



# Effective Test Planning and Execution Tracking Using IBM® Rational® Quality Manager

RQM Development Team

IBM Software

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# Effective Test Planning and Execution Tracking Using IBM® Rational® Quality Manager

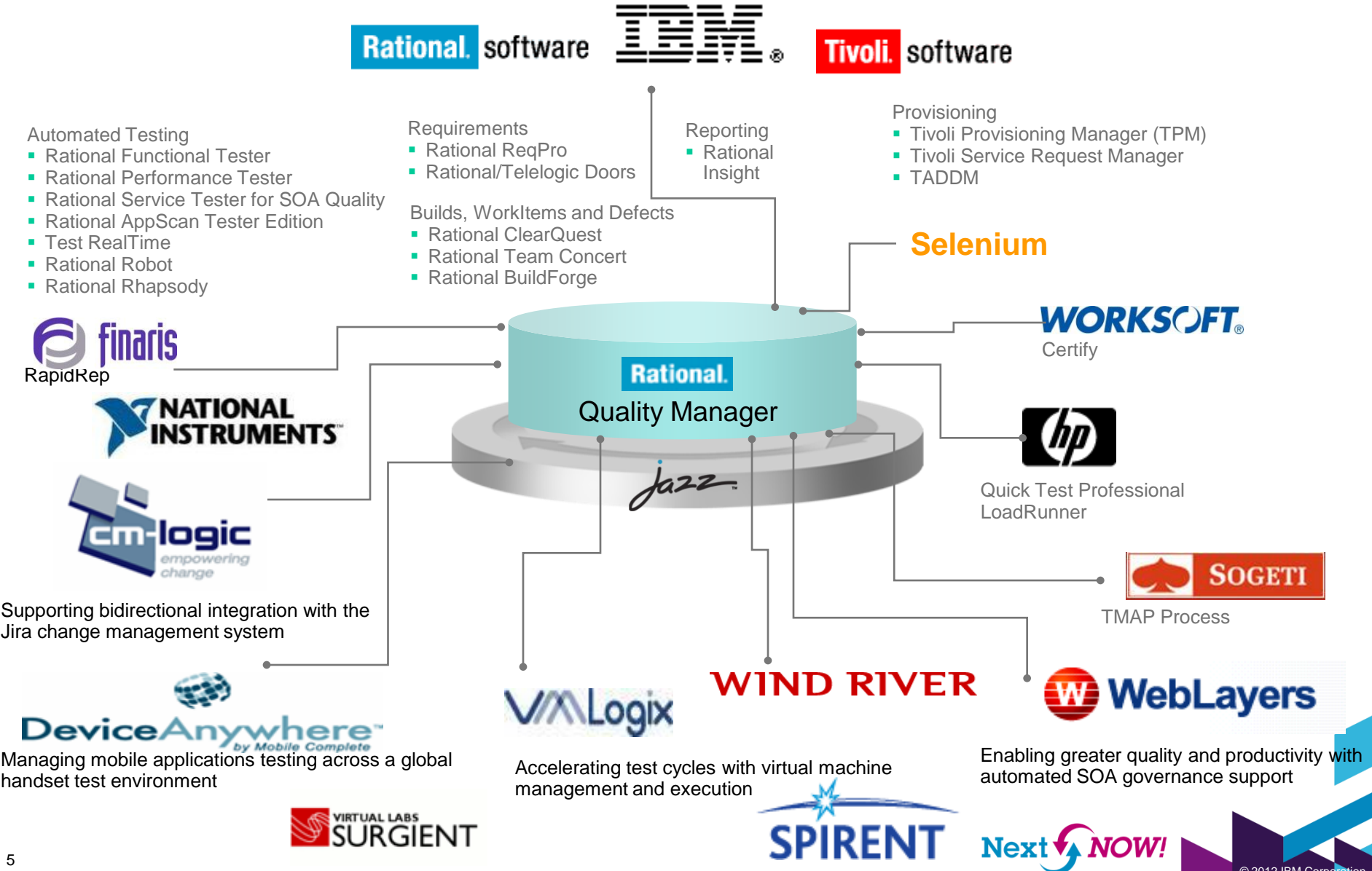
## Agenda

- Introduction
- Estimating the Test Effort
- Prioritizing the Test Effort
- Tracking Progress
- Questions

# Rational Quality Manager: Central Hub for Quality Management



# Rational Quality Manager Open Ecosystem



# Rational Quality Manager: A Closer Look

## Test Planning

- Comprehensive test plan
- Shared objectives
- Scope, Timeline, Resources
- Risk assessment

## Test Construction

- Requirements driven testing
- Test environments coverage
- Manual test authoring
- Test lab management

## Test Execution

- Manual test execution
- Use test automation tools
- Record test results
- Submit & track defects

## Team Collaboration

- Process enactment and enforcement
- Review and approval
- Task management
- Rapid team member on-boarding

## Reporting & Dashboard

- Status and progress tracking
- Customizable live dashboard
- Real-time metrics and reports
- Compliance and quality audit



# Introduction

## New artifact fields in RQM

- Priority
- Estimate
- Time Spent



Test Case Execution Records >

\* (QM Tutorial) Allocate Dividends to Multiple Causes

Originator: QM User      Owner: QM User

Team Area: Unassigned

Priority: High

Blocking Status: Blocked      Run On: May 27, 201

Last Result: Passed

Description: < Click here to enter a description >

### Overview

Test Plan:	Unassigned
Test Case: *	(QM Tutorial) Allocate Dividends to Multiple Causes
Default Test Script:	Allocate Dividends to Multiple
Iteration:	
Available Test Environments:	Unassigned
Weight: *	125
Estimate:	4 hours
Time Spent:	2 hours

# Introduction

## New artifact fields in RQM: Priority

Field	Artifact Types	Usage
Priority	<ul style="list-style-type: none"> <li>• Test Plan</li> <li>• Test Case</li> <li>• Test Suite</li> <li>• TER</li> </ul>	<ul style="list-style-type: none"> <li>• An enumeration of values describing relative priority of one test vs. another</li> <li>• Out of the box values: High, Medium, and Low</li> <li>• Viewable/Filterable/Sortable within Table Views</li> <li>• Used to make intelligent decisions of what test to focus on first and what to defer if needed</li> <li>• Yes, we know some of you use “weight” for this already</li> </ul>



# Introduction

## New artifact fields in RQM: Estimate

Field	Artifact Types	Usage
Estimate	<ul style="list-style-type: none"> <li>• Test Case</li> <li>• Test Suite</li> <li>• TER</li> </ul>	<ul style="list-style-type: none"> <li>• A time measure of how long it will take to execute a test</li> <li>• For TERs: used with “Time Spent” to provide live execution progress data: Test Plan progress and progress by Owner</li> <li>• Viewable/Filterable/Sortable within Table Views</li> <li>• Yes, we know some of you used “weight” for this already</li> </ul>

# Introduction

## New artifact fields in RQM: Time Spent

Field	Artifact Types	Usage
Time Spent	<ul style="list-style-type: none"> <li>• TER</li> </ul>	<ul style="list-style-type: none"> <li>• The actual time it took to run a test</li> <li>• Used with “Estimate” to provide live execution progress data: Test Plan progress and progress by Owner</li> <li>• Viewable/Filterable/Sortable within Table Views</li> <li>• Used to correct Estimates based on historical data to help with more accurate future planning</li> </ul>

# Estimating the Test Effort

How can I plan my testing in a way that allows me to evenly distribute work across the team and make intelligent decisions about load balancing?



# Estimating the Test Effort

## Setting estimate on test cases

When you set an estimate and/or priority on a test case, all TERs generated from that test case will inherit the estimate and priority values

Test Cases >

\* 12: Organization must provide justification for why funds are needed

Cancel Save

Test Case Overview | Snapshots | History

State: Under Review Action: Change State

Originator: Tanuj Owner: Tanuj

Priority: High

Description: < Click here to enter a description >

Generate Test Case Execution Records

Step1 > Step2 > Step3

Generated Test Case Execution Records Organization must provide justification for why funds are needed

Group By: Ungrouped

Quality Task: Allows you to associate, create and generate execution records for an individual test case. Execution records contain detailed configuration information for the test case and the high level results for case execution. Detailed results are in the log files.

Group By: Ungrouped

10 Items per page

Priority	Name	Test Case	Test Environment	Iteration
High	Organization must ...	Organization must pr...	Chrome	S1
High	Organization must ...	Organization must pr...	Chrome 10	S1
High	Organization must ...	Organization must pr...	Chrome 11	S1
High	Organization must ...	Organization must pr...	Chrome 12	S1

# Estimating the Test Effort Using historical time spent

You can use “time spent” from prior iterations to make intelligent decisions about correcting estimates

## Test Case Execution Records ?

This section lists the related test case execution records for the test plan.

View As: General Group By: Iteration

Show All Items per page

Previous | 1 | Next

ID	Iteration	Priority	Name	Owner	Estimate	Time Spent
<b>S1 (1 - 8 of 8)</b>						
1	S1	High	Allocate_Dividends_to_a_Single_Cause_...	Tanuj	5 h	7 h
2	S1	High	Allocate_Dividends_to_a_Single_Cause_...	Tanuj	5 h	6 h
3	S1	High	Allocate_Dividends_to_a_Single_Cause_I...	Tanuj	5 h	3 h
4	S1	Medium	Pay_Bills_Online_InternetExplorer_DB2_...	Tanuj	1 d 2 h	1 d
5	S1	High	Request_Credit_Increase_InternetExplo...	Tanuj	5 h	2 h
6	S1	Medium	Dividend_Allocation_by_Percentage_Firef...	Marco	1 d 2 h	1 d 7 h
7	S1	High	Dividend_Allocation_by_Percentage_Firef...	Marco	1 d 2 h	1 d 5 h
8	S1	Medium	Dividend_Allocation_by_Percentage_Inter...	Marco	1 d 2 h	7 h
<b>S2 (1 - 6 of 6)</b>						
9	S2	High	Allocate_Dividends_to_a_Single_Cause_...	Marco	0 s	0 s
10	S2	High	Allocate_Dividends_to_a_Single_Cause_...	Marco	5 h	6 h

# Prioritizing the Test Effort

How can I plan my testing in a way that ensures that my team executes the most important tests first and defers the least important?



# Prioritizing the Test Effort

## Creating custom priorities for your organization

The Project Area Administration page has a “Priority” entry in the newest version of RQM that allows you to rename, remove, and create custom priority values.

You can set the default priority value used for new test artifacts.

You can insert new priority values within the existing hierarchy indicating relative priority.

This project area is part of a Lifecycle Project: Money that Matters Sample

Active Project Areas >

\* JKE Banking (Quality Management) \*

- Overview
- Timelines
- Roles
- Permissions
- Iteration Types
- Access Control
- RequisitePro Projects
- Process Description
- Releases
- Categories
- Mail Templates
- Work Items
- Test Artifacts
  - Workflows
  - Priority**

### Test Artifacts - Priority

Define the priorities for test artifacts.

Final (ignore customization of this data in child areas)

Properties

Default Literal: \* Medium

Literals

To create a new priority literal, 1st select an existing literal. Click on literal.

Icon	Name
	Unassigned
	Low
	Medium
	High
	Must

# Prioritizing the Test Effort

## Deriving test case priority – requirements and workitems

Use Requirement “Business Priority” and Workitem “Priority” and “Story Points” to determine Test Case priority.

The new “Traceability” view for Test Cases is great for this. You can add those columns to all Test Case views. BTW – the icon “decorations” are live and indicate related asset status. Cool!

Test Cases <sup>?</sup>

The screenshot shows the 'Test Cases' application interface. At the top left, the 'View As' dropdown menu is highlighted with a red box and set to 'Traceability'. Below it, the 'Items per page' is set to 10. The main table displays a list of test cases with two additional columns highlighted by a red box: 'Validates Requirement' and 'Tests Development Item'. The table contains 10 rows of test case data, each with an ID, Name, and corresponding requirement and development item links.

ID	Name	Validates Requirement	Tests Development Item
1	Verify dividend transfer frequency	Frequency of dividend transfer	Frequency of dividend transfer
7	Allocate dividends by amount and frequency	Allocate dividends by amount an...	Allocate dividends by amount an...
8	Organizations may apply with an initial request	Organizations may apply with an ...	Organizations may apply with an ...
9	Donors Can Choose to Support an Organization	Donors can choose to support a...	Donors Can Choose to Support ...
2	Donors Deposit Money Into a Pooled Assistanc...	--	Donors Deposit Money Into a Po...
3	Allocate Dividends by Percentage	Allocate dividends by Percentage	Allocate Dividends by Percentage
4	Process hard copy requests	Requests sent in form of hard co...	Requests sent in form of hard co...
5	Process email requests	Requests sent in form of email	Requests sent in form of email
6	Organization must identify how much money is ...	Organization must identify how ...	Organization must identify how ...
20	Check Account Balance	--	--



# Prioritizing the Test Effort

## Deriving test case priority – defects and prior runs

Use defects found and results of prior runs to determine “sensitive” areas that require more focus.

Use a filtered TER view and leverage the new “Defects” column to make intelligent decisions here.

Test Case Results ?

View As: **General** Group By: **Ungrouped**

10 Items per page Previous | 1, 2, 3, 4, 5 | Next

ID	Name	State	Test Case	Test Script	Status	Defects
17	Allocate_Dividends_by_Percentag...	Draft	Allocate Dividends by Pe...	Allocate Dividends by P...	Failed	Organizati...
31	Allocate_Dividends_to_a_Single_...	Draft	Allocate Dividends to a S...	Allocate Dividends to a ...	Passed	--
29	Dividend_Allocation_by_Percenta...	Draft	Dividend Allocation by P...	Allocate Dividends by P...	Passed	--
15	Allocate_Dividends_to_a_Single_...	Draft	Allocate Dividends to a S...	Allocate Dividends to a ...	Failed	Organizati...
33	Allocate_Dividends_by_Percentag...	Draft	Allocate Dividends by Pe...	Allocate Dividends by P...	Passed	--
4	Allocate_Dividends_to_a_Single_...	Draft	Allocate Dividends to a S...	Allocate Dividends to a ...	Passed	--
44	Dividend_Allocation_by_Percenta...	Draft	Dividend Allocation by P...	Allocate Dividends by P...	Passed	--
14	Dividend_Allocation_by_Percenta...	Draft	Dividend Allocation by P...	Allocate Dividends by P...	Passed	--
28	Dividend_Allocation_by_Percenta...	Draft	Dividend Allocation by P...	Allocate Dividends by P...	Blocked	Organizati...
12	Allocate_Dividends_to_a_Single_...	Draft	Allocate Dividends to a S...	Allocate Dividends to a ...	Passed	--

# Prioritizing the Test Effort

## Deriving test plan priority

Do you classify test plans with categories to indicate type of testing? Using categories (like Test Phase) to separate plans by regression, translation, new feature, etc. is useful to define relative priority.

Additionally, Test Plans have traceability views to Requirement Collections and Development Plans that can also drive decisions on priority.

### Test Plans ?

View As: Traceability Group By: Ungrouped

Show All ▼ Items per page ◀ Previous | 1 | Next ▶

<input type="checkbox"/>	ID	Name	Validates Requirement Collection	Tests Development Plan	Priority	Test Phase
<input type="checkbox"/>	1	Development Test	157: Release 1 Planning	BRM Sprint 2 (1.0) Plan		Developer Test
<input type="checkbox"/>	2	System Verification	157: Release 1 Planning	BRM Sprint 2 (1.0) Plan		Integration Test

# Tracking Progress

How can I track execution progress and make adjustments real-time to react to business reality?



# Tracking Progress Test plans – live view

Use the new test plan “Live View” for real-time, at a glance, info on how your testing is progressing.

Test Plans >

\* 2: System Verification

**Test Plan Overview** | [Snapshots](#) | [History](#)

State: Draft      Action:  ▼

Originator: Tammy      Owner:  ▼

Priority: High ▼

**Execution Progress**

Test Case: Estimated: 100%      Progress: 1155      Total: 1580  
Total: 104/105 h

Test Suite: Estimated: 0%      Progress: 0      Total: 0

Description: Formal test plan for system verification.

# Tracking Progress

## Test plans – Execution view

The test plan list view has a “view as Execution” option. You can see execution progress against estimates, points, and overall test case coverage.

Tip: expand the test plan to see progress against iterations.

### Test Plans <sup>?</sup>

View As: Execution ▼

Show All ▼ Items per page
« Previous | 1 | Next »

	ID	Name	Iteration	Test Case Estimates	Test Case Points	Test Case Attempts
	1	Development Test	TestPlan 1	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Total: 107/115 h      Estimated: 100%	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:1320      Total:1520	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:14
	2	System Verification	TestPlan 2	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Total: 97/100 h      Estimated: 100%	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:1155      Total:1580	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:10
			S1	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Total: 61/60 h      Estimated: 100%	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:805      Total:905	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:7
			S2	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Total: 36/40 h      Estimated: 100%	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:350      Total:675	<div style="display: flex; align-items: center;"> <div style="flex: 1; background-color: #e0e0e0; border: 1px solid #ccc; margin-bottom: 2px;"></div> <div style="flex: 1; background-color: #c0e0c0; border: 1px solid #ccc; margin-bottom: 2px;"></div> </div> Progress:3

# Tracking Progress

## Test plans – TER view

There's a new section for test plans to list all TERs associated with the plan. "Group By Owner" shows you individual progress.

### Test Case Execution Records ?

View As:  Group By:

10 Items per page Previous | 1, 2 | Next

ID	Priority	Name	Test Case	Iteration	Owner	Last Res	Time Spent	Estimate
<b>Marco (1 - 9 of 9)</b>								
12		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S2	Marco	✓	1 d 6 h	1 d 2 h
10		Allocate_Dividends_to_a_Single...	Allocate Dividends to a ...	S2	Marco	✓	6 h	5 h
9		Allocate_Dividends_to_a_Single...	Allocate Dividends to a ...	S2	Marco	✓	7 h	5 h
7		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S1	Marco	✓	1 d 5 h	1 d 2 h
6		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S1	Marco	✓	1 d 7 h	1 d 2 h
14		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S2	Marco	○	6 h	1 d 2 h
13		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S2	Marco	○	7 h	1 d 2 h
11		Allocate_Dividends_to_a_Single...	Allocate Dividends to a ...	S2	Marco	○	3 h	5 h
8		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S1	Marco	○	7 h	1 d 2 h
<b>Tanuj (1 - 1 of 5)</b>								
5		Request_Credit_Increase_Intern...	Request Credit Increase	S1	Tanuj	○	2 h	5 h

# Tracking Progress TER view

Use the TER view grouped by owner to reassign test ownership. Transfer TERs from overbooked testers to under-booked testers.

The TER view in a plan is great, but the general TER view can also be grouped by Owner for a more holistic view.

Test Case Execution Records ?

View As: General Group By: Owner Type Filter Text

Show All Items per page Previous | 1 | Next

ID	Priori	Name	Test Case	Iteration	Owner	Last Res	Time Spent	Estimate
<div style="border: 1px solid red; padding: 5px; width: fit-content;"> <b>Change Owner</b>                       Owner: <span>Deb</span>   <span>OK</span> <span>Cancel</span> </div>								
21		Allocate_dividends_by_amount_a...	Allocate dividends by a...	S1	Tanuj		6 h	2 d
31		Allocate_Dividends_to_a_Single_...	Allocate Dividends to a ...	S2	Tanuj	✓	3 h	5 h
29		Dividend_Allocation_by_Percenta...	Dividend Allocation by P...	S1	Tanuj	✓	1 d	1 d 2 h
28		JKE_Charity_Coordinator_respon...	JKE Charity Coordinator ...	S1	Tanuj	✓	1 d	1 d 2 h
18		Allocate_Dividends_by_Percentag...	Allocate Dividends by Pe...	S1	Tanuj	✗	1 d	1 d 2 h

# Tracking Progress Dashboard viewlet – Test Plans Execution Status

Test plan execution status can be tracked via a viewlet on personal, team, and project dashboards.

Hover over progress bars for breakdowns of details.

Click on progress bars to open the relevant table of test case or test suite execution records.

**JKE Banking (Quality Management)**

General | Planning | Execution | Development | Defects

**Test Plans Execution Status (JKE Banking (Quality Management))**

Test Plan	Estimated	Total	Progress
Development Test	100%	1520	1320
System Verification	100%	1580	1155
User Acceptance	100%	1495	1495
Master Test Strategy	0%	0	0

**Progress Report - Points**

Total:	1520	Progress: 1320
Points attempted:	1320	Progress: 1155
Pass:	1058	Progress: 1495
Fail:	112	Progress: 0
Blocked:	100	Total: 0
PermFailed:	0	Progress: 0
Deferred:	0	Total: 0
Inconclusive:	150	Progress: 0
Points unattempted:	200	Total: 0

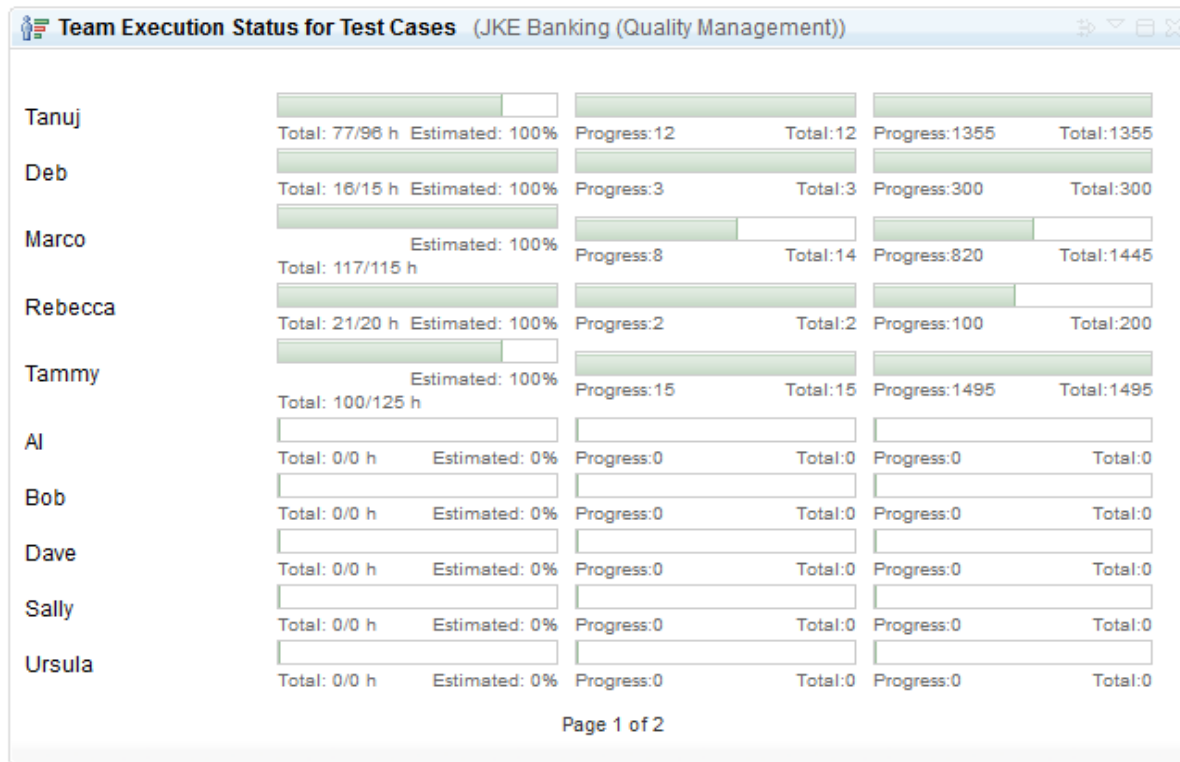
Page 1 of 1 | Next



# Tracking Progress Dashboard viewlet – Team Execution Status for Test Cases

A great team dashboard viewlet (also available on personal and project dashboards) that is a breakdown of your team's progress.

Hover over progress bars for breakdowns of details.



# Tracking Progress

## Reviewing what has not been executed: TER view

The TER view in a test plan filtered with “Last Result = Not Run and Failed” (e.g.) is a quick and easy way to see your exposure.

Leverage the priority you've assigned to TERs to assess risk and exposure, drilling into the associated test case's related requirements and workitems for a complete picture. Use the progress view to reassign those critical TERs!

ID	Priority	Name	Test Case	Iteration	Owner	Last Result
	Any			Any	Any	Not Run
<div style="display: flex; justify-content: space-between;"> <span>▼ Marco (1 - 5 of 5)</span> <div style="text-align: right;"> <span>Total: 31/45 h</span> <span>Estimated: 100%</span> </div> </div>						
13		Dividend_Allocation_by_Percentage_Fir...	Dividend Allocation by Perce...	S2	Marco	
8		Dividend_Allocation_by_Percentage_Int...	Dividend Allocation by Perce...	S1	Marco	
14		Dividend_Allocation_by_Percentage_Int...	Dividend Allocation by Perce...	S2	Marco	
11		Allocate_Dividends_to_a_Single_Caus...	Allocate Dividends to a Singl...	S2	Marco	
16		Dividend_Allocation_by_Percentage_Ch...	Dividend Allocation by Perce...	Unassigned	Marco	

# Tracking Progress

## Reviewing what has not been executed: Execution Records viewlet

You can save your TER query in the prior slide and use that to drive the Execution Records viewlet on your project, team, or personal dashboard.

Decorations in the viewlet include execution status and priority.



# Tracking Progress

## Reviewing requirement exposure in a report

Use the “Plan Requirement Defect Impact” report to view exposure for a test plan, iteration, requirement(s), owner, or TER state.

**Plan Requirements Defect Impact\***

► Parameters

**Requirements impacted by defects**

Requirement name	Test case	Defect ID	Defect name	Defect state
Allocate dividends by Percentage	Allocate Dividends to a Single Cause	38	Organization selection list is empty	New
Allocate dividends by amount and frequency	Allocate Dividends to a Single Cause	38	Organization selection list is empty	New
Dividend allocation by percentage	Allocate Dividends to a Single Cause	38	Organization selection list is empty	New
Donor Chooses an Organization	Allocate Dividends to a Single Cause	38	Organization selection list is empty	New
Donors can choose to support an organization	Allocate Dividends to a Single Cause	38	Organization selection list is empty	New

**Test cases impacted by blocked requirements**

Test case	Requirement name
Allocate Dividends to a Single Cause	Allocate dividends by Percentage Allocate dividends by amount and frequency

# Tracking Progress

## Reviewing what has not been executed: exporting to CSV

You may need to report status to others in your organization who may not want to or be licensed to use CLM reporting, let alone QM itself. CSV Export is a new 2012 feature that allows you to export exactly what you're seeing in any table view to a spreadsheet. Start your pivot table engines!

Show All Items per page
Previous | **1** | Next
📄 📄 📄 📄 📄 📄 📄 📄 📄 📄

ID	Priority	Name	Test Case	Iteration	Owner	Last Result	Time Spent	Estimate
<div style="display: flex; justify-content: space-between;"> <span>Marco (1 - 5 of 5)</span> <div style="text-align: right;"> <span>Total: 31/45 h</span> <span>Estimated: 100%</span> <span>Progress: 0</span> <span>Total: 525</span> </div> </div>								
13	🚫	Dividend_Allocation_by_Percentage_Firefox_DB2_WAS_Linux_S2	Dividend Allocation by Percentage	S2	Marco	○	7 h	1 d 2 h
8	📄	Dividend_Allocation_by_Percentage_InternetExplorer_DB2_WAS_Windows_S1	Dividend Allocation by Percentage	S1	Marco	○	7 h	1 d 2 h
44	📄	Dividend_Allocation_by_Percentage_InternetExplorer_DB2_WAS_Windows_S2	Dividend Allocation by Percentage	S2	Marco	○	7 h	1 d 2 h



Priority	Name	Test Case ID	Test Case	Iteration	Owner
Must	Dividend_Allocation_by_Percentage_Firefox_DB2_WAS_Linux_S2	18	Dividend Allocation by Percentage	S2	Marco
Low	Dividend_Allocation_by_Percentage_InternetExplorer_DB2_WAS_Windows_S1	18	Dividend Allocation by Percentage	S1	Marco
Low	Dividend_Allocation_by_Percentage_InternetExplorer_DB2_WAS_Windows_S2	18	Dividend Allocation by Percentage	S2	Marco
Medium	Allocate_Dividends_to_a_Single_Cause_InternetExplorer_DB2_WAS_Windows_S2	19	Allocate Dividends to a Single Cause	S2	Marco
Medium	Dividend_Allocation_by_Percentage_Chrome_DB2_Tomcat_Linux	18	Dividend Allocation by Percentage		Marco

## Summary

- Use priority to focus your test efforts and make intelligent decisions on what can be deferred.
- Estimate and time spent drive our live status views and allow you to better track your execution progress from a resource perspective.
- Traceability views provide easy access to linked data to make planning decisions.
- Live views in the test plan offer “at a glance” status without running a report.
- The TER section in a test plan is a powerful way to easily and conveniently track testing progress.
- New viewlets make tracking progress in a dashboard easier

# QUESTIONS

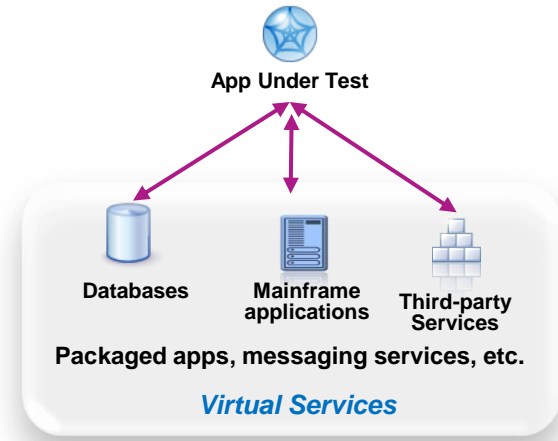
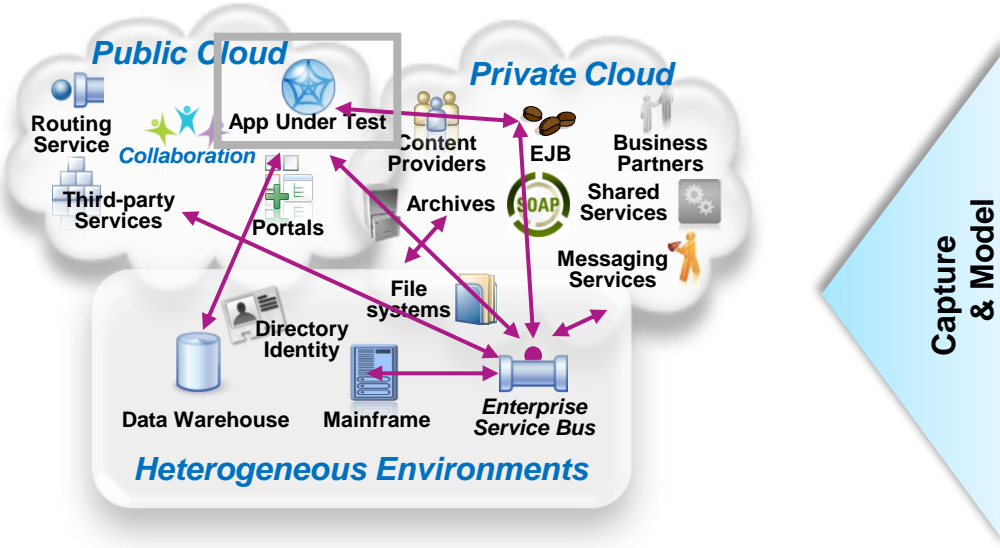
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# IBM Rational Test Virtualization Solution

Powered by Green Hat Technology



# What is Test Virtualization?



System dependencies is a key challenge in setting up test environments:

- ▶ **Unavailable/inaccessible:** Testing is constrained due to production schedules, security restrictions, contention between teams, or because they are still under development
- ▶ **Costly 3rd party access fees:** Developing or testing against Cloud-based or other shared services can result in costly usage fees
- ▶ **Impractical hardware-based virtualization:** Systems are either too difficult (mainframes) or remote (third-party services) to replicate via traditional hardware-based virtualization approaches

Test Virtualization enables to create “virtual services”:

- *Virtual Services simulate the behavior of an entire application or system during testing*
- *Virtual Services can run on commodity hardware, private cloud, public cloud*
- *Each developer, tester can easily have their own test environment*
- *Developer and testers continue to use their testing tools (Manual, Web performance, UI test automation)*

## Why IBM Rational Test Virtualization Solution ?

*A Smarter Solution for Better Quality*

### Significantly Lesser Test Lab costs

- Test lab infrastructure costs can be reduced by up to 90%
- Labor involved in setting up test environments can be reduced by 80%+
- Reduced or eliminate the cost of invoking 3rd party systems for non-production use, fee-based web services

### Reduced Cycle Time

- Test environments can be configured in minutes vs weeks
- More testers can be focused on testing, rather than configuring test environments
- More regression testing can be done independently from the User Interface, during development

### Lower Risk

- Developers have the means to test software earlier at the Service/API level
- Large teams working on different parts of an application or system can effectively do parallel development by virtualizing different parts of the system

Launched June 2012

# The New IBM Rational Solution

*Powered by Green Hat Technology*

## ■ IBM Rational Test Workbench

- Enable functional, performance and integration testing throughout your project lifecycle.
- With a script less, wizard-driven test authoring environment and support for more than 70 technologies and protocols,

## ■ IBM Rational Performance Test Server

- Save time and effort by reusing your functional integration tests for performance testing
- Combine your tests to model real-world scenarios and assess the impact of load on your integrated infrastructure.

## ■ IBM Rational Test Virtualization Server

- Model real system behavior to eliminate test dependencies and simulate production,
- Accelerate testing and reduce the setup and infrastructure costs of traditional testing environments.



QA staff



Test Workbench

Functional Testing  
Integration Testing  
Performance Testing  
Regression Testing

Test Servers

Load Agents  
Virtualization Agents



Test Lab Infrastructure



# Supported Environments & Technologies

## Messaging Protocols

- ActiveMQ
- Email (SMTP, IMAP)
- Files
- FTP/S
- HTTP/S
- JMS (JBOSS et al)
- IBM WebSphere MQ
- JBoss MQ
- SAP IDoc, BAPI, RFC & XI/PI
- Software AG's IB & IS
- Solace
- Sonic MQ
- TCP
- TIBCO Rendezvous, Smart Sockets & EMS
- Custom

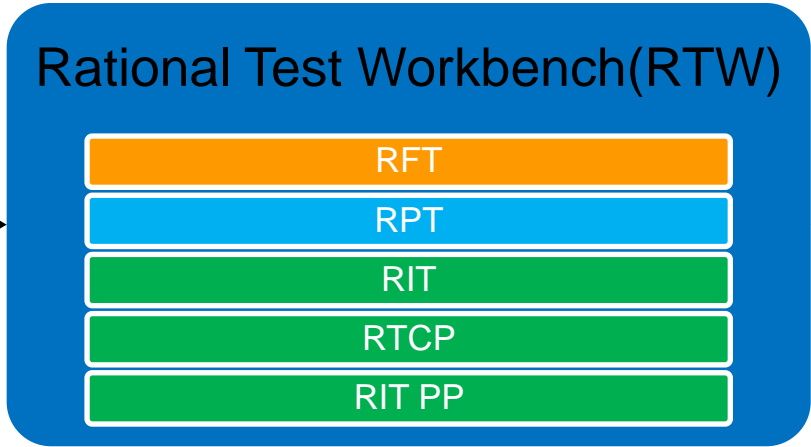
## SOA, ESB, Others

- CentraSite
- Oracle Fusion
- SCA Domain
- Software AG IS, BPMS
- Sonic ESB
- TIBCO ActiveMatrix
- UDDI
- Web Services
- WebSphere RR
- WSDL
  
- BPM
- Databases
- Log Files

## Message Formats

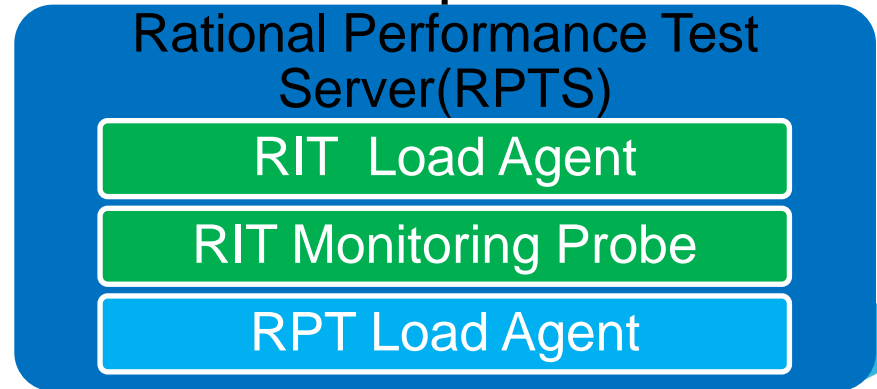
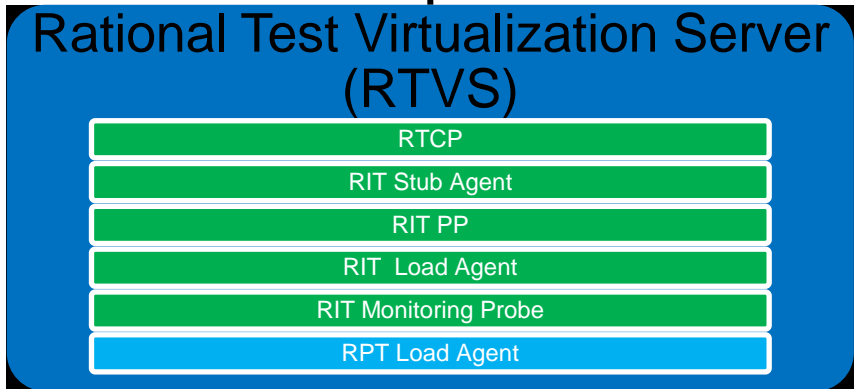
- .Net Objects
- Bytes
- COBOL Copybook
- ebXML
- EDI
- Fixed Width
- HL7
- IATA
- Java Objects
- MIME
- OAG
- SOAP
- Software AG Broker Docs
- SWIFT
- TIBCO ActiveEnterprise
- XML (DTD, XSD, WSDL)
- Custom

# The Solution Ingredients



*Requires RTW for creation of Test Virtualization assets*

*Requires RTW for creation of performance test assets*





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