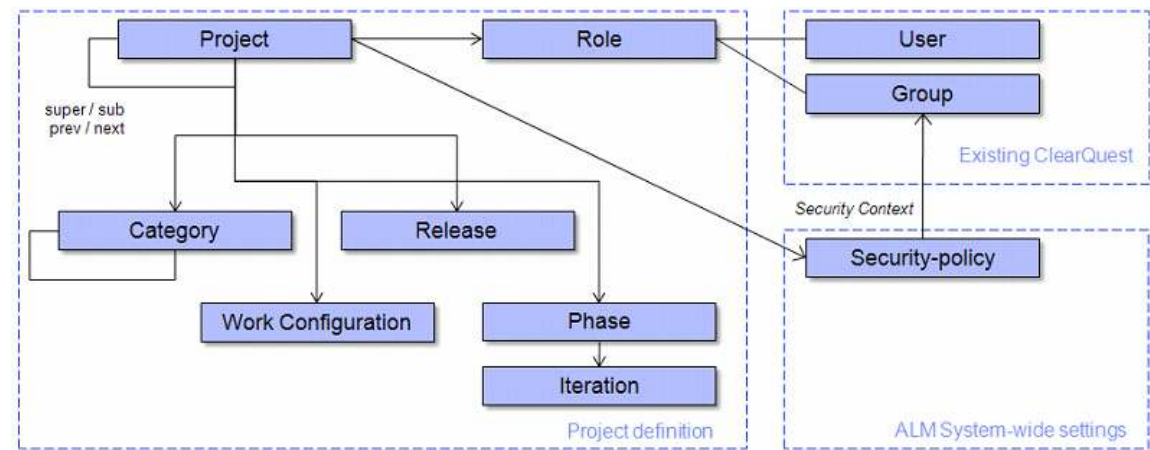
Security policies define who can access the project

Project specific attributes include:

- Roles
- Work configurations which define request, task and activity attributes

Categories and releases define project uniqueness

Planning is possible using phases and iterations



Source: Pampino, Pierce

A number of useful features ease project set-up and automation

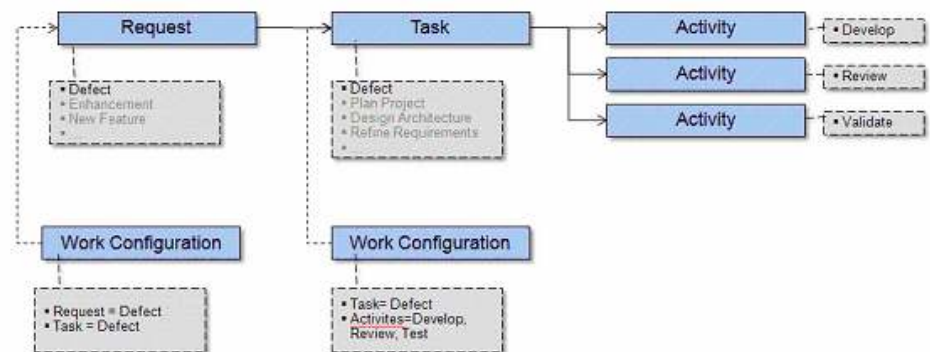
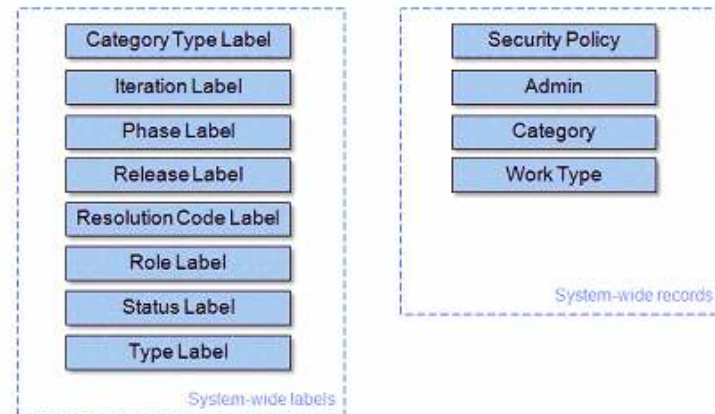
Labels and types provide process flexibility and remove the need for state changes to the schema

Work configuration records allow activities to be automatically created

Project creation wizard eases project set up

Project copy command allows new projects to be set up more quickly

Sample database provides an out of the box starting point



Source: Pampino, Pierce

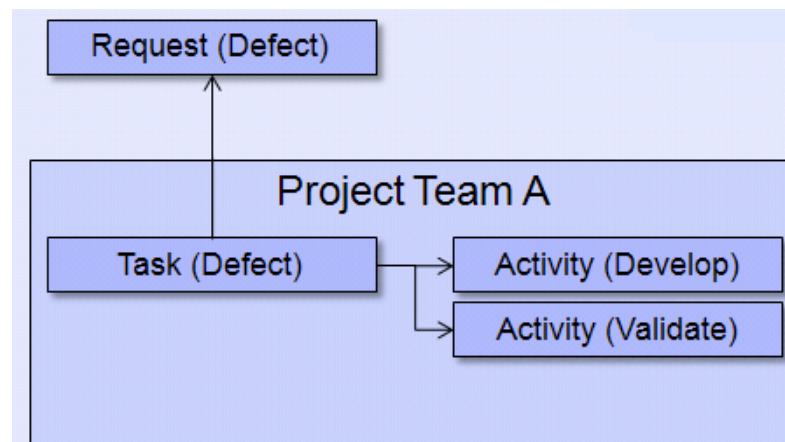
A key property of the ClearQuest ALM Solution is that state based transitions are replaced by activities

Current approach supports a single record type and state transitions



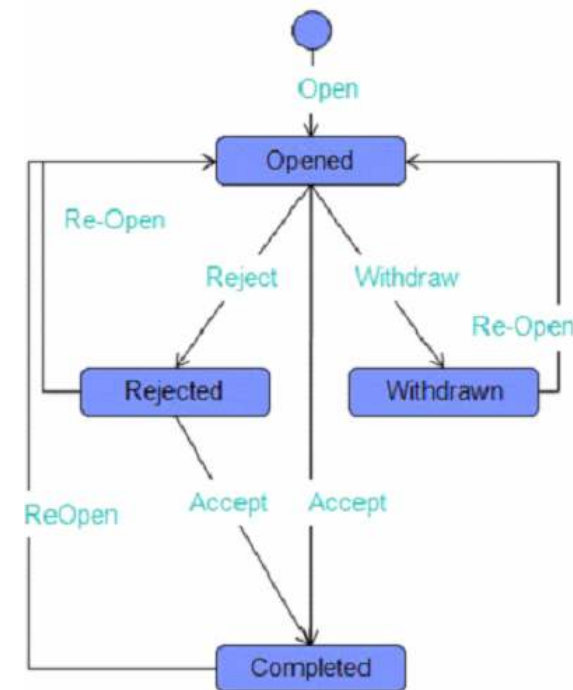
The ClearQuest ALM Solution uses activity records instead of single record state transitions

- Avoids schema changes
- Users can work in parallel on resolving their activities



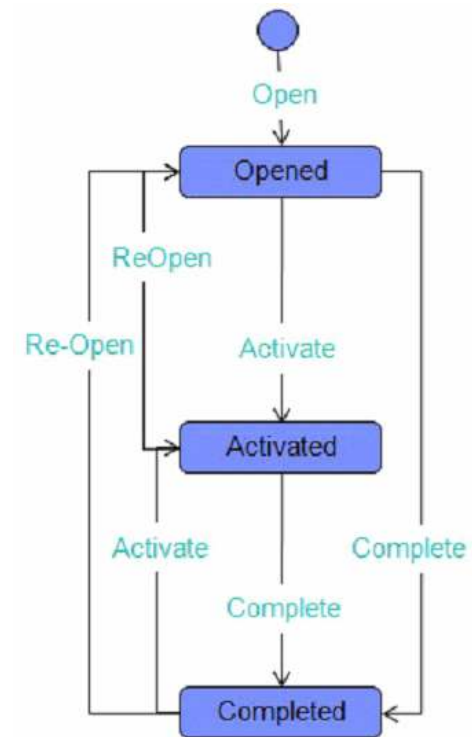
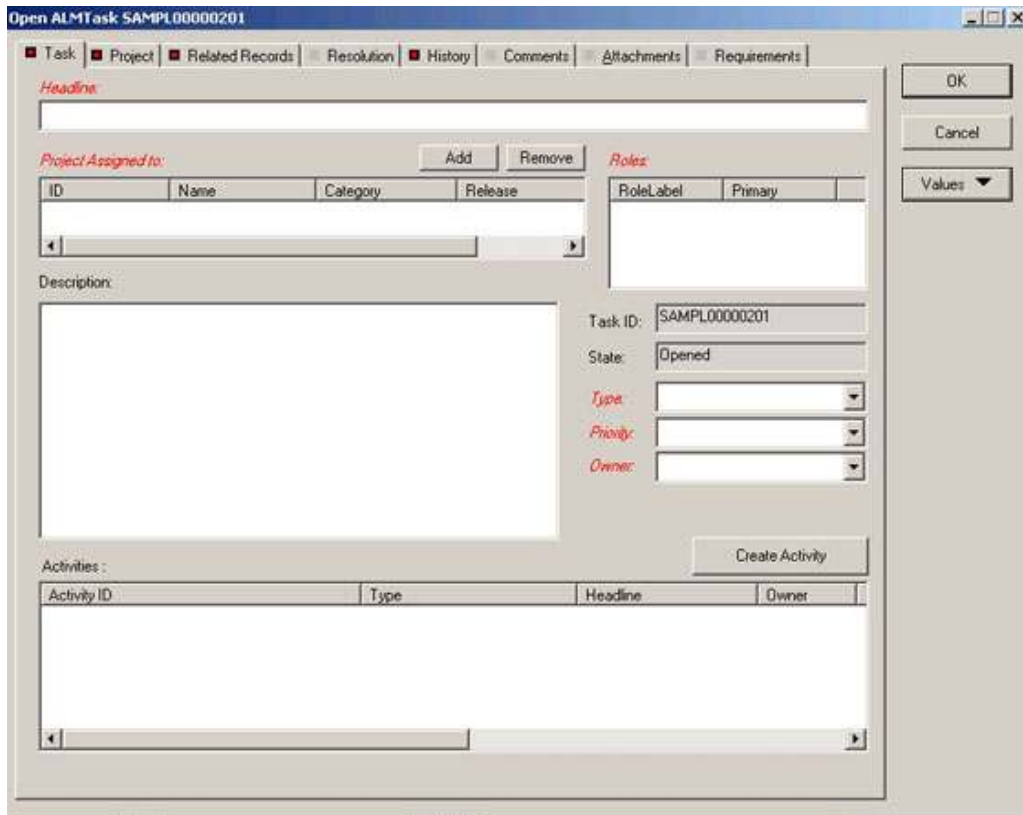
Source: Pampino, Pierce

Work begins with a request which allows anyone to submit petitions (e.g. defects) to the team



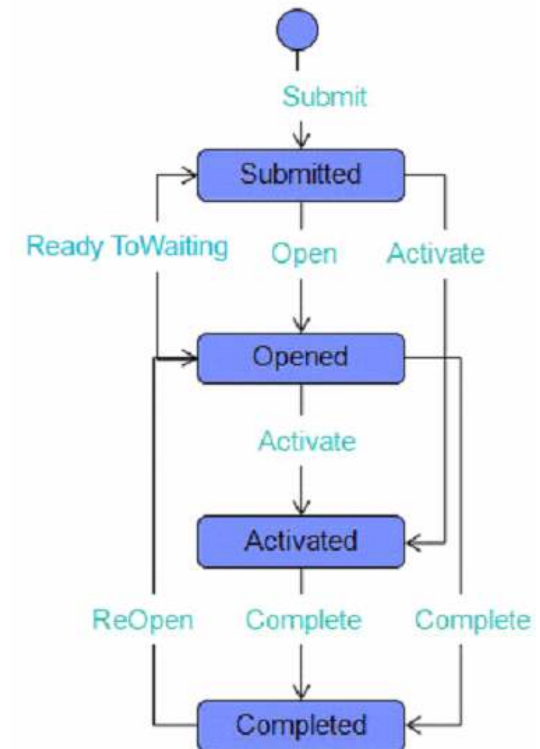
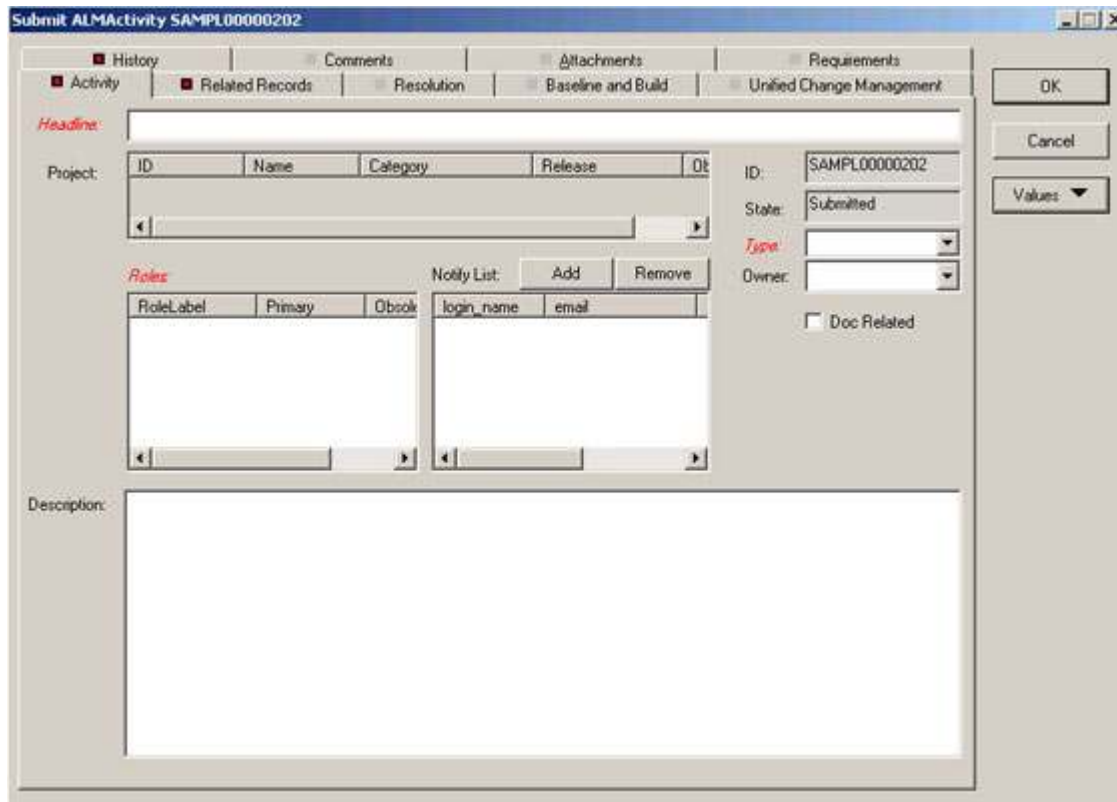
The request is triaged and a task is created which commits the team to 'act' on the request

The CreateTask utility can be used to create the default task for the request



The team lead then creates the activities which are needed to complete the task

The CreateActivity utility can be used to create the default activities for the task

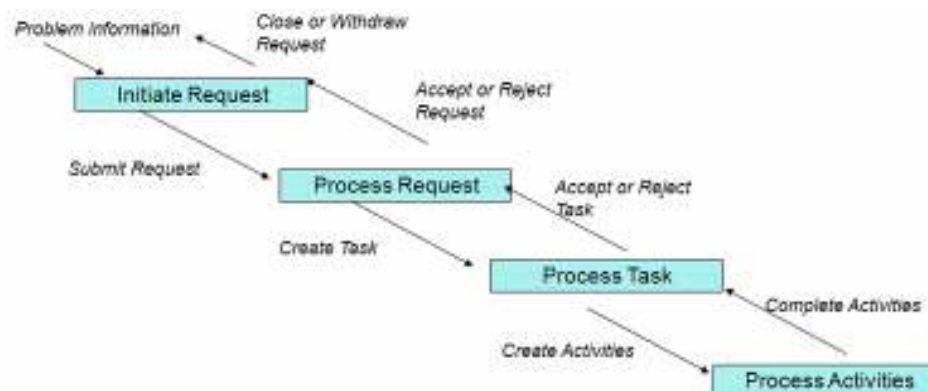
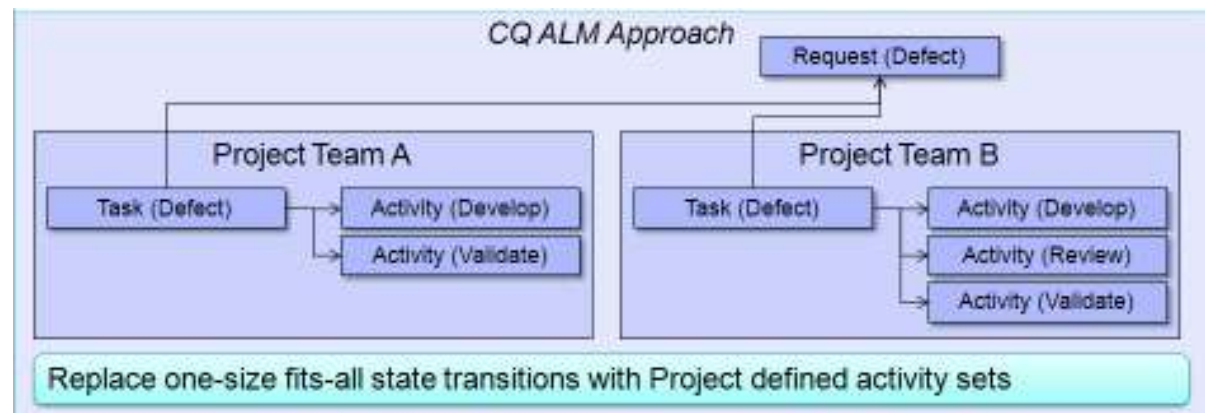


The 3 tier model provides process flexibility across the enterprise

Release and maintenance teams can work on solutions using their own processes

Activities give control to the individual, even when the team is non-colocated

Model ensures traceability across record types and roles



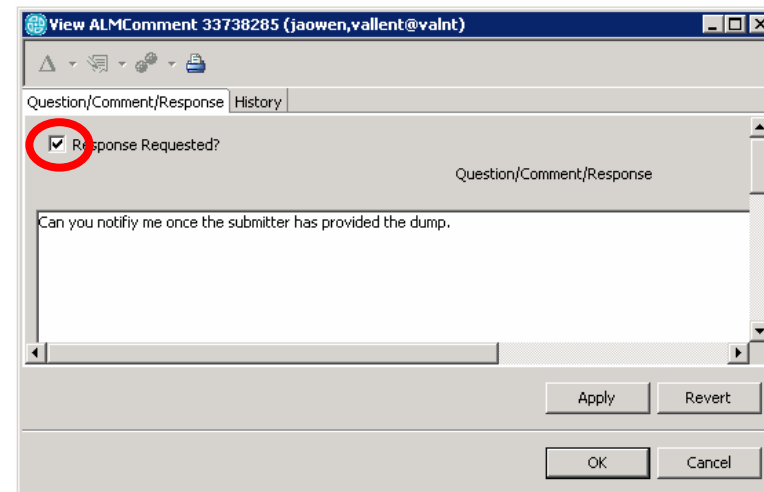
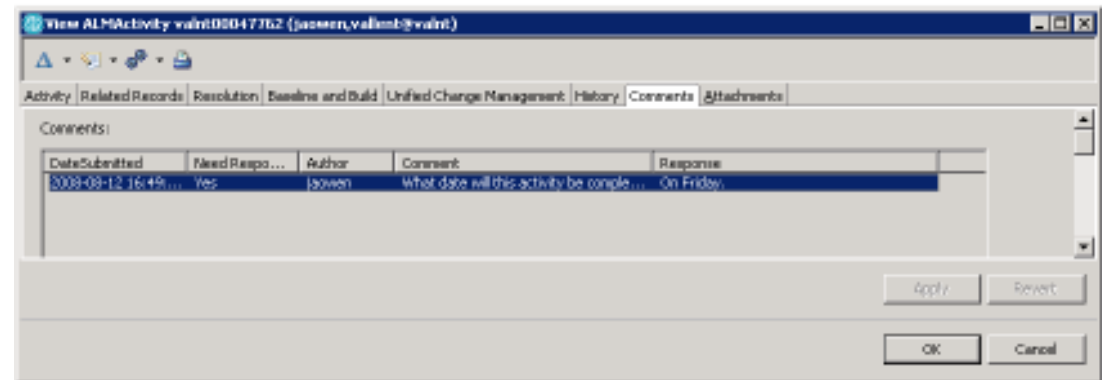
Source: Pampino, Pierce

Comments allow communication between any user and the record owner...

The QuestionOrComment utility allows comments to be created and associated with requests, tasks or activities

Users can optionally request a response:

- Clarification
- Approval

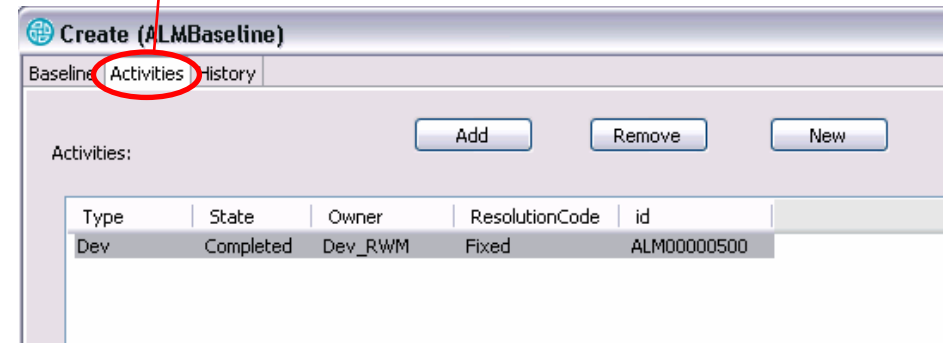
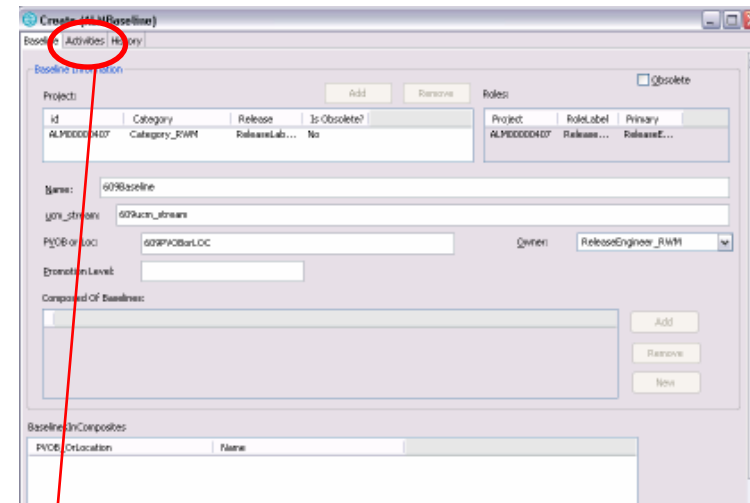
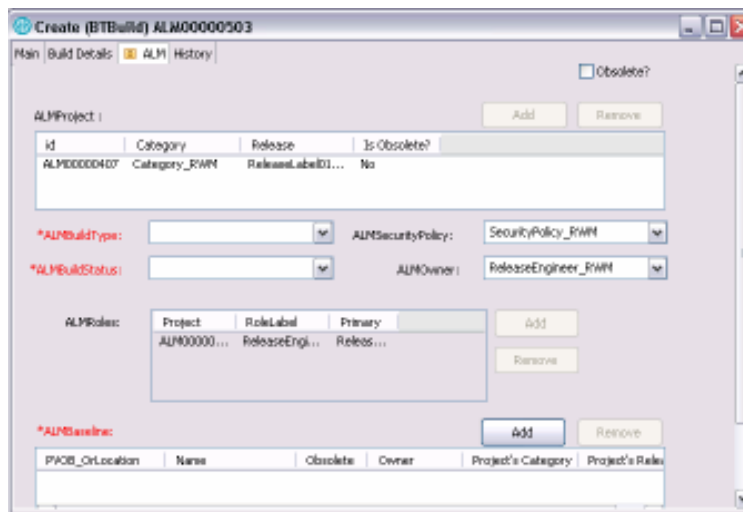


Whilst build and baseline records provide traceability between development and test

Baseline and build records can be managed in build scripts

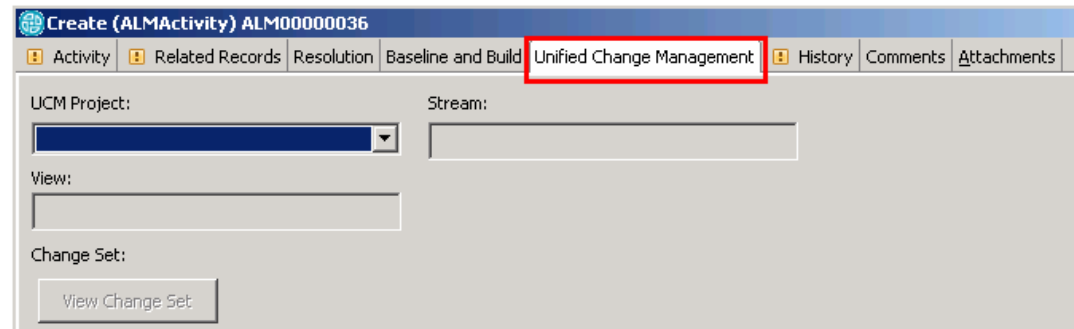
Testers can determine “good” builds

Support for optional integration with ClearCase UCM baselines

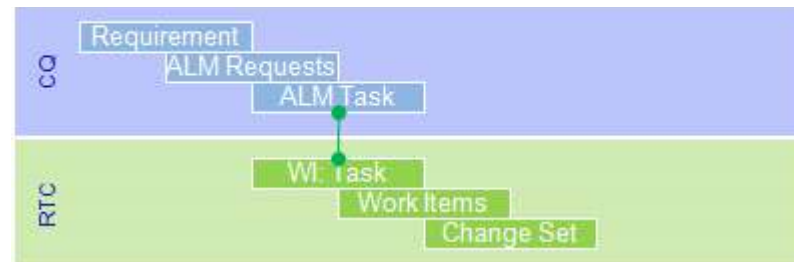


Additionally the ClearQuest ALM Solution supports integrations with other tools

Rational ClearCase UCM
via the UCM tab on the
Activity record



Rational Team Concert via
the ALM Task



Source: Pampino, Pierce

Lessons Learned

1. Use cases and scenarios assist knowledge transfer
 - First project set up
 - Understanding the relationship between request, type and activity
2. Project and team leader involvement early on eases onboarding
3. Minimizing change early on encourages cross-project collaboration and sharing of best practise

Next Steps

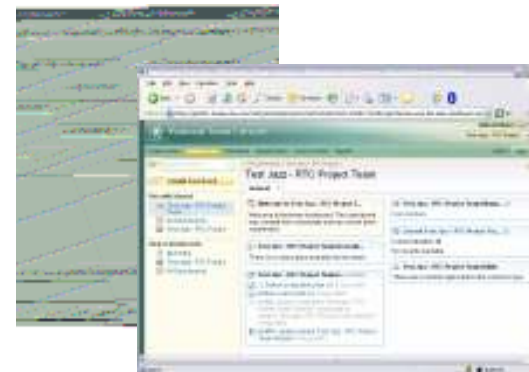
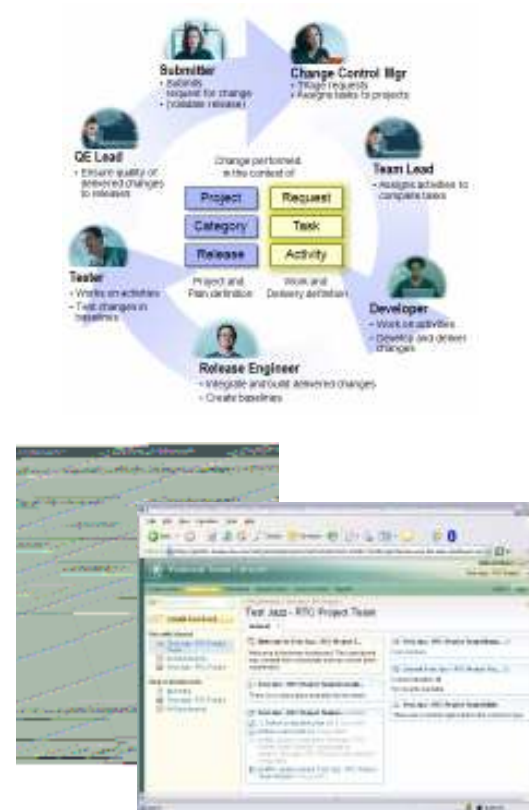
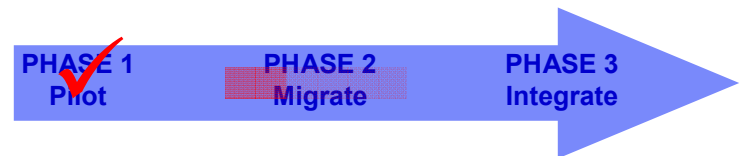
Phase 1 of our project is now complete

Phase 2 is now underway

- Migrate data off 3rd party defect tracking solution
- Onboard projects to ClearQuest ALM solution
- Create the UK ClearQuest hub

Phase 3 will then commence in 2009

- ClearCase integration
- Rational Team Concert integration



Further Information

[ClearQuest Data Sheet](#)

Application Lifecycle Management with ClearQuest 7.1
Carolyn Pampino & Robert Pierce

[Part 1: Introduction, Concepts and Design](#)

[Part 2: Managing Work In The ALM Environment](#)

[Part 3: Administration, Security and Integrating CQ ALM](#)

[Download the ALM Solution for ClearQuest 7.0.1](#)

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Thank-you

Any questions?

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