

## 7.3 Meister Roadmap

Delivery Date: April 15, 2009

A technical review of enhancements that will be included in the 7.3 release of OpenMake Meister.

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## 7.3 Roadmap Overview

This document outlines the feature enhancements that are to be included in the 7.3 release of Meister. 7.3 will focus primarily on improving the dashboard capabilities, and adding Target Generation features. Specific enhancements will include:

- Enhanced Workflow reporting for easy access to Workflow results
- Continuous Integration support based on a Workflow
- Improvements for Java developers delivered via the Target file generator. This feature will support additional mappings of source code locations to output locations within an archive. Additional mappings will include Apache, MyEclipse, Jboss, and Weblogic.
- Integrated Code Coverage and Testing Reports

## TGT Generation

Generating TGTs automatically allow developers to eliminate updating their TGTs through the Meister TGT editor. This feature will be enhanced to provide additional source locations to output locations as well as PDE targets for Eclipse Plug-in development. The enhanced TGT editor will handle versioning numbers within plug-in development environment. New mappings will support:

- Apache
- MyEclipse
- JBoss
- Weblogic

## **Enhancements to "OM Dashboard" Perspective**

The OM Dashboard will provide a "global" view of Workflows. The Dashboard perspective will show the 7.21 Workflow Summary Table View and the 7.21 Workflow Monitor Table View. The Monitor in this perspective will show all Workflows and the Tab Title will be renamed to "Global Workflow Monitor". This is the same functionality as in 7.21 with the Tab for the Monitored more clearly indicating what is being displayed in the Global Workflow Monitor.

## **Enhancements to the Workflow Monitor:**

The workflow monitor can be accessed from the "OM Perspective" -> "Workflow Explorer" and from the "OM Dashboard". A change will be made allowing quicker access to Build Logs directly from the Workflow Monitor. A double Click on an item in the Workflow Monitor takes you directly to the Workflow log, bypassing the Workflow Activity Detail Dialog box. All Workflow Activity Detail will now be displayed in the "Workflow Explorer" Summary tab.

## Enhancements to "OM Workflow" Perspective

In order to provide easier navigation to Workflow configurations, results, summaries and reports, changes will be made under the "OM Workflow" perspective, particularly the "Workflow Explorer". The 7.2 "Workflow Explorer" will be enhanced so that users will be able to view all information related to a particular Workflow from within the "Workflow Explorer".

The new "Workflow Explorer" will consolidate all reports and logs for each individual workflow. This organization will simplify the navigation between the workflow reports, trends and logs. All Workflow reports and logs will be organized so that when a user executes a workflow, the results are displayed to them based on that unique workflow. This prevents the user from having to point and click their way through the reports explorer to view a particular Workflow's results.

The 7.3 "Workflow Explorer" will have 5 tabs, History/Trends, Monitor, Activities, Configure and Continuous Integration. It will initially be displayed at the History/Trends Tab based on the users selection from the workflow "tree". Workflows can be executed from the Workflow Explorer History/Trends tab or from a right mouse click on the Workflow tree.

### ***History Trends Tab***

The Workflow History/Trends tabs displays a History table that shows high level information about the workflow vs. detailed information about a particular run of the workflow. It also displays a Trend Graph, showing trends for success/fail, testing, code coverage, diffs and activities.

## "Workflow Explorer History Trends Tab"

- Private
- Metalworks
- Metalworks Ant
- Public
- Copy System
- Petshop

### Metalworks History/Trends

Run #	Results	Diffs	Start Time	Duration	Machine
<a href="#">4</a>	<a href="#">Success</a>	10	Jul 25 13:00:00	10 mins	MyComputer
<a href="#">3</a>	<a href="#">Compile failed</a>	3	Jul 24 15:00:01	5 mins	MyComputer
<a href="#">2</a>	<a href="#">Success</a>	1	Jul 22 13:00:00	1 hr	Woody
<a href="#">2</a>	<a href="#">Success</a>	4	Jul 22 13:00:00	10 Min	Skateboard
<a href="#">2</a>	<a href="#">3 test failed</a>	0	Jul 22 13:00:00	15 Min	Radioflyer

Execute

**Data**

Data related to past workflow execution.

Last Execute Date: 2008-07-21 16\_15\_03

Last Execute Number:

[View the Workflow logs associated with prior executions...](#)

[View the Workflow reports associated with prior executions...](#)

#### Metalworks Trend Graphs

Range From \_\_\_\_\_ to \_\_\_\_\_ (defaults to last 10 builds)

[History/Trends](#) | [Monitor](#) | [Activities](#) | [Configure](#) | [Continuous Integration](#)

## Workflow Explorer History/Trends Elements

### OM Workflow "Tree View":

The tree view will display a list of all Workflows. Double clicking on a Workflow will take you to that Workflow's "Workflow Explorer" History Tab. A right mouse click will allow the following options:

New, Delete, Configure, Execute. The options "edit" and "add" will be removed.

### Workflow Number:

In 7.3, Activity detail reports are listed by "run" number. The run number will be kept for each execution of the workflow, added sequentially.

### Workflow Explorer "History" Tab:

This table shows all executions of the workflow, organized by Run Number, with the latest added to the top of the table. The table elements are:

Title	Description
Run #	The sequential number of the run of the workflow
Results	Success or Fail – If fail indicate what step failed. <i>Note: This has a hyperlink which will take the user to the Workflow Results Screen for all details on that unique run.</i>
Diffs	Show number of changes noted in diff report. If no diff report available, use n/a
Start Time	Date and start time
Duration	Time of build
Machine	Machine name

**Execute Button:**

The Execute Button will run the workflow on demand from this screen. A new Eclipse Master Page will be created to contain a new page part that includes the Execute Button. The perspective will be altered to bring the <workflow name> Monitor to the foreground and display the Monitor data filtered on Workflow name when the run is executed from this button.

**History Data:**

History data shows information from the last execution. The Data page part comes from the 7.21 Edit Workflow -> Overview Page.

## Trend Reporting:

Trend graphs gives a summary of how the workflow is trending on build successes, testing averages, code coverage statistics and number of differences. A new Eclipse page part for Trend Graphs will be displayed under the History Tab/Monitor Tab. The Trend Graphs part should have multiple tabs as follows:

- Success/Fail
- Testing
- Code Coverage
- Diff
- Activity Trends

Displays the current Activity detail report with modifications. The top section will be removed as it is a summary of Workflow runs and this is already displayed in the Workflow Summary screen. Below is the report format. It shows the activity name with the run times.

<u>Activity</u>	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>
Generate Meister Build Control File for Metalworks with Build Audit	1	2	1	2
Execute Meister Clean All Build With Audit Report for Metalworks with Build Audit	2	1	1	
Set Classpath of metalworks.classpath for metalworks.jar	1	1	0	
Ant Javac of metalworks.javac for metalworks.jar	16	5	6	
Ant Jar of metalworks.jar for metalworks.jar	7	4	4	
om complete for Metalworks with Build Audit	0	0	0	
Copy Theme File Local	1	0	0	
Launch Metalworks	5	198	2	

**Range:**

Will include a From Run #: and To Run # entry fields. Will allow user to indicate how many workflows runs to view. The default would display the last 10 iterations.

***Workflow Explorer Monitor Tab***

This is used to display the 7.21 monitor of the build executed from the "Execute" button on this screen. This monitor shows only real time results for this run of the Workflow –not all workflows. The 7.21 Workflow Monitor will be reused with a Workflow name filter applied.

***Workflow Explorer Activities Tab***

This tab will display the current Workflow Explorer Activity Tab.

***Workflow Configure Tab:***

The Workflow Configure Tab is an enhanced version of the 7.21 Workflow Editor "Overview " tab.

**Configuration Tab elements:**

General Information (From the 7.21 Workflow Editor Overview)

Scheduling (Displays the 7.21 Schedule dialog box)

Environment variables (From the 7.21 Workflow Editor Overview)  
Execution Settings (From the 7.21 Workflow Editor Overview)

The Execution Settings will have a new radio button allowing users to choose if they wish to collect Trend information when the workflow runs as follows:

Trend Collection:

- Always Collect Trend Detail Data
- Disable Trend Detail Data Collection to save space.

Note: The default for this is "Always Collect Trend Detail Data"

## Configure

Workflow Explorer

-Private  
Metalworks  
Metalworks Ant  
-Public  
Copy System  
Petshop

### General Information

This section describes general information about this Workflow.

Public  Private

Name:

Job Number:

Job Label:

Execute...

### Execute Settings

Change the settings to that affect execution of the Workflow.

Machines To Include In Full Workflow Execute:

My Computer

Trend Collection during Builds:

Always Collect Trend Detail Data for full reports  
- Disable Trend Detail Data Collection to save space.

### Configure Environment

Configure the environment where the Workflow will be executed by defining Environment Variables and scripts to be executed.

Type	Variable	Value	
			New Var...
			New Script...
			Edit...
			Remove

**Schedule Information** — Enter the date and time patterns you wish the workflow to execute.

Enter minutes pattern:

Enter hours pattern:

Enter dates pattern:

Enter months pattern:

Enter weekdays pattern:

History/Trends | Monitor | Activities | Configure | Continuous Integration

## ***Workflow Continuous Integration Tab***

The Workflow Explorer will be enhanced to allow users to configure a continuous Integration Server for each unique workflow. Enhancements to support this functionality will include the ability to select and configure an SCM repository for the workflow and define the Continuous Integration Server parameters. In 7.21 the ability to configure a SCM tool as part of an activity workflow is already available. This same functionality will be added to the Continuous Integration tab so that the SCM check-out process included in the Continuous Integration process is available. This functionality is different in that a workflow can call an SCM tool as part of the workflow process. With the continuous integration, the check-out is part of the continuous integration process, not the workflow. Therefore the functionality must be available in both locations. In addition, the ability to configure the continuous integration server from the Eclipse Client will be available. In 7.21, this functionality is available, however only through a command line interface.

The Workflow Explorer will have a new tab added called Continuous Integration. All new items for the continuous integration features will be contained to this new screen. The Continuous Integration Tab will have two sections, one for configuring SCM and the second to configure the CI parameters.

### **Continuous Integration Tab Elements:**

#### **SCM Section**

Select VCS Tool: (Drop down)

Accurev

CVS

Perforce

CA SCM

Dimensions

MKS Integrity

Git  
Team Concert  
Subversion

ClearCase  
TFS

For each tool selected, the 7.21 Activity SCM Command Page part will be displayed providing configuration options for each unique SCM tool in the drop down.

### **Continuous Integration Triggers Section**

Quiet Periods (radio button):

Disable CI Build Triggers

Build on Check-in

Build every [Entry field] seconds

### **CI Build Server (drop down)**

This drop down will allow them to select what machine to be used as the CI Build server. The options will be MyComputer, the Knowledge Base Server, or a licensed Remote Build Server.

### **CI Build Directory**

The CI Build directory defines where the Workflow will execute on the CI Build Server.

## Continuous Integration Configuration Tab

### Continuous Integration Configuration

- Private
- Metalworks**
- Metalworks Ant
- Public
- Copy System
- Petshop

#### SCM Configuration

Select SCM

CVS

- Accurev
- CVS
- CA SCM
- ClearCase
- Dimensions

\* CVS Root:

CVS Options:

UpdateOptions:

[View the resolved command string...](#)

#### Continuous Integration Triggers

Quiet Periods:

- Disable CI Build Trigger
- Build on Check in
- Build every \_\_\_\_\_ seconds

CI Build Server:   
Knowledge Base Server  
Remote Build Server #1

CI Build Directory on CI Server:

History/Trends | Monitor | Activities | Configure | Continuous Integration

## **Workflow Results Summary Explorer**

The Workflow Results Summary Explorer displays results summary information for a particular run of a workflow. The name of this Explorer should indicate the Workflow Name and Run Number – "Metalworks #4 Results Summary". This explorer is accessed via the Workflow Explorer "History Table". This History Table displays a list of Workflow runs, with a hyperlink to this Explorer. This Explorer contains summarized information about a particular run. It also includes access to all reports showing details of a particular run. Included on the Explorer is Results Summary information contained in 4 quadrants: Build Summary, Testing Summary, Diff Summary and Code Coverage Summary. Tabs for the Results Summary Explorer include: Summary, Build Logs, Diffs, Test, Code Coverage, Insight Audit, Insight Impact Trees and BOM.

### ***Workflow Results Summary Explorer Tab***

#### **Workflow Results Summary Box**

Success or Fail - On fail shows what step in workflow failed.

Machine – displays the machine where this part of the workflow was executed.

Executed by: Displays name of the person that ran the build.

Start time: Date and start time of workflow execution

Duration: Time it took workflow to run.

#### **Code Coverage Summary Box**

Summarizes the code coverage reports when available. If code coverage tool gives no summary then display – "no summary information available from code coverage"

#### Test Results Summary Box

Summarizes the test reports when available. If test tool gives no summary then display – "no summary information available from test tool".

#### Diffs Summary Box

Summarizes the Diff reports from SCM diff tool. If SCM tool gives no summary then display – "no summary information available from SCM tool".

## Metalworks #4 Results Summary

Workflow Explorer

-Private  
[Metalworks](#)  
Metalworks Ant  
-Public  
Copy System  
Petshop

[Build: Success \(Fail\)](#)

Targets Built: 50

Start time: July 25 13:00:00

Duration: 10 minutes

Machine: My Computer

Executed by: Tracy

### Code Coverage

[View full coverage report](#)

Classes:	100%	6/6	Lines:	30%	3/9
Methods:	50%	4/8	Blocks:	70%	56/80

### Test Results:

[pass - 1](#)  
[failed - 2](#)

### Diff Results:

10 Changes

[Results Summary](#) | [Build Logs](#) | [Diffs](#) | [Test](#) | [Code Coverage](#) | [Insight Audit](#) | [Insight Impact Trees](#) | [BOM](#) | [History/Trends](#)

***Workflow Results Summary Explorer Log Detail Tab***

Displays the 7.21 HTML log output

***Workflow Results Summary Explorer Test Tab***

Displays the Testing tool html output (i.e. JUnit html report)

***Workflow Results Summary Explorer Code Coverage Tab***

Displays the Cover Coverage tool html output (i.e. Emma html report)

***Workflow Results Summary Explorer Diff Detail Tab***

Displays the SCM diff report in html format.

***Workflow Results Summary Explorer Insight Audit Tab***

Displays the Meister 7.21 Build Audit html output

***Workflow Results Summary Explorer Insight Detail Tab***

Displays the 7.21 Explosion report with a toggle to Implosion

***Workflow Results Summary Explorer BOM Tab***

Displays a 7.21 BOM report from the configured SCM tool for the workflow.

### ***Workflow Results Summary Explorer History/Trend Tab***

Takes user back to the Workflow Explorer History/Trends Tab

## **Management Control Console**

The Management Control Console will be enhanced to reflect the new organization of Workflows. The re-organization will simplify navigation from Workflow execution to resulting reports.

The menu options for the Management Control Console will be the Workflows, Build Service Configuration Summary, Administration and Insight. The 7.21 "Configuration" option will be renamed to "Build Service Configuration Summary", the Admin option will be renamed "Administration". No changes to these two items will be made..

Insight reports will remain at this level for SCM administrators.

### ***Enhanced Management Control Console Workflow Pages***

The Workflow menu option will display a list of all workflows and their last run information with a execute button to execute the workflow. The Execute button will execute a single workflow. Each Workflow Name will hyperlink to Workflow Results page for a particular workflow.

#### **Search Workflow Results Summary:**

This function will return a list of all runs for a particular Workflow. All Workflow names will populate the drop down list. The "all" option will be removed. The user can further qualify which Workflow Runs they would like to see by entering additional search information including "success" or "fail", stats, and to and from dates.

## Search Workflow Results

Workflow Name:

Copy Example - Windows

Result:

- All -

Status:

- All -

From:

- All -

To:

- All -

Submit

## Execute and View Recent Workflows

	Workflow	Run #	Date	Status	Machine	
Execute						
<input type="checkbox"/>	<a href="#">Metalworks</a>	<a href="#">4</a>	Jul 25-08 13:00:00	Success	Woody	↑
<input type="checkbox"/>	<a href="#">Petshop</a>	<a href="#">6</a>	Jul 28-08 9:00:00	Fail	Surfboard	
<input type="checkbox"/>	<a href="#">Copy System</a>	<a href="#">10</a>	Jul 30-08 11:00:00	Success	Woody	
<input type="checkbox"/>	<a href="#">Puzzle</a>	<a href="#">55</a>	Jul 30-08 2:00:00	Success	RadioFlyer	
<input type="checkbox"/>	<a href="#">Hotel</a>	<a href="#">1,055</a>	Aug 1-08 10:00:00	Fail	Frisbee	↓

## **Management Control Console Workflow Summary**

Once the user selects a particular Workflow either from the "Execute Workflow" Table or the Search Workflows option, the workflow Summary page will be displayed. Like the Eclipse Workflow explorer, it will contain a History table and Trend graphs as well as a "recent data" section and the ability to "Execute" the Workflow. There will be no "Configure" option on this screen. Configuring workflows is handled via the Client (Eclipse RCP).

From this option, users will be able to select a hyperlink from the history table which will display all reports and result information for that particular workflow run. When the Workflow is executed, the workflow log will be displayed, refreshing in realtime. Using the "back" option will take them back to the Workflow summary page, with updated information regarding the last run.

# Management Control Console



Home

Build Service Configuration Summary

Administration

Insight

## Search for Workflow Results

Workflow Name:

Copy Example - Windows

Result:

- All -

Status:

- All -

From:

- All -

To:

- All -

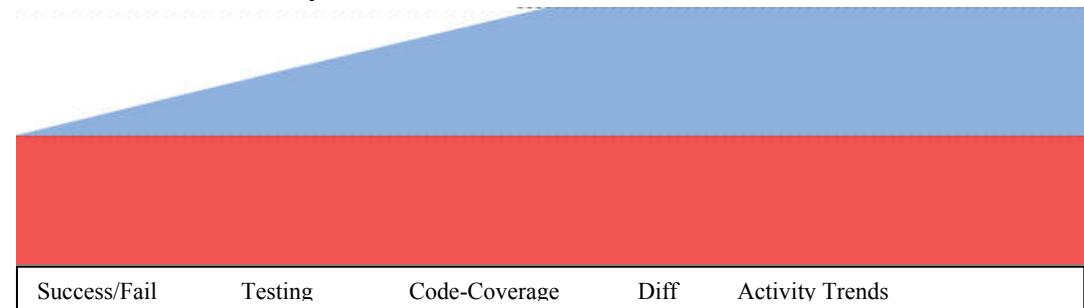
Submit

## Metalworks History

#	Results	Diffs	Start Time	Duration	Machine
4	<a href="#">Success</a>	10	Jul 25 13:00:00	10 mins	MyComputer
3	<a href="#">Compile failed</a>	3	Jul 24 15:00:001	5 mins	MyComputer
2	<a href="#">Success</a>	1	Jul 22 13:00:00	1 hr	Woody
2	<a href="#">Success</a>	4	Jul 22 13:00:00	10 Min	Skateboard
2	<a href="#">3 test failed</a>	0	Jul 22 13:00:00	15 Min	Radioflyer

Execute

## Metalworks Trend Graphs



Range From \_\_\_\_\_ to \_\_\_\_\_ (defaults to last 10 builds)

## **Management Control Console Workflow Results Summary**

This page is modeled after the Client (Eclipse RCP) Workflow Results Summary Screen. It displays all of the detail for that particular run of the workflow with links to all reports and logs for that workflow.

Execute

## Metalworks #4 Result Summary

### Search for Workflow Result

Workflow Name:

Copy Example - Windows

Result:

- All -

Status:

- All -

From:

- All -

To:

- All -

Submit

[Build: Success \(Fail\)](#)

Targets Built: 50

Start time: July 25 13:00:00

Duration: 10 minutes

Machine: MyComputer

Executed by: Tracy

### Code Coverage

[View full coverage report](#)

Classes:	100%	6/6	Liness:	30%	3/9
Methods:	50%	4/8	Blocks:	70%	56/80

### Test Results:

[pass - 1](#)  
[failed - 2](#)

### Diff Results:

10 Changes

[Results Summary](#) | [Build Logs](#) | [Diffs](#) | [Test](#) | [Code Coverage](#) | [Insight Audit](#) | [Insight Impact Trees](#) | [BOM](#)