



爱开发 重创新 更智慧

# Innovate2011

IBM Rational 软件创新论坛

 Software. Everywhere.



# 探索RTC配置管理

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## 日程

配置管理的现状

RTC配置管理设计目标

典型的RTC配置管理场景



## 日程

### 配置管理的现状

RTC配置管理设计目标

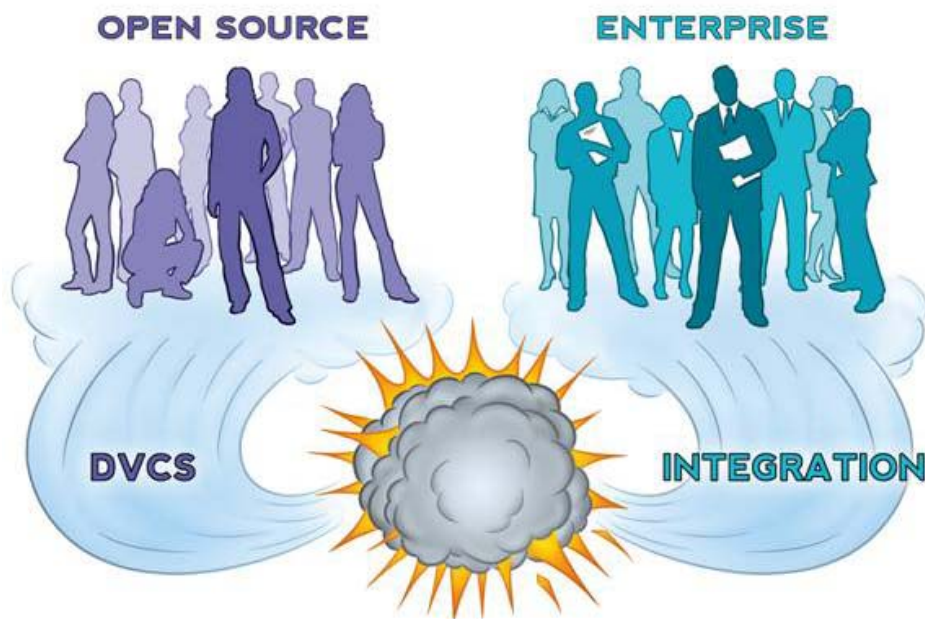
典型的RTC配置管理场景



## 配置管理的现状

企业用户 -> 应用生命周期管理ALM

**VS** 开源社区 -> 去集中化Decentralization



# 两者无法调和?

图片和部分观点来自[http://www.ericSink.com/articles/vcs\\_trends.html](http://www.ericSink.com/articles/vcs_trends.html)



## 一切为了更方便地“协作”

### 分布式配置管理的精髓：

本地存储库的根本目的是为了更方便地访问代码

多站点；离线工作

优异的性能

以开发人员为本

RTC的目的是在集中存储库的方式下，体现出分布式配置管理的“大部分”优势



## 日程

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## (一) 让所有人都可以访问代码

### 分布式配置管理的理念：

即使没有提交权限，甚至没有网络连接，依然可以修改程序

### RTC的设计模型：

允许用户在没有交付权限的情况下拥有、修改代码；  
并不强制开发人员共享他们的修改（备份，尝试和验证）





# 存储库工作区 Repository Workspace

## RTC的创新

个人工作环境

存在于服务器端

不同于传统的公共环境->个人环境模式

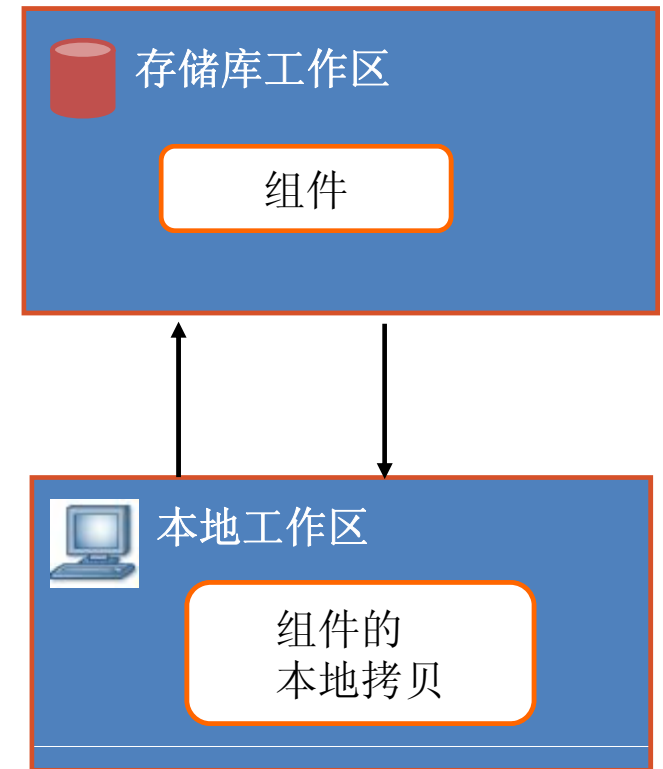
## 开发人员拥有主控权

可以随意修改代码、检入变更、尝试功能、回退修改、备份程序

自行决定 什么时候交付,接受

## 代码交换的媒介

可绕过流实体, 进行变更的传递



## （二）不要让“分支”停留在口头上

人们总是喜欢讨论并行开发、规划它但是很难真正做到

暴露太多“多分支的实现细节”，吓倒了开发人员  
根本原因在于“合并”和冲突解决

### RTC的设计模型：

简化操作，在界面中根本看不到分支这个词，像日常吃饭喝水一样容易  
在个人环境下解决冲突。不影响团队；



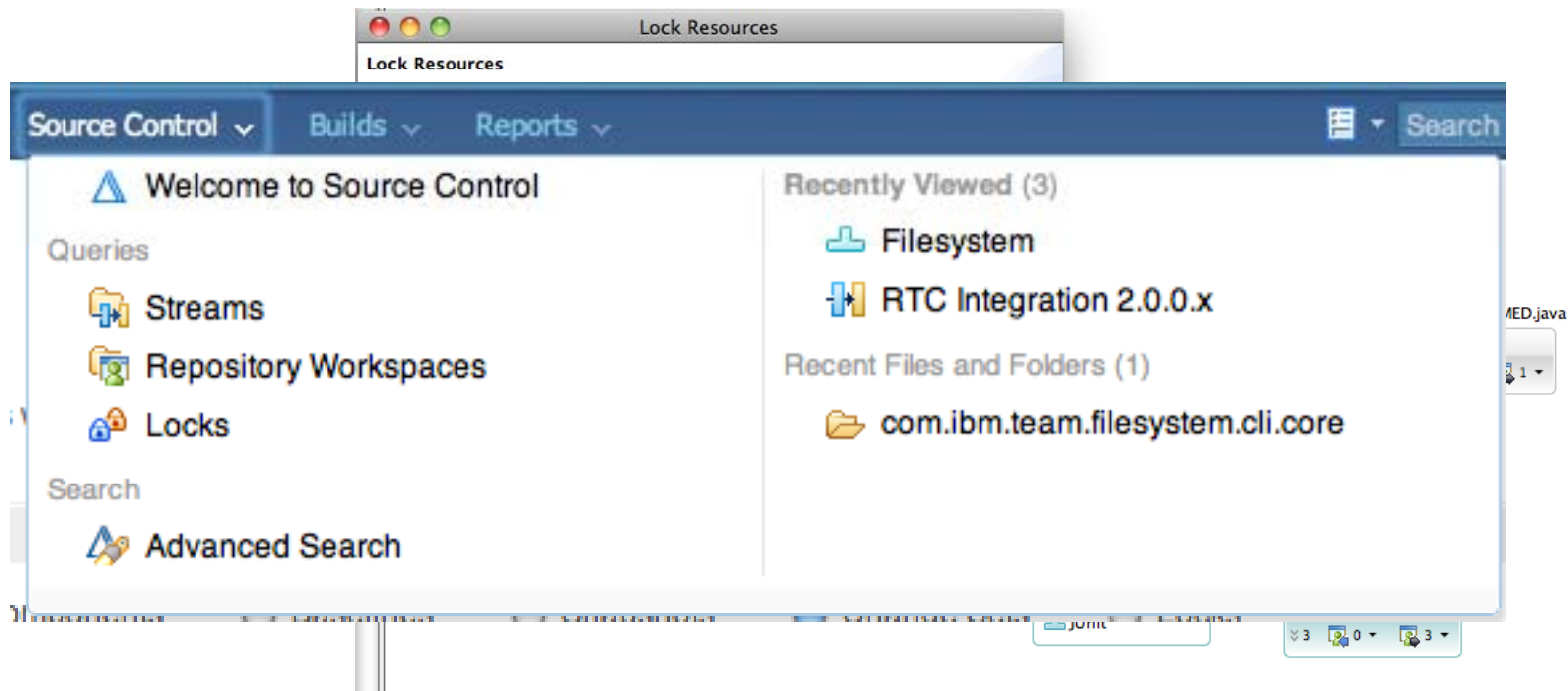
### （三）对简单模式的支持（乐观锁与悲观锁）

不希望或者不能并行修改？

RTC通过锁定方式控制

通过WEB，可以直接在流上进行修改

将来的版本中，将会实现传统的，基于流的修改方式



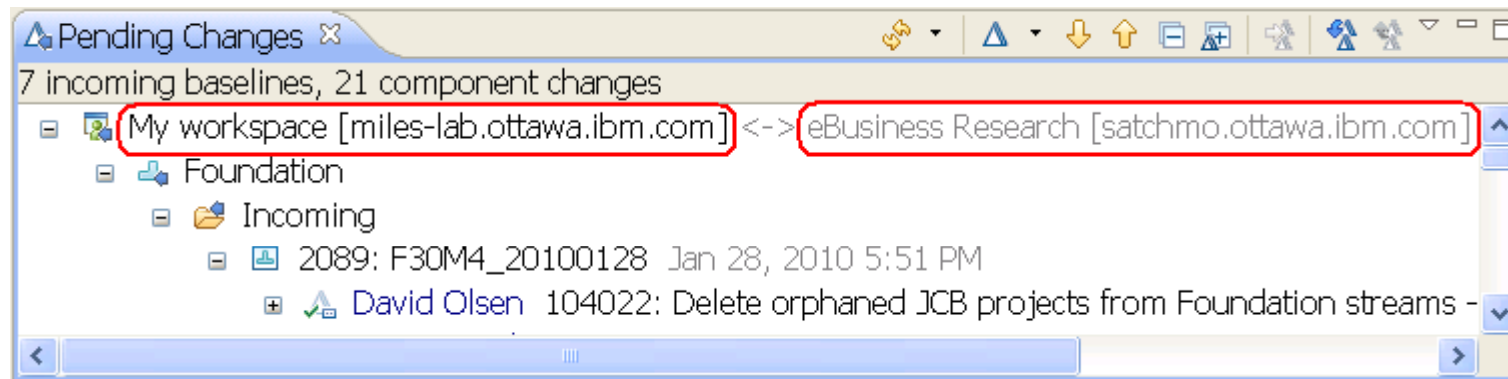
## （四）支持分布式 workflows

### RTC也支持分布式存储库

尽管RTC已经是为WAN网络环境设计优化的

RTC支持跨存储库提交和同步

RTC不要求克隆整个存储库，只需同步需要的“组件”



## 日程

配置管理的现状

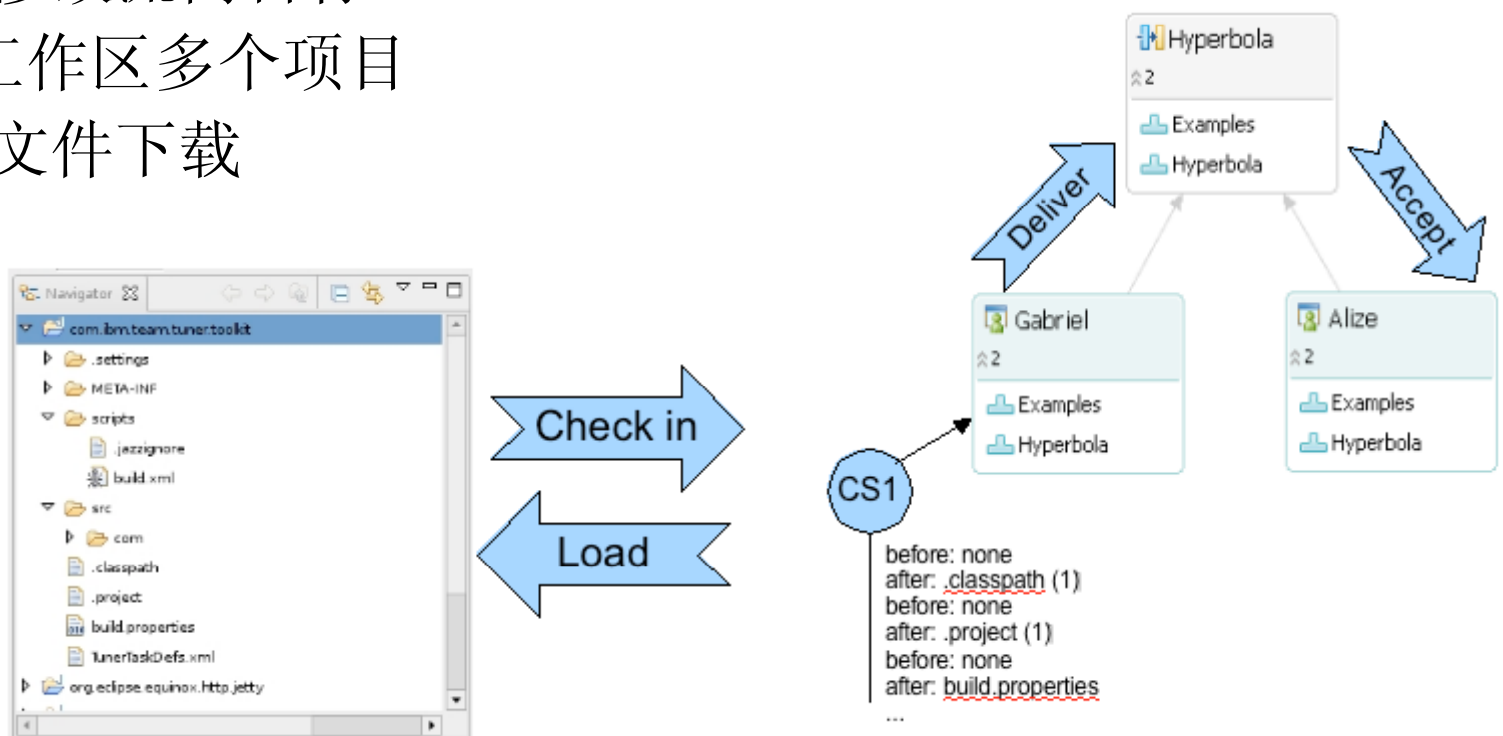
RTC配置管理设计目标

典型的RTC配置管理场景



## 创建工作环境

支持对组件、流的权限控制  
 可随意指定/修改流向目标  
 一个存储库工作区多个项目  
 多线程/增量文件下载



## 程序开发/检入

无须检出的修改

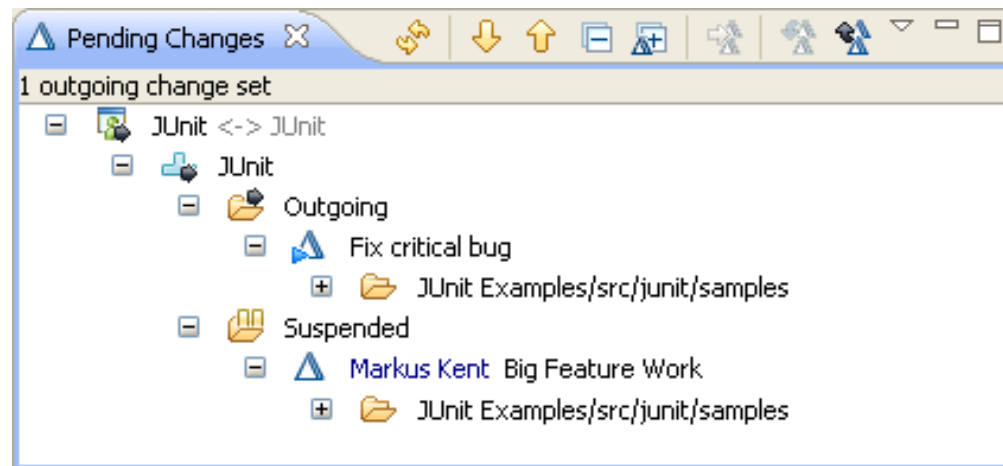
与开发工具的集成

实时刷新工作区

挂起与恢复

先开发后关联变更集

多个变更集关联一个工作项



# 程序回退

## 开发过程中的程序回退

Eclipse本地历史记录

废弃变更集

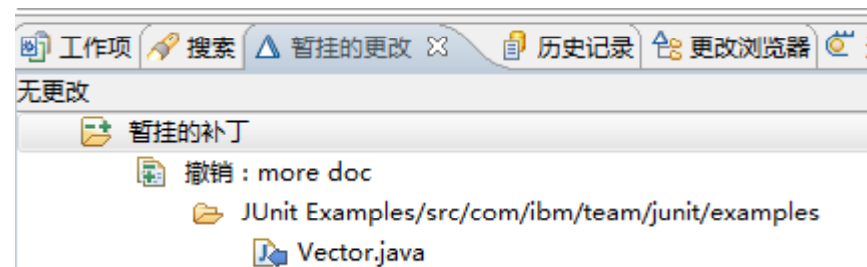
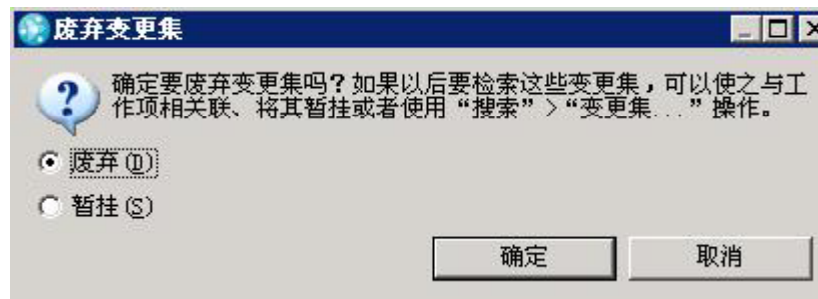
## 流上的程序回退

替换组件基线

撤销变更集

## RTC其实不会删除任何变更

需要时可找回

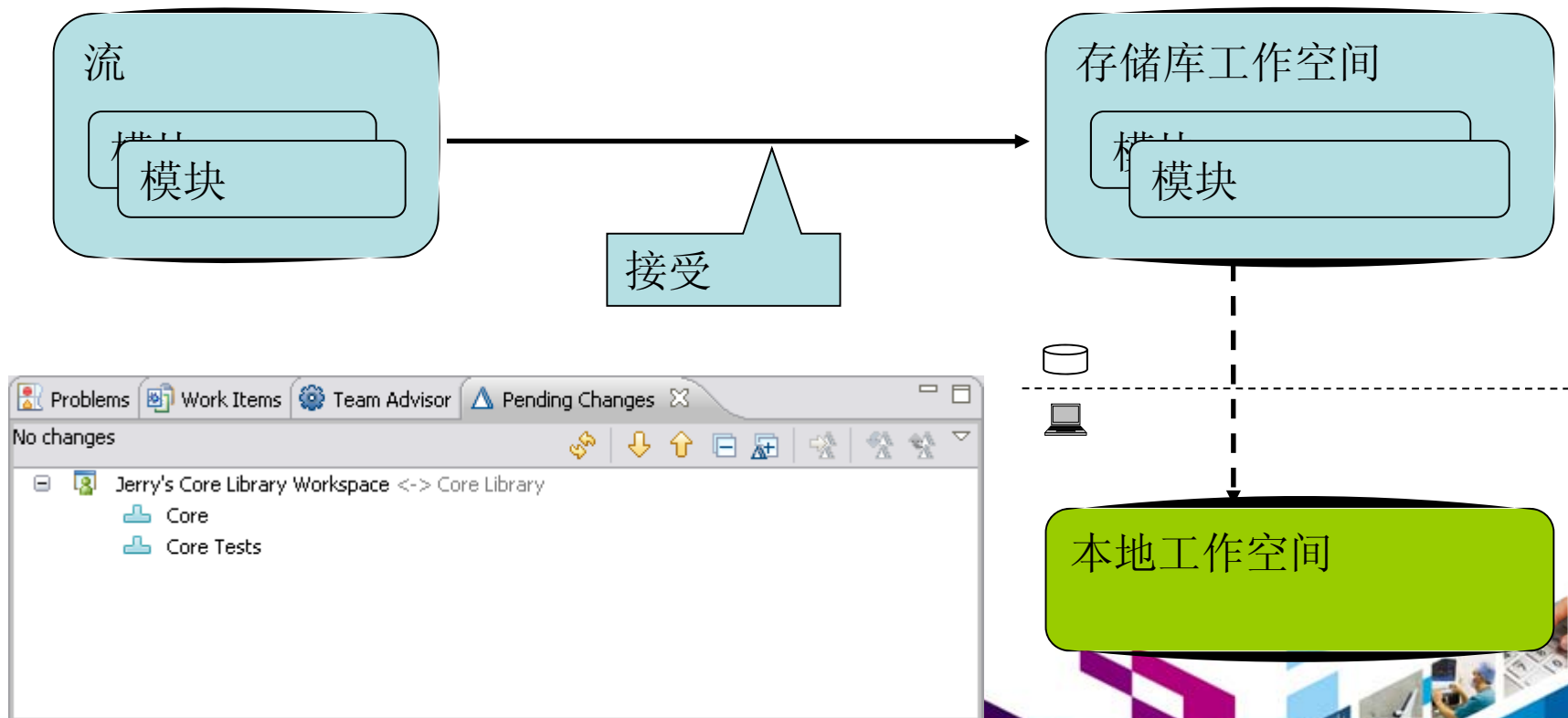




# 接受变更

合并操作发生在存储库工作区中

“流向目标”可以是流，也可以是另一个存储库工作区  
以变更集为单位



# 交付变更

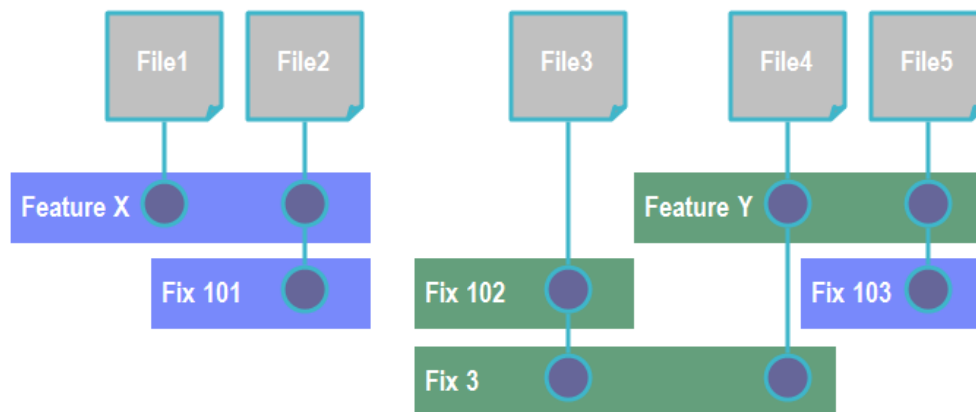
交付操作不产生新版本

按需使用的流

变更集区分组件

依赖检测

Evil Twins



## 浏览、察看、比较

历史信息

RTC强调What, Why,Who而不是Where

201: FA-T4

**Task 201**

Summary: \* FA-T4 → Resolved

Overview | Links | Approvals | History

Change Explorer | History | Pending Changes | Work It

<No Comment>

- code
  - alwaysConflicts.txt
  - neverConflicts.txt
  - code/evilTwinDir/moveMeDir (moved from code/moveMeDir)
  - code/renamedDir (moved from code/renameMeDir)

Problems | Javadoc | Declaratio | Work Item | Pending C | History

ScmService.java in Workspace JM5CM - SCM

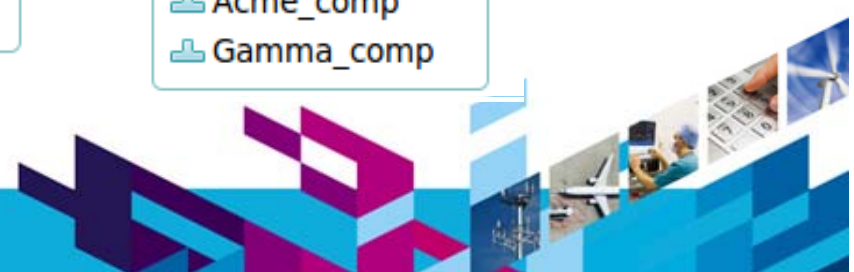
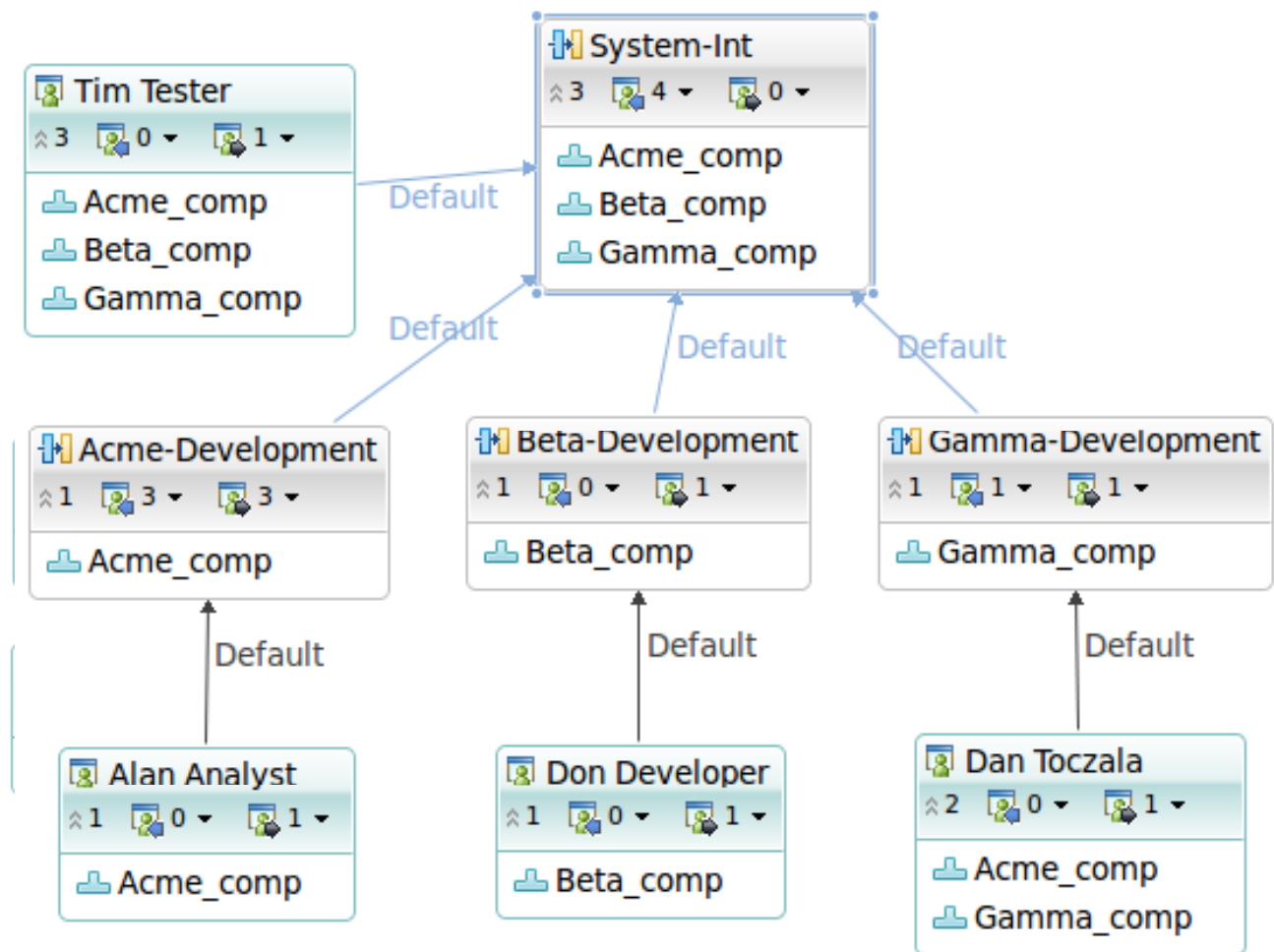
Merges	Comment	Creator
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	20573: Design replacement for vtime ε...	Dmitry Karasik
	27033: IChangeSet.getComment() ret...	John Camelon
	26894: Remove IScmService deprecat ...	Carol Yutkowitz
	26747: reduce deprecated usage in sc...	John Camelon
	26669: Data model constraints differ f...	John Camelon

moved

← renamed



## 灵活的流策略支持



## 总结

### 保证满足企业级配置管理要求

统一用户管理

安全

流程控制

高可用性

### 尊重分布式需求

简单、直观

强调协作和灵活

### 新理念、新技术、新架构



# RTC

### Phase Plan

Plan Details Edit

Planned Items Links Snapshots Resources Notes

View As: Work Breakdown and Schedule

### Planned Items

View As: Taskboard

**Andrew Hoo**  
Closed Items: 1 | Open Items: 4  
Load: 6/21 | +15 h  
Estimated: 100%

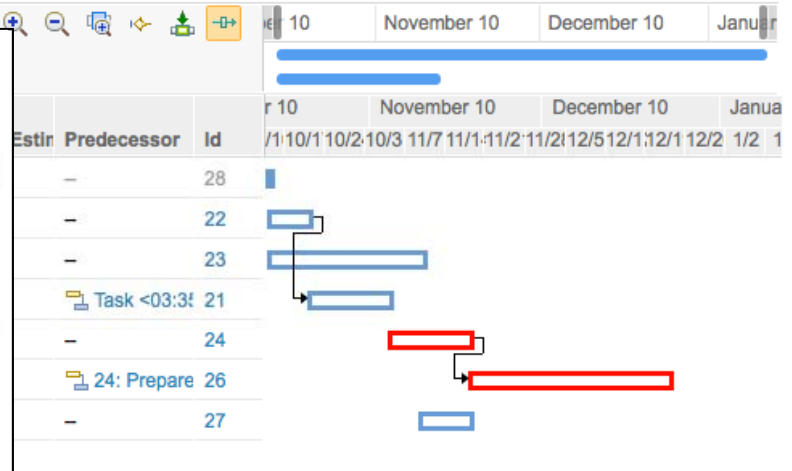
Story	Open	In Progress	Resolved
Implement compact		Expose rendering for registrations 2 hours 2 days	Expose rendering for users 1 day 1 day
Add colors to the page	Pick nice colors 4 hours		

**Heather Fraser-Dube**  
Closed Items: 1 | Open Items: 1  
Load: 1/21 | +20 h  
Estimated: 100%

Story	Open	In Progress	Resolved
Implement compact		Expose rendering for donations 1 hour 2 days	Implement the figure colors 1 hour 1 hour

**Jean-Michel Lemieux**  
Closed Items: 1 | Open Items: 1  
Load: 2/16.75 | +14.75 h  
Estimated: 100%

Story	Open	In Progress	Resolved
	Jar packaging is failing when		Finish the javadoc in our server APIs 4 hours 4 hours



甘特图

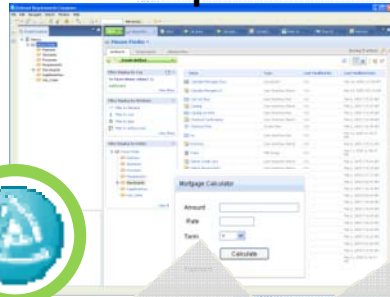
支持不同类型的开发方式

任务板

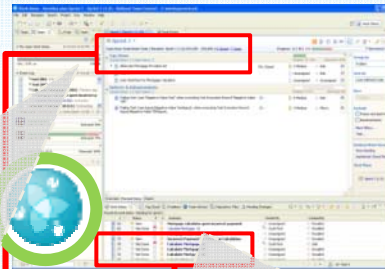
## CALM



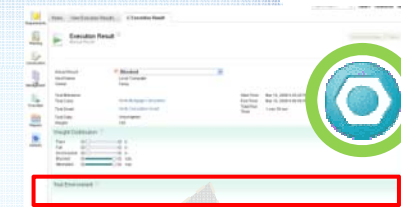
Analyst  
**Rational Requirements Composer**



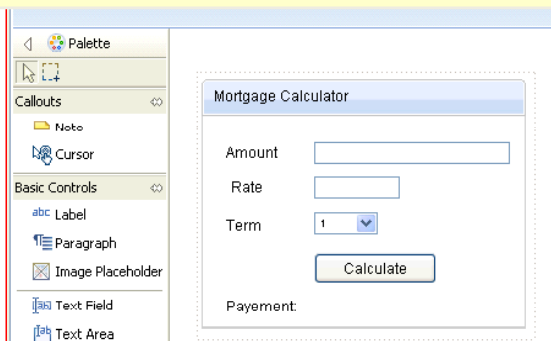
Developer  
**Rational Team Concert**



Tester  
**Rational Quality Manager**

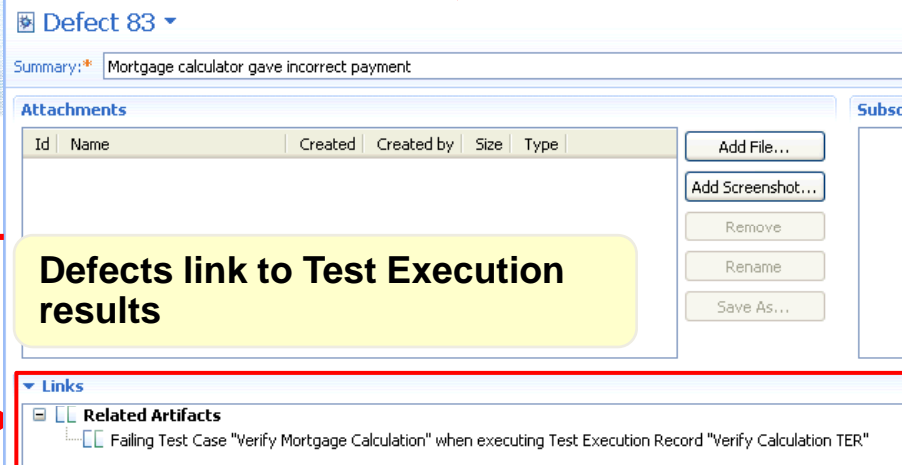


**Defects can link to requirements**



**Test Execution Results link to defects**

**Defects link to Test Execution results**



## 报表展现

**Jazz Project Description**

Process enabled team collaboration platform

The goal of the Jazz project is to build a scalable, extensible team collaboration platform for seamlessly integrating tasks across the software lifecycle. The new technology is called the Jazz Platform. The Jazz project is defining the overall architecture of the Jazz Platform, and building an initial set of Jazz components that plug in to the Jazz Platform.

The work in the Jazz project is divided into development work and maintenance work. Development work produces a consecutive line of releases. Maintenance work produces bug fix releases of the released produced by the development work.

Development as well as maintenance work is overseen by the PMC. The team members listed in this project area constitute the PMC.

**Jazz Project Members (11)**

CQ Connector Account	connector
Dejan Glozic	dashboardadmin
Erich Gamma	dashboardadmin, projectadmin, PMC, contributor
Jean-Michel Lemieux	dashboardadmin, projectadmin, PMC, contributor
John Vasta	connectoradmin
Kai-Uwe Maetzel	PMC, contributor
Kevin Haaland	PMC, contributor
Kim Moir	projectadmin
Peter Klenk	PMC, contributor
Scott Rich	PMC, contributor

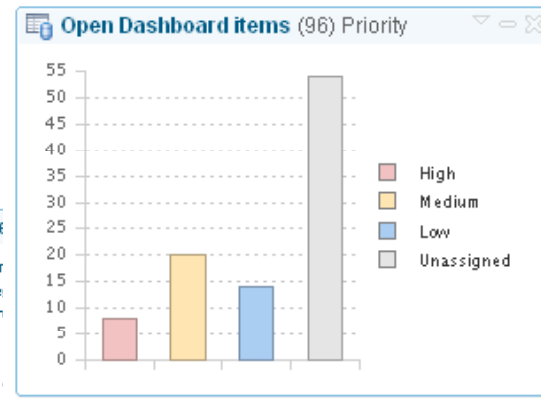
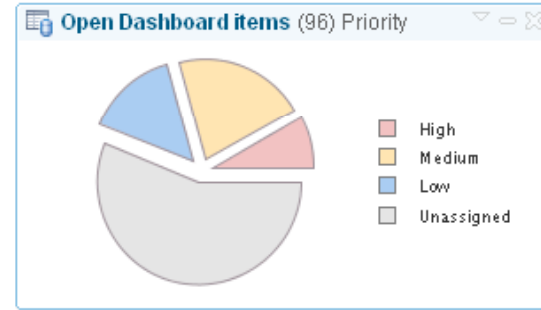
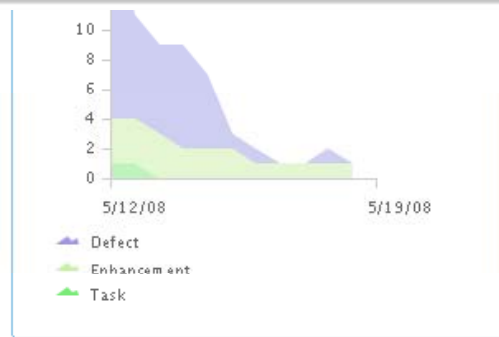
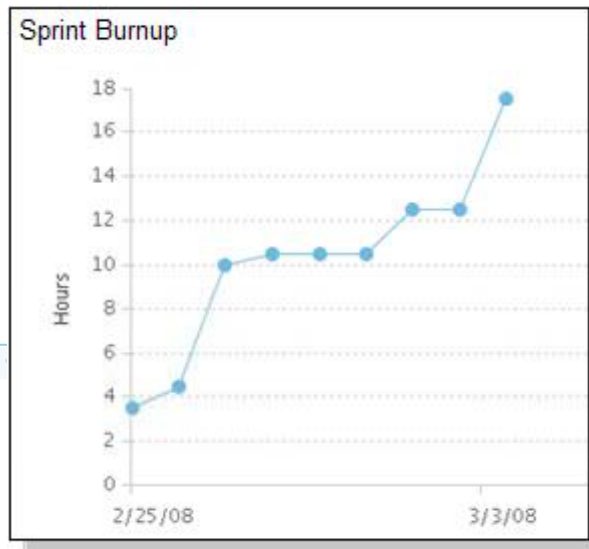
Page 1 of 2

**Jazz Proj**

- Jazz Devel
- Agile P
- Build
- ClearC
- ClearQ
- Comm
- Dashb
- Develo
- Improv
- Incubal
- Install
- Jumps
- Proces
- Releas
- Report
- Reposi
- Source
- Systerr
- UI Des
- User A:
- Web UI
- Work Ib
- X-Team
- Jazz Maint

**Open vs Closed Work Items**

Team Area: /Jazz Development/Dashboard  
Category: Dashboards  
Interval: 0.6 RC3



**Open Dashboard items (96) Priority**

High(8) Medium(20) Low(14)  
**Unassigned(54)**

**Open Dashboard items (96) Priority**

Priority	Count
High	8
Medium	20
Low	14
Unassigned	54



# QUESTIONS

[www.ibm.com/software/rational](http://www.ibm.com/software/rational)





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## Backup



