Rational. Portfolio Manager

Version 7.1.1.2
Windows and UNIX

Release Notes

GI11-8350-00

Rational® Portfolio Manager

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Before using this information, be sure to read the general information under “Notices,” on page 57.

Contents

Tables

About this book

The Rational Portfolio Manager 7.1.1.2 release notes cover the new features added in this release, a list of known problems, and problems that have been fixed in this release.

Who should read this book

This document is intended for any Rational Portfolio Manager user and administrators responsible for upgrading Rational Portfolio Manager.

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Chapter 1. About this release

Documentation roadmap

The following documents are updated in this release:

- *IBM® Rational® Portfolio Manager installation and upgrade guide for Windows®*
- *IBM Rational Portfolio Manager installation and upgrade guide for UNIX®*
- *IBM Rational Portfolio Manager/IBM Rational ClearQuest® Integration*
- *IBM Rational Portfolio Manager/IBM Rational RequisitePro® Integration*
- *IBM Rational Portfolio Manager/IBM Rational ProjectConsole™ Integration*
- *IBM Rational Portfolio Manager Web Services API guide*
- *IBM Rational Portfolio Manager online help*

All documents accompanying this release are available as part of product installation media, or from the IBM Publications Center.

To locate the Publication Center for your area, go to http://www.ibm.com/shop/publications/order. Follow the instructions on the IBM Publications Center Web site to locate individual documents.

Translation

The release notes and the installation and upgrade guides for Windows and UNIX are the only translated documents for this release. All other updated documents are provided in the English language only.

Security settings changes

This section describes the new or modified security settings in version 7.1.1.2 of IBM Rational Portfolio Manager. For more information about security settings, refer to the security section of the online help.

Security validation for importing Rational Method Composer templates

When importing the Rational Method Composer templates into the Templates view, the following securities are validated:

- Publish to Local Template: enables the importing of Rational Method Composer templates to the Local Templates folder.
- Publish to Method Template: enables the importing of Rational Method Composer templates to the Method Templates folder.
- Can Breakdown Folders: enables the "Import Process Template" menu option in the Templates view.

Network Diagram security setting

There is a new security setting that enables the Network Diagram feature. System administrators must assign the security permission to their resources for them to access the network diagram view. The security can be assigned for individual resources from the Resource Management view, or for resource groups from Application Administration.

To enable the security setting for a particular resource:

1. Go to the Resource Management view.
2. Select a resource, open and check out the Description view.
3. Expand the System Security Rights portlet.
4. Expand the **General** list, and select the **Can view Network Diagram** security right.
5. Check in the Description view.

The selected resource now has the security permission to use the network diagram feature.

To enable the security setting for resource groups:

1. Go to Application Administration, click the **Security** tab, and click the **Default Security/Settings** tab.
2. Select the required group in the left pane.
3. In the right pane, expand the **General** list and select the **Can view Network Diagram** setting.

Resources assigned to the selected group now have the security permission to use the network diagram feature.

Latest supported operating environments

The following sections list the operating environments that Rational Portfolio Manager supports.

Supported databases

The following table lists the Rational Portfolio Manager latest databases supported with this release for DB2® and Oracle.

Note: The versions of DB2 and Oracle identified are the latest versions certified. In general, previous maintenance releases of DB2 and Oracle are supported also. Contact IBM Client Support for any queries on previous supported versions.

Table 1. Rational Portfolio Manager latest supported databases

Operating system	Hardware architecture	Database and version
AIX® 5.2 (32-bit)*	P5	• DB2 8.2 FP 14 • Oracle 10.2.0.1
AIX 5.2 (64-bit)*	P5	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 9.2.0.8 • Oracle 10.2.0.3
AIX 5.3 (64-bit)	P5	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3

Table 1. Rational Portfolio Manager latest supported databases (continued)

Operating system	Hardware architecture	Database and version
Red Hat Linux® AS Version 3 (32-bit) Kernel Version 2.4.21	Xeon®	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 9.2.0.8 • Oracle 10.2.0.3 • Oracle 10.2.0.4
Red Hat Linux AS Version 4 (32-bit and 64-bit) Kernel Version 2.6.9	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 10.2.0.3 • Oracle 10.2.0.4
Red Hat Linux WS Version 4.0 (32-bit and 64-bit))	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.0 SP2 Enterprise Sever (32-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 9.2.0.8 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.0 SP2 Enterprise Sever (64-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.0 SP3 Enterprise Sever (32-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.0 SP3 Enterprise Sever (64-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.0 SP4 Enterprise Sever (32-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3 • Oracle 10.2.0.4

Table 1. Rational Portfolio Manager latest supported databases (continued)

Operating system	Hardware architecture	Database and version
SuSE Linux 9.0 SP4 Enterprise Sever (64-bit)	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 10.2.0.3 • Oracle 10.2.0.4
SuSE Linux 9.2 (32-bit and 64-bit) Kernel Version 2.6.9	Xeon	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 10.2.0.3 • Oracle 10.2.0.4
Solaris 8 (64-bit)	SPARC	• DB2 8.2 FP 14 • DB2 9.1 FP 4
Solaris 9 (64-bit) update 6 or later	UltraSPARC	• DB2 9.1 FP 4 • Oracle 10.2.0.3
Solaris 10 (64-bit)	UltraSPARC	• Oracle 9.2.0.8 • Oracle 10.2.0.3
HP-UX 11i Version 1 (11.11) (64-bit) update 4	HP PA-RISC	• Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows 2000 Server Edition FP4 (32-bit)	Xeon, Itanium® 2	• DB2 8.2 FP 14 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows 2000 Professional SP4 (32-bit)*	Xeon, Itanium 2	• DB2 8.2 FP 14 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows 2003 Server Edition SP1 and SP2 (32-bit and 64-bit)†	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows 2003 Server Enterprise Edition SP1 (32-bit)	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows XP Server Edition Professional, SP1, and SP2 (64-bit)†	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3

Table 1. Rational Portfolio Manager latest supported databases (continued)

Operating system	Hardware architecture	Database and version
Windows XP Professional (32-bit)	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows XP Professional SP1 (32-bit)	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • Oracle 9.2.0.8 • Oracle 10.2.0.3
Windows XP Professional SP2 (32-bit)	Xeon, Itanium 2	• DB2 8.2 FP 14 • DB2 9.1 FP 4 • DB2 9.5 • Oracle 9.2.0.8 • Oracle 10.2.0.3

Note: The supported library compiler is gcc v.3.4.6.

Note: The DB2 v8.2 support will end in a future release of Rational Portfolio Manager. You should consider migrating to DB2 v9.1 or later.

* Support will end in a future release of Rational Portfolio Manager.

† 32-bit code was used to test on a 64-bit platform.

Supported application servers

The following table lists the Rational Portfolio Manager application servers supported with this release to deploy the middleware.

Table 2. Rational Portfolio Manager supported application servers

Application server	Version
WebSphere®	• 5.1 • 6.0 • 6.1
Apache Tomcat	• 5.5 with JDK 1.4 compatibility kit

Note: The WebSphere Application Server (WAS) v5.1 support will end in a future release of Rational Portfolio Manager. You should consider migrating to WAS v6.1.

Client requirements

The following table lists the Rational Portfolio Manager Windows versions supported with this release to run the Client.

Table 3. Rational Portfolio Manager client requirements

Software	Version
Microsoft® Windows XP	• Professional SP1 • Professional SP2
Microsoft Windows Vista	• Enterprise Edition
Microsoft Windows 2000	• Professional (96 DPI) • Server • Advanced Server (latest service pack)
Microsoft Project (MSP)*	• 2002 (with MDAC† 2.6 or higher for export capabilities) • 2003 (with MDAC 2.6 or higher for export capabilities)
Internet Explorer‡	• 6 or higher (with ActiveX installed) • 7 or higher (with ActiveX installed) Only on Windows XP SP2, Vista Enterprise Editions, Windows 2000 Server SP1, and Windows 2003.

* MSP is required for importing or exporting MSP files. If this functionality is not required, MSP does not need to be installed.

† Microsoft Data Access Component (MDAC)

‡ Internet Explorer is only required if you are running the plugin version of Rational Portfolio Manager.

Supported integrations

The following table lists the Rational Portfolio Manager integrations supported with this release.

Table 4. Rational Portfolio Manager integrations support

Application	Version
Rational ClearQuest	• 7.0.x.x • 2003.06.15 • 2003.06.16
Rational Method Composer	• 7.1 • 7.2
Rational ProjectConsole	• 7.0.0.1 • 7.0.1
Rational RequisitePro	• 7.0.1 • 7.1

Supported TeamMember Web browsers

The following table lists the Rational Portfolio Manager **TeamMember** Web browsers supported for his release.

Table 5. TeamMember support

Software	Version
FireFox	• 1.5 on Red Hat Linux AS Version 4 and Version 5, Windows • 2.0 on Red Hat Linux AS Version 4 and Version 5, Windows
Internet Explorer	• 6.x • 7.0 only on: – Windows XP Server Edition SP2 – Windows Vista Enterprise Edition – Windows 2000 Server Edition SP1

IBM Tivoli License Manager

Rational Portfolio Manager is compatible with IBM Tivoli® License Manager. IBM Tivoli License Manager is a Web-based solution that provides software usage metering and license allocation services on Windows, Linux, and UNIX platforms. It can be scaled to meet the needs of large and small organizations, and supports the management of multiple organizations, for example by service providers. The process of enablement includes the submission and testing of software signatures that are to be included in the IBM Software catalog. The IBM catalog is the central knowledge base used by IBM Tivoli License Manager to monitor software use and recognize installed software.

The following table lists the IBM Tivoli Access Manager (TAM) WebSeal version supported with this release of Rational Portfolio Manager.

Table 6. IBM Tivoli Access Manager (TAM) WebSeal version supported

Software	Version
IBM Tivoli Access Manager (TAM) WebSeal	• v6

Citrix Presentation Server

This release of Rational Portfolio Manager supports deployment on the Citrix Presentation Server. Deployment on the Citrix Presentation Server enables users to connect to the Rational Portfolio Manager client application remotely from the central server outside of the corporate network in a secure environment.

The following table lists the requirements to deploy Rational Portfolio Manager on Citrix Presentation Server 4.5.

Table 7. Citrix Presentation Server requirements

Software Version	Operating System and Hardware Requirements
Citrix Server Version: Citrix MetaFrame Presentation Server, Version 4.0	• Windows 2003 Server Edition S-22 (32-bit) • RAM: 512 MB • Hard Disk: 3 drives - 14, 12, 9 GB
Citrix Client Version: Citrix MetaFrame Program Neighborhood, Version 9.200.44376 (128-bit SSL)	

Internet Protocol version 6 (IPv6)

This version of Rational Portfolio Manager supports Internet Protocol version 6 (IPv6) addressing.

Chapter 2. New features in this release

This section describes the new features implemented in version 7.1.1.2 of IBM Rational Portfolio Manager.

Network diagrams

Using network diagrams, you can view critical paths and dependencies in a project or proposal and monitor task completion status.

The network diagram displays the sequence of tasks, summary tasks, milestones, work product, deliverables, and external projects. The WBS elements are displayed as nodes, and dependencies between the elements as arrows. Network diagrams also display the critical path for projects or proposals.

The calculated information, if available for a node, is also displayed in the network diagram view.

In the network diagram view, you can edit the WBS elements and their dependencies, and calculate and level projects.

Note: By default, the Network Diagrams feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID =
'CAN_ACCESS_NETWORK_DIAGRAMS_____'
```

Working with network diagrams

Before you start using network diagrams, you must reset the Work Management toolbar to display the network diagram options. To reset the toolbar to display the network diagram options, you must have the security to view network diagrams. You need to reset the toolbar only once. Thereafter, your configuration is saved and the network diagram options are displayed in the toolbar. To do this:

1. Log in to Rational Portfolio Manager and go to the Work Management view.
2. If the Work Management toolbar is displayed, skip to the next step. If not, to display the toolbar, click **View** > **Toolbars** > **Work Management**.
3. On the Work Management toolbar, click the Down arrow and click **Add or Remove Buttons** > **Reset Toolbar**.
4. Click **OK** in the warning dialog to reset the generic toolbar.

The Work Management toolbar will be reset to include the Tree and Network Diagram options. You can click the options to go to the tree and network diagram view respectively.

Network diagram view description

The following table describes the elements and controls in the network diagram view.

Table 8. Elements and controls in the network diagram view

Element	Description	Controls
Network diagram main view	• Displays nodes for each WBS element. • Displays dependencies as arrows between nodes. • Critical paths and dependencies are outlined in red. Elements and dependencies not in the critical path are outlined in black.	Clicking the expand icon on the root folder displays the project/proposal nodes. Clicking the collapsed icon on an expanded folder hides the project/proposal nodes.
Nodes	• Represent a single WBS element. • Outlined in red when in the critical path. • Divided into node header and node body. • If calculated, displays WBS details on mouse hover: – Element ID – Priority – Start – Finish – Duration – Estimated Effort to Complete – Percent Duration Complete – Responsible – Predecessor (if applicable) • If not calculated, or if user does not have role-based security to view calculated details, on mouse hover, displays a hint that the calculate operation is not performed.	Clicking the expand icon on a node displays the child elements and dependencies (if any). Clicking the collapsed icon on an expanded node hides the child elements and dependencies.

Table 8. Elements and controls in the network diagram view (continued)

Element	Description	Controls
Node header	• Displays the WBS element icon, WBS element name and completion status icon. • For a list of WBS element icons, see Work Management view menus and icons. • The completion status icons are: –  : Indicates that the work is complete (100%). –  : Indicates that the work is in progress. – Blank: Indicates that the work is not started (0%). • Is gray if the node is not calculated.	WBS element icon: Clicking the WBS element icon toggles between node body expand and hide.
Node body	• Displays additional information fields as configured in the Node Configuration window. • Displays a scroll bar to scroll through the list if the number of fields is more than five. • Is hidden if the Show node body check box is cleared in the Diagram Settings window.	A Down arrow icon is displayed if the number of configured fields for the node is more than five. Clicking this arrow displays a scroll bar to browse the additional fields.
Dependencies	• Indicated by an arrow between two elements. • Arrow is red if in the critical path; else is black. • Always point from predecessor to successor. • Type is indicated next to the arrow in abbreviated form: – SS - Start to Start – SF - Start to Finish – FS - Finish to Start – FF - Finish to Finish	Double-clicking the dependency arrow opens the Modify Dependency window.

Limitations

- Elements cannot be created using drag and drop from the toolbar.
- Elements cannot be transferred from the Scope Management to the Work Management view.
- Elements cannot be transferred from the Work Management view to the Scope Management view.
- The Dependencies view is not available - the Dependencies option is disabled in the main toolbar.
- The Templates view is not available and cannot be used to save elements as templates or to create new elements from templates. Only new proposals can be created from templates using the Adopt From option in the New Proposal window.
- Workflow steps can be responded to only from the Workflow toolbar and not from the Description view.
- Multiple elements cannot be selected.
- MSP export and import is not available.
- CSV export is not available.
- WBS elements cannot be cut, copied, pasted, or renamed.
- As a result of the above limitations, the following options are not available in the pop-up menu:
  - New...
  - Edit
  - Inline Edit
  - Export to CSV
  - Import/Export

Offline forms

Using the offline forms feature, you as a team member or a project manager, can download scope elements and timesheets from Rational Portfolio Manager as forms for offline use. The offline form is a Spreadsheet Markup Language file, an open XML (.xml) file format that can be edited using Microsoft Excel. After editing the data in offline mode, you can upload the forms to Rational Portfolio Manager.

Note: By default, the offline forms feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID like
'CAN_ACCESS_OFFLINE_FORMS%'
```

Working with offline forms

The following data types can be downloaded as an offline form:

- Existing scope elements
- New scope element template
- Duration-based status update sheet
- Effort-based timesheet

Note: Scope elements that contain attachments are downloaded and uploaded as *.zip* packages. If you are using a Windows version earlier than Windows XP, you need a file zip (compression) utility to create the download and upload (*.zip*) packages.

To download and upload data, you must have the security rights to access the functional areas that support download and upload of offline forms: Work Management, Scope Management and Timesheets.

You must navigate to the appropriate functional area to download data belonging to that area. However, you can upload data from any functional area that supports upload, irrespective of the area to which the data belongs. For example, you can download scope elements only from the Scope Management view, but you can upload scope elements from any of the views: Work Management, Scope Management, or Timesheets.

Example 1: Offline form for existing scope element

1. Log into Rational Portfolio Manager as a team member. Your role must have the security to view scope elements.
2. Go to the Scope Management view, right-click a scope element, and click **Download**.
3. Specify the file save location and the file name. Click **Save**. The scope element and the attachments are downloaded to a .zip file that contains the following elements:
   - Scope element data form (*.xml* file)
   - Attachment files in an Attachments subfolder
4. Extract the downloaded files from the archive to a folder.
5. Open the *.xml* form in Microsoft Excel and edit details. You can also update attachments and edit RTF fields.
6. Create a *.zip* archive with the modified *.xml* form and the Attachments subfolder.
7. In Rational Portfolio Manager, right-click the Scope Element root folder, and click **Upload**.
8. Specify the name and location of the *.zip* file for the upload. Click **Open**. The scope element and attachments are uploaded and a confirmation is displayed.
9. To update the view with the new information, click **Refresh**.

Limitation

When uploading offline scope element files, proper security is not checked. As a result, resources that are not assigned to the project can upload scope element XML files for that project.

Example 2: Offline form for duration-based status update

In this scenario, the project manager performs the download and upload, and the team member updates the status in the form in offline mode.

1. Log into Rational Portfolio Manager as a Project Manager. The role has the default security to view tasks.
2. Go to the Work Management view, select the **My Teams' Work** > **All Work Assignments** filter.
3. Right-click a resource and click **Download**.

4. Specify the file save location and the file name. Click **Save**. The status update template is downloaded to the specified location.
5. Forward the form to the respective team member for update.

The team member opens the *.xml* form in Microsoft Excel and enters the Actual Start Date, Manual % Complete, and Actual Finish Date for the tasks as applicable. The team member saves the form and forwards it to the project manager for upload. To upload the form to Rational Portfolio Manager:

1. Log into Rational Portfolio Manager as a Project Manager, go to the Work Management view.
2. Right-click the root folder and click **Upload**.
3. Select **Files of Type** as XML File
4. Specify the name and location of the file for the upload. Click **Open**. The form is uploaded and a confirmation is displayed.
5. To update the view with the new information, click **Refresh**.

Limitation

In the Work Management view, if a user selects multiple resources for download of timesheets, a download error is displayed. Multiple resources cannot be selected for timesheet download in a single instance.

Schedule remaining work

In previous releases of Rational Portfolio Manager, support for scheduling remaining work of task assignments was limited, particularly when assignments were already started. This release introduces the flexibility for scheduling the remaining work of resources and profiles that have already been assigned to tasks and projects based on the following:

- A new EETC and contour type from any date after the last day that actual hours were reported in Rational Portfolio Manager, therefore, allowing gaps between the last day with actual hours and the first day that the assignment is to resume.
- Resource availability
- Without actual hours to avoid having to remove the resources or profiles when project managers need to change the contour type of an assignment.

Example: Schedule the remaining work of task assignments

The project manager selects to reschedule the remaining work of a resource or profile that is assigned to a task of a project:

1. Defining the Resume Date.
2. Increasing or decreasing EETC or defining the Finish Date for the **Fix Dur** contour, where defining EETC and Finish Date is allowed.
3. Selecting the contour type.
4. Selecting how other assignments are to be considered. This is similar to the **Search Options** in searching for a resource.

   The remaining work of the selected resource or profile is then allocated from the defined Resume Date according to the defined EETC or Finish Date and contour type. The assignment information is then updated accordingly; Start and Finish dates, total work, for Expected and Proposed information, and task contour type.

5. Selecting to Calculate (Calculate/Level) the project. The rescheduled assignment(s) are calculated (leveled) based on the defined contour type selected in the step.

The rescheduled assignments are calculated (leveled) based on the defined contour type selected in the step 2.

Limitations

- Multiple resource selection for a task assignment and allocation.
- You can specify Start and Finish dates combination only for Fixed Duration contour type.

Note: By default, this new feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID like
'ENABLE_REALLOCATE_REMAINING_WORK%'
```

Viewing total project assignment contour per resource

Project Managers and Resource Managers can view the original daily affected hours at the project level and total assigned at the task level for each resource in all work package views and the Resource Management view where the Work Contour is displayed.

The following menu options are available for selection when right-clicking **Work Contour** in the Resource Management view for all filters except for **Staffing Requests** and **Archived Requests**:

- Show > Assigned
- Show > Affected
- Show > Affected Considering Actual
- Show > Assigned/Affected
- Show > Assigned/Affected Considering Actual
- Show > Affected/Affected Considering Actual

The following menu options are available for selection when right-clicking the **Work Contour** in all **My Work** and **My Teams' Work** filters and the **Effort Contour** displayed in the Staffing view:

- Show > Assigned
- Show > Calculated-Leveled
- Show > Affected
- Show > Affected Considering Actual
- Show > Assigned/Calculated-Leveled
- Show > Assigned/Affected
- Show > Assigned/Affected Considering Actual
- Show > Calculated-Leveled/Affected
- Show > Calculated-Leveled/Affected Considering Actual
- Show > Affected/Affected Considering Actual

These assignment contours are also displayed in the resource utilization pivots. The following bands and headers are added to the Resource Utilization and Monthly Resource Utilization pivots to display the project level affected

information:

Table 9. Bands and headers that are added to the Resource Utilization and Monthly Resource Utilization pivots

Band	Header
Total Affected Utilization	Proposed (h)
	Plan (h)
	Total (h)
	Proposed Remaining (h)
	Planned Remaining (h)
	Total Remaining (h)
Total Affected Utilization Considering Actual	Proposed (h)
	Plan (h)
	Total (h)
	Proposed Remaining (h)
	Planned Remaining (h)
	Total Remaining (h)

A new Weekly Resource Utilization (with Project Affectation) pivot is added to the pivot list that displays the same bands and headers as the Monthly Resource Utilization pivot. In addition, this pivot displays the Week, Week Start, and Week Finish headers under the Time band.

Capital cost and profit loss

This new feature allows Rational Portfolio Manager administrators to configure Rational Portfolio Manager through both system or project-level settings. Project managers can choose to either include Capital Costs in Total Costs or to exclude it from Total Costs and display Total Capital Costs. System behavior in previous releases included Capital Cost in Total Costs, hence, the system default value setting includes Capital Cost in Total Costs. The default setting for project level is set to the same value as the system value until overridden. To exclude capital charge codes from profit calculations:

1. Login to Rational Portfolio Manager as administrator.
2. Select the Application Administration navigation bar.
3. Select the Financials tab.
4. In the Calculation of the financial information section, mark the checkbox for **Exclude Capital charge codes from Profit calculations**.

Refresh shortcut key

The following shortcut keys are assigned to refresh the IBM Rational Portfolio Manager views:

- F5: Refreshes the selected node and its child nodes where the Refresh icon is enabled.
- CTRL + F5: Refreshes the entire view where the Refresh icon is enabled.

New out-of-the-box reports

The following reports are added in this release of Rational Portfolio Manager:

Table 10. New out-of-the-box reports

Category	Report	Description
Work Management > Portfolio > Reports > General/Health(f)	Portfolio Summary by Priority (including Gantt)	Sorts projects by priority and displays the portfolio summary including a quarterly gantt chart that spans two years.
	Portfolio Overview	Displays the project name, scheduled finish date, and project manager's name.
	Portfolio Summary by Priority (FT)	Sorts projects by priority and displays the portfolio summary of financial total information.
Work Management > Portfolio > Reports > Scope Management > Risks(f)	Risk Summary	Displays the risk summary. Closed risk items can also be included in this report.
Work Management > Portfolio > Reports > Resource Management	Timesheet Detail by Pool/Employee *	Displays timesheet data including regular and overtime hours for individual resources sorted by resource pools.
	Timesheet Summary by Pool/Employee *	Displays aggregate timesheet data per employee sorted by resource pools. The Report Parameters window is displayed before opening the report that lets you filter the report by state, these include: All, Submitted, Approved, Rejected, or Missing.
Resource Management > Pivots/Reports > Reports > Timesheet	Timesheet Detail by Pool/Employee *	Displays timesheet data including regular and overtime hours for individual resources sorted by resource pools.
	Timesheet Summary by Pool/Employee *	Displays aggregate timesheet data per employee sorted by resource pools. The Report Parameters window is displayed before opening the report that lets you filter the report by state, these include: All, Submitted, Approved, Rejected, or Missing.
	Missing Timesheet by Employee	Displays the missing timesheets per employee sorted by employee name, separated by resource pools.

* Accessible from both Work Management and Resource Management views.

Chapter 3. Customer-reported problems fixed in this release

This chapter lists customer-reported problems from previous releases of Rational Portfolio Manager that are fixed in this release.

Table 11. Customer identified problems fixed in this release

APAR ID	Description
PK22354	Document rename does not work for first time attaching.
PK23355	RPM should prompt before overwriting customized settings.
PK26969	Cannot create from a specific template (timeout error).
PK28509	Cost Center Portlets are not printable in Resource Management.
PK28786	TRANSLATION (French) - Translation issue in the Spell checker dialog: ″reset default″.
PK28855	TRANSLATION (French) - Translation issue in the Spell checker dialog: ″Dictionaries″.
PK30555	Creating duplicate of single attribute from the same Classification when using a service request template.
PK33862	Notification is not sent to the Communications view when approving time sheets.
PK35842	Unhandled Exception Error: EDatabaseError for Resource Supply and Demand Pivot.
PK38101	Limitation in saving of subset of projects.
PK38554	LDAP (Active Directory) configuration did not work in 7.0.4.4.
PK40975; PK43863	Entering comments in ″Change Brief″ section of the Status Update portlet of Clients/Cost Centers, returns -440 Database error.
PK42504	Filter by attribute of project in the Work Management view cannot support Chinese character.
PK43148; PK43145	Cannot change contour when replacing the profile.
PK58532; PK46675	RPM performance problem for power user.
PK48149; PK45146	Resource utilization pivot shows only competency or skills of resources but not both.
PK48625	Cannot change the contour type by API.
PK50422	High lock escalation condition and increase in the number of deadlocks.
PK50580	Portfolio Configurator displays names of projects that when selected, do not display in the Work Management view.
PK50712	XML file import changed the tasks to fixed duration, even thought the Default Task Type is set to ″Default Task″.
PK50826; PK51724	Cannot add any text in front of a link in the RTF portlet.
PK50875; PK50879	Copy as Link feature does not work properly when used in the WBS view.
PK50954	Project name that is using the asset, is not displayed in the Maintenance Activity Detail (WBS) portlet.

Table 11. Customer identified problems fixed in this release (continued)

APAR ID	Description
PK51093	Application Error Exception ERowException in module RPMBRO~1.DLL at 0009759F generated when opening the Documents view.
PK51355	No Remove button in the ″Organization″ and ″Geographical″ portlets.
PK51676	Need to select ″Rename″ option twice to rename a custom filter under 'By Attributes' category in 'WBS Plans'.
PK51678	Inconsistency while selecting future or past dates in the Start or Finish headers of the Quick Status band when using the Inline Edit option.
PK51721	Copied folders give incorrect security roles.
PK51990	RPM7.1.0.0 No script file is provided for encrypted password.
PK52050	RPM opens the wrong element when a link is placed after another link.
PK52072	The Resource Management view is not loaded properly after login back to RPM again.
PK52073	Save To option for multiple documents only asks once when overwriting different documents.
PK52267	Two Copy as Link pasted links together will launch only the first one.
PK52270	"Save As" displays a dialog window with subject "Check Out To", and this option does not make a check out.
PK52415	EVariantError - Invalid variant type conversion when creating a project from template.
PK52513	Next and Previous Scope Element buttons (from the Staffing view), must be clicked twice to function.
PK52900	Unable to retrieve attribute's value for minor horizontal axis in Investment Maps.
PK53202	Importing RMC XML into RPM template view does not follow security.
PK53234	Work Management view does not display attributes created within a subfolder.
PK53351	Unhandled exception error in the Unit (%) field under the Staffing view, Results Set tab.
PK53591	Language Translation typo in v7.1.0.1 Web UI timesheet - French version.
PK53837; PK56666	Portfolio Configuration problem with the expand (+) button.
PK54139	Unhandled exception EOleexception while entering alphabets in the Asset life field under assets view.
PK54623	PMCOE Pivot layouts do not always display the correct attributes.
PK54785	Creating baseline sets proposed date back to one day duration.
PK55016	When using multi approval, resources' own timesheets are not submitted.
PK55105	Disabled navigation bar buttons are re-enabled.
PK55280	″Convert to″ button is disabled on the menu bar.
PK55479	-803 error when checking-in Timesheets view and -801 error when changing EETC or %C in the Staffing view.
PK55685	Unhandled exception error when clicking on 'Print' icon in any of the Scorecard portlets in the 'Description' view of a project.
PK55912	GUI Event handler is not aggregating results on the resource utilization pivot.
PK56101	WEB Service API error when using Chinese Character to download the document from RPM.

Table 11. Customer identified problems fixed in this release (continued)

APAR ID	Description
PK56166	Unhandled error when entering a large number (999999999999999999) in one single day entry in the Timesheets view.
PK56433	Currency exchange rate is not followed when a user creates a project with a different currency from Template.
PK56550	Removal of pool participant using Delete key is possible, even though the ″Can Remove Participant″ security is not set.
PK56994	Unhandled Exception 0 when copying mulit-deleted URLs and pasting them under the Document All filters.
PK57276	Unhandled exception in Description view of the templated Scope Elements when there is customized RTF enclosed text in it.
PK57702	WorkflowRoleMapping of a project in API does not work.
PK57732	Error message ″Terminated due to handling of code thrown exception″ on calculate/level.
PK58342	The options of ″Change State, Baseline, Calculate/Level, Communications″ etc. in toolbar are having empty drop down lists.
PK58573	Task Expected duration becomes a question mark (?), after re-import from MSP.
PK58693	Messages ″Could not read environment variable″ always displayed in middleware logs.
PK58986	Resources with full security options cannot checkout the layout settings.
PK59364	Unable to turn off LDAP check when creating new resources.
PK59464	Multi-Select (Approve Timesheets and Edit Timesheets) do not work.
PK59564; PK62372	Session timeout variables not working on WebSphere.
PK59597	The Project Visitor > Documents > Can View All Documents security does not work on RPM 7.1.1.1 version.
PK59728	Session timeout variables are not working on WebSphere.
PK59749	Date sort by ″Start (Min)″ header and ″ Finish (Max)″ header in ″Projects General Information″ tab is not accurate.
PK59755	The division line between ″Parent Name″ header and ″Reference″ band is missing.
PK59899	Label mismatch in ″WBS plans / By Task Types″ portlet in My Portal view.
PK60434	Cannot blank out the selected CQ profile in the project
PK60640	RPM in Oracle DB: Custom Fields having Datafields value are not showing correctly in the Staffing View -> Open Resource Record.
PK60757	CQ-RPM integration in 7111, falsely importing actual start date.
PK61090	Options for FIND button are not explained in the Online Help.
PK61107	CQ-RPM Integration has Est / Planned Dates displaying in the RPM.
PK61197	CQ-RPM Integration has zeros instead blank values in 2 columns: Actual and Estimated Effort to Complete.
PK61352	AttributeAssignment: Missing primary key(s) for load operation: TypeID error while trying to delete an AttributeAssignement.
PK61428	EAccessViolation when double clicking ″All Scope Elements″.
PK61433	WBS ID of Work Management view is being truncate to ten digital numbers in Pivots and Reports.

Table 11. Customer identified problems fixed in this release (continued)

APAR ID	Description
PK61455	Web Services API RESOURCE - Error ID: 400556.
PK61483	Error code is missing in pop-up window.
PK61566	CQ-RPM Integration uses 8 hours per day instead of ClearQuest 7 hours per day.
PK61647; PK63714	″Unhandled Exception:EOIeerror″ error is displayed when double-clicking on “Resource Record Re-Approval” notification.
PK61669	Association of layout to document workflow step is not working.
PK61671	Synchronization is not occurring on the second synchronization.
PK61682	CQ-RPM integration: The duration field is displayed instead of the work field.
PK61885	CQ-RPM integration: Zeros are always present before any integration has occurred.
PK62559	Custom field value is not displayed in the custom asset pivot and Assets view.
PK62627	Printing the expanded expenses view crashes the application.
PK62690	Issue with the creation of a scope element using the RPM V7.1.1.1 API.
PK62723	Organizational filter issue - Duplicate folder.
PK62731	CQ-RPM integration: Importing an RPM defect into CQ results into error message ″RPM WebService:..″
PK63042	Organization filters are not working.
PK63353	Start and finish dates do not change when new Forecast start and finish dates are entered from My Work for duration-based tasks.
PK63411	Cannot open workflow attachment link from email notification.
PK63529	Unable to select RTF datafields Work Product and Summary Task in custom fields.
PK64394	Error with CALL SP_D_ORG_FILTER when user has no Organizations assigned.
PK64595	Problem with auto saving of the user profile in System Tray.
PK64787	Move and Transfer Scope exception function is causing elements not to be displayed for users.
PK64977	A document workflow visitor without security permission can open a document properties in the Communications view.
PK65263	Resource Utilization pivot optimization.

Chapter 4. Known limitations in this release

This chapter lists the known limitations in Rational Portfolio Manager 7.1.1.2.

Invalid date error when running the Scorecards Per Team report

When designing the Scorecards Per Team - Template report, if you use `[STRTODATE([ReportDataSet."fldREC_DATETIME"])]` to convert a string to a date, invalid date error message is displayed. To solve this problem, you must use `[TODATEEX([ReportDataSet."fldREC_DATETIME"])]` instead.

Calculating Status field in What-If scenario on Oracle

On an Oracle database, when leveling a scenario that is very small, there is a possibility that before the What-If view is refreshed, the leveling has already finished. In this case, the message at the bottom of the view will not be displayed to notify you of the leveling action and no notification will be sent to the Communications view.

TeamMember access requires JDK 1.4 compatibility pack on Tomcat 5.5 application server

If you have Tomcat 5.5 application server installed on your middleware without the JDK 1.4 compatibility package, the Rational Portfolio Manager TeamMember edition access fails. This is due to the missing `xercersImpl.jar` file in Tomcat 5.5. To solve this problem, even when using JDK 5.0, you must download and install the JDK 1.4 compatibility package from the Apache site: http://tomcat.apache.org/download-55.cgi

Opening checked-out elements in New Window

When opening already checked-out elements using the **Open in New Window** menu option, after closing the new window and opening the element's main description view, the description view is in checked-out mode. Attempting to check in or closing the description view generates the "300173 Element is already checked-in" error message. To close the description view you must click the **Undo Check Out** button. Note that changes that are made in the main description view will be lost. To avoid this problem, you must first check in the element before opening it in the new window. Changes that are made in the new window will be refreshed in the main description view upon checking out.

Values lost in the Custom Portlet of the Documents description view

Values added to the Custom Portlet of the Documents description view in Resource Management, Assets, and Clients/Cost Centers views are lost after the document description view is reopened. There is no workaround for this issue in this release of Rational Portfolio Manager.

Numeric attributes in saved layouts

The Attributes and Custom Fields bands have been redesigned to improve performance. As a result, if you have a saved layout with numeric attributes columns in your current Rational Portfolio Manager, migrating to version 7.1.1.2 will remove these columns. Note that this impacts only the numeric attributes columns, all other attribute types and custom fields are not impacted.

Dashes disappear on the project assignment level after leveling

When leveling proposals with the start date of one day after the resource assignments, dashes disappear in the proposal staffing view at the project level. There is no workaround for this issue in this release.

Database error when replacing a resource with a profile for the second time

When replacing a resource with a profile twice, the second time, a Database error message is generated. There is no workaround for this issue in this release.

Profile is still displayed after replacing with a resource

When entirely replacing a profile that is affected to a project and assigned at the task level only, the Demand/Supply view shows the profile affected at the project level with no effort. If you replace this profile with another resource, the Staffing view shows the affected resource with no effort. There is no workaround for this issue in this release.

Replacing a profile that is shared between a project and a task

Replacing a profile that is shared between a project and a task, does not work properly. There is no workaround for this issue in this release.

Rational Method Composer template import with dependencies

Dependencies are not imported properly from Rational Method Composer into Rational Portfolio Manager. There is no workaround for this issue in this release.

Rational ProjectConsole trend charts in Rational Portfolio Manager

The Rational ProjectConsole trend charts are not displayed in Rational Portfolio Manager, if you enter the start and end date when creating the chart in Application Administration. The workaround for this issue is not to enter the start and end dates.

Chapter 5. Migrating to this version

Before you begin

Before you proceed with the migration, you must back up the Rational Portfolio Manager database. Make sure that total recovery of the database is possible from this backup. All database migration instructions listed must be done by the instance owner and the user that connects to the database from the Web server based on the scenario that you will use for your current Rational Portfolio Manager installation.

Note: If your migration was unsuccessful, you need to restore your old database, check the log files that require troubleshooting, and restart the migration steps.

Migrating IBM Rational Portfolio Manager on DB2 for the UNIX system

This section describes how to migrate the Rational Portfolio Manager database from version 7.1.x.x to version 7.1.1.2 on DB2 for the UNIX system.

Prerequisites for migration

- A successful Rational Portfolio Manager version 7.1.x.x installation
- Rational Portfolio Manager version 7.1.1.2 migration package
- One of the following versions of DB2 supported with this release:
  - DB2 8.2 FP 14
  - DB2 9.1 FP 4
  - DB2 9.5

Definition of terms used in this section

- **DBNAME**: The name of the Rational Portfolio Manager database.
- **DB_USER**: The instance owner. The instance owner is the DB2 Instance that is defined as the logical database server environment.
- **DB_USER_PWD**: Password for the instance owner.
- **CON_USER**: The username of the connected user who is connecting to Rational Portfolio Manager from the Web application. This is the user who connects to the database from the Web application and has been granted rights to update, insert, delete, select on database tables. A Connected User can also be the instance owner.
- **CON_USER_PWD**: The password for the connected user.

You can migrate the database using the schema of your choice:

- **Scenario 1**: The instance owner name is used to connect to the database from the IBM Rational Portfolio Manager Web application. All tables are created using the user name of the instance owner as schema. Table aliases are equivalent to the instance owner name and do not need to be created. Schema names are also equivalent to the instance owner.
- **Scenario 2**: The connected user is the operating system user who will be connecting to the database from the Rational Portfolio Manager Web application. All tables are created using the user name of the instance owner as schema.

Therefore aliases are created for database tables, where the alias name is the same as the user name for the connected user. Schema names are equivalent to the instance owner name.

Note: You should use the scenario that you are using with your current Rational Portfolio Manager database.

The migration process uses a Korn shell script to supply all corresponding values for parameters. A log file is created for each step that you might need to look at if the migration is not successful. There is one main log file called `DB_CHECK.log` that contains a result report that is displayed at the end of the migration. Refer to the log file to verify that the migration was successful or if any steps failed.

The log files are located in the location specified in the execution plan. There is one main script called `migration_7112` which carries out all steps.

Setting file permissions

Before starting the migration, add execute permissions to all files shown in the table below that will be used by the migration script. If you do not add execute permission on any of these files the migration will fail.

Table 12. Permission files

Path	File
{MIGRATION_HOME}/Database/DB2/	`migration_7112, install_func`
{MIGRATION_HOME}/Database/DB2/migration	`alias, drop_triggers70, grants, reorgstats, dw_migration, refnum_update`
{MIGRATION_HOME}/Database/DB2/csp_{OS}	`bindall, dropsp`

To add execute permission to all files in the migration package, go to the package directory root and type:

```
chmod -R +x *
```

Configuring the database migration execution plan

Modify the settings in the `exec_prep.sql` file found in `{MIGRATION_HOME}/Database/DB2/` as shown in the table below. During the migration, the migration script uses this file to run the steps with predefined information, it then records and updates any success and failures and creates a table called `exec_plan` that will be used for support purposes. This file contains the following information:

- Steps run during the migration
- Package location information
- Location of log files
- Instance owner username
- Connected user
- Date the script is executed
- Description of error messages

Note: It is mandatory to edit this file, failure to do so causes the migration to fail.

Note: Make sure to remove the % notations when setting values.

Table 13. Settings for the execution plan

Setting	Notes
%OS_TYPE%	Set this value by replacing %OS_TYPE% with your operating system. Possible values are: • Linux • AIX • SunOS **Note:** Values are case-sensitive.
%PKG_DIR%	Set this value by replacing %PKG_DIR% with the path to the directory where the migration_7112 script is located. For example, {MIGRATION_HOME}/Databases/DB2/. **Note:** Make sure you have full execute rights on all the folders you will be pointing to.
%LOG_DIR%	Set this value by replacing %LOG_DIR% with the location where the log files will be created. **Note:** Make sure you have full execute rights on all the folders you will be pointing to.
%CON_USER	• If you are using scenario 1, set this value by replacing %CON_USER% with an empty string, for example, ' '. • If you are using scenario 2, set this value by replacing %CON_USER% with the username of the connected user.
%DB_USER%	Set this value by replacing %DB_USER% with the instance owner username.

Migration steps

Note: Make sure that you have a backup of your current library file before starting the migration because the file `ibmrpm.so` will be overwritten.

1. If you are installing the Rational Portfolio Manager database on versions of DB2 9 and onwards, you must enable the DB2TEMPDIR DB2 environment variable. There are two ways to do this: the first enables DB2TEMPDIR only as long as the UNIX shell window where you run the command in is open and the second keeps the DB2TEMPDIR enabled by adding the variable to the .profile file. Choose the one that suits your needs best.
   a. Run the following command in a UNIX shell window:

      ```
      export DB2TEMPDIR=<path of the sqllib directory> /
      ```

      Verify whether the previous variable has been set or not, run the following command:

      ```
      echo $DB2TEMPDIR
      ```

   b. To add the variable to the .profile file of the db2 instance owner on the UNIX machine:

1) Log into the UNIX machine as the db2 instance owner.
2) Open the .profile file in the home directory of the instance owner. (vi .profile)
3) Enter the following in the .profile file:
```
export DB2TEMPDIR= <sqllib directory path> /
```
4) Save the file and quit.
5) Run the .profile file by running the following command:
```
. ./.profile
```
or by login out and login back in as the db2 instance owner. This will automatically run the .profile file.
6) To verify that DB2TEMPDIR has been created, run:
```
echo $DB2TEMPDIR
```

2. Go to `${MIGRATION_HOME}/Database/DB2/` and run:
   - For scenario 1:
     ```
     ./migration_7112 DBNAME DB_USER_PWD
     ```
   - For scenario 2:
     ```
     ./migration_7112 DBNAME DB_USER_PWD CON_USER_PWD
     ```

Steps used when migrating from version 7.1.x.x

The following list includes the steps and the names of log files created for each step of migration process:

1. Checks for the version number in the Rational Portfolio Manager database table to decide from which Rational Portfolio Manager version the migration must be done.
2. Stops and starts the Rational Portfolio Manager database.
3. If using scenario 2, drops aliases for the Rational Portfolio Manager table > `drop_alias.log`
4. Starts the migration process.
5. Drops the triggers of the Rational Portfolio Manager database > `drop_triggers71xx.log`
6. Migrates to version 7.1.1.2 > `migration71xx_7112.log`

   Note: Additional log files will result as output
7. If you used scenario 2, creates aliases for Rational Portfolio Manager tables > `alias.log`
8. If you used scenario 2, grants the connected user rights to access Rational Portfolio Manager tables > `grants.log`
9. Creates triggers for Rational Portfolio Manager v 7.1.1.2 > `triggers.log`
10. If Rational Portfolio Manager data warehouse has been installed inside Rational Portfolio Manager database, updates data warehouse tables, recreates the staging and data warehouse views.

    Note: For information about Rational Portfolio Manager data warehouse installation, refer to the *Installation and Upgrade Guide*.
11. Runs statistics on tables > `reorgstats.log`
12. Drops all Rational Portfolio Manager stored procedures > `dropsp.log`
13. Creates stored procedures for V7.1.1.2 > `createsp.log`
14. Binds Rational Portfolio Manager V7.1.1.2 code > `bindall.log`

15. Generates a report that contains migration to Rational Portfolio Manager 7.1.1.2 results > `DB_CHECK.log`

Note: In the log files generated through the migration you might see the following SQLSTATE numbers or similar. These can be ignored because they are only warnings:

- SQLSTATE=02000 (...the result set of the query is an empty table)
- SQLSTATE=42704 (...is an undefined name)

Note: In the case that an error occurs during any of the installation steps, the migration will exit.

Enabling features

Earned Value

If you are using the Earned Value functionality of IBM Rational Portfolio Manager and you want the values to be updated on a regular basis for all projects, you can schedule a job that executes the stored procedure call to update these values. You can use the `rollup_ev.sql` file located in the `${MIGRATION_HOME}/Database/DB2/migration` directory by editing the file and adding the correct parameters for the database name, username, and password. Username and password can be the username and password of the instance owner or the connected user, depending on the database scenario you are using. This file connects to the Rational Portfolio Manager database specified and calls the earned value stored procedure to update Earned Value for all projects.

Note: It is a good practice to run the scheduled job during off hours when system usage is minimal.

Network Diagrams

By default, the Network Diagrams feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID =
'CAN_ACCESS_NETWORK_DIAGRAMS_____'
```

Offline Forms

By default, the Offline Forms feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'CAN_ACCESS_OFFLINE_FORMS%'
```

Non Linear Contouring

By default, the Non Linear Contouring feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'ENABLE_REALLOCATE_REMAINING_WORK%'
```

Improving the Data Warehouse staging initial load

For clients with a large amount of legacy data (more than 1000 projects), the initial load to transfer Rational Portfolio Manager data into the Staging database and further to the Data Warehouse might take a long time. To speed up the initial load, use the following steps to manually load the data from Portfolio Manager to Staging and then to Data Warehouse.

Note: The process uses a Korn shell script to supply all corresponding values for parameters. Make sure that all script files have execute permissions.

Note: All log files generated by the following scripts are located under`${MIGRATION_HOME}/Database/DB2/migration/RPMDW/logs`. Refer to this directory to check the log files.

Note: To improve the performance of ETL or to improve the initial load of ETL, it is important to apply the correct parameters to the ETL stored procedure which loads data from the Rational Portfolio Manager tables into the staging tables. The stored procedure deletes all data from the staging tables before it starts the loading process. The deleting process might take a long time, depending on the amount of data in the tables, which will result in the DB2 transaction log files getting full. For the same reason, to get a much faster process time, we truncate the data instead of deleting them.

Here is the stored procedure name and its parameters:

```
SP_LOAD_STAGING(project_ids, resource_ids, bitflag, rec_user)
```

1. The `project_ids` and `resource_ids` parameters are for future use. You can pass `NULL` for these parameters.
2. The most important parameter is the `bitflag` parameter. It controls how to clear up the data and what will be loaded into the staging tables. The value of this parameter must be an integer and only the first three bits are used:
   - Pass the value 1, to have the stored procedure load all Rational Portfolio Manager data into the staging tables after deleting the old data.
   - Pass the value 2, to have the stored procedure load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables after deleting the old data.
   - Pass the value 4, to have the stored procedure truncate the staging tables to clear them without loading the Rational Portfolio Manager data into the staging tables. This approach is the fastest way to clear up the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 5, to have the stored procedure truncate the staging tables to clear them, then load all Rational Portfolio Manager data into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 6, to have the stored procedure truncate the staging tables to clear them, then load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
3. The `rec_user` parameter is the Rational Portfolio Manager user ID who executes the stored procedure. By default, you can pass `'PMO_SUPERVISOR'`.

Note: During the initial load improvement steps described below, all foreign key constraints are removed before running the ETL stored procedure. Also, the ETL stored procedure is called with the truncate option. If you want to opt from this option, call the stored procedure with the bitflag value of 2 in step 3 and the value of 1 in step 6.

If you are using scenario 1 (connecting to the Rational Portfolio Manager database as the instance owner):

1. From the shell prompt logged as the instance owner, locate the ${MIGRATION_HOME}/Database/DB2/migration/RPMDW/ folder and execute the following script:

   ```
   ./staging DBNAME DB_USER DB_USER_PWD
   ```

2. Execute the following statement to initialize a small number of projects (for example 100 projects) for a pre-load. If you want to initialize for more than 100 projects, open the ${MIGRATION_HOME}/Database/DB2/migration/RPMDW/ init_projects.sql file for editing and replace 100 with the required number. Save and close the file, then run:

   ```
   db2 -tvf init_projects.sql -z ${MIGRATION_HOME}/Database/
   DB2/migration/RPMDW/logs/init_projects.log
   ```

   Check the log file. If there are no errors, continue to the next step.

3. Call ETL to pre-load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user DB_USER using DB_USER_PWD
   ```

   then run:

   ```
   db2 "CALL SP_LOAD_STAGING (NULL, NULL, 6, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

4. Run reorg/runstats for all staging tables and indexes:

   ```
   ./reorg_stagingtables
   ```

5. Rebind all Rational Portfolio Manager packages:

   ```
   db2rbind DBNAME –l db2bind.log all –u DB_USER –p DB_USER_PWD
   ```

6. Call ETL to load the staging area with the following parameters:

   ```
   db2  "CALL SP_LOAD_STAGING (NULL, NULL, 5, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

7. Recreate the ETL stored procedure (sp_etl_dw) with the real body:

   ```
   db2 –td@ -f rpm_staging_dw_etl.sql -z ${MIGRATION_HOME}/Database/
   DB2/migration/RPMDW/logs/rpm_staging_dw_etl.log
   ```

8. Execute the following script to transfer the Data Warehouse version to the appropriate Data Warehouse tables:

   ```
   ./dw_etl DBNAME DB_USER DB_USER_PWD
   ```

If you are using scenario 2 (connecting to the Rational Portfolio Manager database as the connected user):

1. From the shell prompt, locate the ${MIGRATION_HOME}/Database/DB2/migration/ RPMDW/ folder and execute the following script:

   ```
   ./staging DBNAME DB_USER DB_USER_PWD CON_USER CON_USER_PWD
   ```

2. Execute the following statement to initialize a small number of projects (for example 100 projects) for a pre-load. If you want to initialize for more than 100 projects, open the ${MIGRATION_HOME}/Database/DB2/migration/RPMDW/ init_projects.sql file for editing and replace 100 with the required number. Save and close the file, Connect to database as the instance owner and run:

   ```
   db2 -tvf init_projects.sql -z ${MIGRATION_HOME}/Database/
   DB2/migration/RPMDW/logs/init_projects.log
   ```

   Check the log file. If there are no errors, continue to the next step.

3. Call ETL to pre-load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

then run:

```
db2 "CALL SP_LOAD_STAGING (NULL, NULL, 6, 'PMO_SUPERVISOR')"
```

If there are no errors, continue to the next step.

4. Run reorg/runstats for all staging tables and indexes. Connect to Rational Portfolio Manager database as the instance owner:

   ```
   db2 connect to DBNAME user DB_USER using DB_USER_PWD
   ```

   then run:

   ```
   ./reorg_stagingtables
   ```

5. Rebind all Rational Portfolio Manager packages:

   ```
   db2rbind DBNAME –l db2bind.log all –u CON_USER –p CON_USER_PWD
   ```

6. Call ETL to load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

   then run:

   ```
   db2  "CALL SP_LOAD_STAGING (NULL, NULL, 5, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

7. Recreate the ETL stored procedure (sp_etl_dw) with the real body:

   ```
   DB2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

   then run:

   ```
   db2 –td@ -f rpm_staging_dw_etl.sql -z ${MIGRATION_HOME}/Database/
   DB2/migration/RPMDW/logs/rpm_staging_dw_etl.log
   ```

8. Execute the following script to transfer the Data Warehouse version to the appropriate Data Warehouse tables:

   ```
   ./dw_etl DBNAME DB_USER DB_USER_PWD CON_USER CON_USER_PWD
   ```

Loading and restoring sample reports default configuration (optional)

For information about loading and restoring data warehouse common reporting samples into Rational Portfolio Manager, see the *Installation and Upgrade Guide*.

Migrating IBM Rational Portfolio Manager on Oracle for the UNIX system

This section describes how to migrate the IBM Rational Portfolio Manager database from version 7.1.x.x to version 7.1.1.2 on Oracle for the UNIX system.

It is also possible to run the migration scripts from a remote machine. In this case, make sure that you can connect to the remote database using sqlplus.

Note: IBM Rational Portfolio Manager 7.1.1.2 migration script uses `SQLplus` located under `${ORACLE_HOME}/bin` directory. Therefore, you should run the migration scripts on a machine that has this utility.

Prerequisites

- A successful Rational Portfolio Manager version 7.1.x.x installation
- Rational Portfolio Manager version 7.1.1.2 migration package
- `SQLplus` utility for running Oracle migration scripts

- Oracle migration uses shell scripting in bourne shell environments (sh)
- Make sure that you have execute rights for `mig_owner.sh`, `mig_con_user.sh`, `mig_staging.sh`, and `mig_dw.sh` files
- One of the following versions of Oracle supported with this release:
  - Oracle 9.2.0.8
  - Oracle 10.2.0.3

Setting file permissions

Before starting the migration, add execute permissions to all files that will be used by the migration script. If you do not add execute permission on all files in the migration package, the migration will fail.

To add execute permission to all files in the migration package, go to the package directory root and type:

```
chmod -R +x *
```

All files in the current directory and all it's subdirectories now have execute permissions set.

Migration steps

Migrating to Rational Portfolio Manager 7.1.1.2 consist of the following steps:

1. Migrating Rational Portfolio Manager schema owner
2. Migrating Staging user
3. Migrating Rational Portfolio Manager connected user (if a connected user is used)
4. Migrating Rational Portfolio Manager Data Warehouse (if installed previously)
5. Loading and restoring sample reports default configuration (optional)
6. Enabling features

Migrating the schema owner (mig_owner.sh)

1. Tablespaces used in the migration scripts are:
   - `PMO_IDX_64K` for indexes
   - `PMO_DATA_64K` for tables
   - `PMO_LOB_64K` for lobs

   Note: If the tablespaces in your Rational Portfolio Manager database are different from the above mentioned names, you must change the name of the tablespaces in the migration scripts in the following file:

   `${MIGRATION_HOME}/Database/Oracle/scripts/step1.sql`
2. Stop the application server associated with the Rational Portfolio Manager database.
3. Shut down the Rational Portfolio Manager database.
4. Start the Rational Portfolio Manager database.
5. Open a shell window and change the directory to `${MIGRATION_HOME}/Database/Oracle` and run `./mig_owner.sh`.

   The migration script runs and prompts you with a series of questions:
6. `Do you have a backup of your database? (y/n)` If yes, type `y` to continue. If you do not have a backup, type `n` to stop the migration, backup your database, and run the `./mig_owner.sh` script again.

7. The script uses the ${ORACLE_HOME} environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of ${ORACLE_HOME}>. After the script has verified that ORACLE_HOME is set to${ORACLE_HOME} it prompts you to validate the value and for the following information. Enter the required information when prompted.
   - Is this the right value?(y/n) answer y if the value is correct.
   - Is your RPM database installed on this machine? (y/n)
     - Answer y, if the Rational Portfolio manager database is installed on this machine.
     - Answer n, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
8. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - Is this the right value?(y/n)

     Answer y if the value is correct.
   - Enter the IBMRPM schema owner
   - Enter the IBMRPM schema owner password
9. After entering the previous information, the script checks the version of the Rational Portfolio Manager database that you currently have and prompts you to validate it.

   Is the above version number correct?(y/n)
   - If the Rational Portfolio Manager database version is correct, answer y.
   - If it is not, answer n. You will then be prompted to enter the correct version of your Rational Portfolio Manager database.

   Note: It is important to enter the version number that corresponds to your Rational Portfolio Manager database in the following format: 7.1.x.x
10. Are you sure you want to migrate your database now?

    To start the migration, answer y.
11. At the end of migration you will be provided with a migration report. The migration report includes the following information:
    - The current version of the database (which at this level must be 7.1.1.2)
    - The number of invalid objects in the database (which should be 0)
    - The number of objects (needed for 7.1.1.2) for each object type and their status in the migrated Rational Portfolio Manager database

      Comparing the number of objects for each object type in the **YOUR_RPM_DATABASE** and **NUMBER_OF_OBJECTS_MUST_BE** columns helps you to check if the migration has been successful. These values should be equal.
    - The name and type of the missing objects in your database
    - The list of error messages generated during DDL migration (if any)
12. Migration log files will be created under ${MIGRATION_HOME}/Database/Oracle/logs folder. It is a good practice to look at the log files to see if migration was successful.
13. Stop the Oracle listener:

    ${ORACLE_HOME}/bin/lsnrctl stop

14. LevelingLib.so located under ${MIGRATION_HOME}/Database/Oracle/leveling/[your OS/your Oracle version] folder must be manually copied to ${ORACLE_HOME}/bin on the database server.
15. Start the Oracle listener:

    ```
    ${ORACLE_HOME}/bin/lsnrctl start
    ```

Migrating the staging user (mig_staging.sh)

Migrating the staging user is a mandatory step in Rational Portfolio Manager 7.1.1.2 migration (whether you have previously installed Data Warehouse or not); it is done by running the mig_staging.sh file. Follow the steps below to install staging user:

1. Open a shell window and navigate to ${MIGRATION_HOME}/Database/Oracle directory and run the ./mig_staging.sh script.

   The migration script runs and prompts you with a series of questions:
2. The script uses the ${ORACLE_HOME} environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of ${ORACLE_HOME}>. After the script has verified that ORACLE_HOME is set to ${ORACLE_HOME}} it will prompt you to validate the value and for the following information. Enter the required information when prompted.
   - Is this the right value?(y/n) answer y if the value is correct.
   - Is your RPM database installed on this machine? (y/n)
     - Answer y, if the Rational Portfolio manager database is installed on this machine.
     - Answer n, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
3. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - Is this the right value?(y/n)

     Answer y if the value is correct.
   - Enter the IBMRPM schema owner
   - Enter the password for staging user. The default password is *staging*.
4. The script gathers all the necessary information to start the installation and prompts you to start the migration.

   ```
   Are you sure you want to start the migration now? (y/n)
   ```

   To start the migration, answer y.
5. Log files are created in the ${MIGRATION_HOME}/Database/Oracle/logs folder. Look at the log files to see if scripts ran successfully.

Migrating the connected user (mig_con_user.sh)

This step is optional in most cases, but it must be performed if you are using a connected user. To update the connected user:

1. Open a shell window and change the directory to ${MIGRATION_HOME}/Database/Oracle and run ./mig_con_user.sh.
2. The script uses the ${ORACLE_HOME} environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of ${ORACLE_HOME}>. After the script has verified that ORACLE_HOME is set to ${ORACLE_HOME} it prompts you to validate the value and for the following information. Enter the required information when prompted.

- Is this the right value?(y/n) answer y if the value is correct.
- Is your RPM database installed on this machine? (y/n)
  - Answer y, if the Rational Portfolio manager database is installed on this machine.
  - Answer n, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
    - TNS string
    - ORACLE_SID

3. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - Is this the right value?(y/n)

     Answer y if the value is correct.
   - Enter the IBMRPM schema owner.
   - Enter IBMRPM schema owner password.
   - Enter the IBMRPM connected user name.
   - Enter the IBMRPM connected user password.
   - Enter the staging password (default is *staging*).
   - Enter the comprt password (default is *comrpt* if you have not changed it).
   - Enter the sys password.
4. Are you sure you want to migrate your connected user now? (y/n)

   To start the migration, answer y.
5. Migration log files are created under ${MIGRATION_HOME}/Database/Oracle/logs folder. It is a good practice to look at the log files to see if the migration was successful.

Migrating the Data Warehouse (mig_dw.sh)

This section describes the steps to migrate Rational Portfolio Manager Data Warehouse using the mig_dw.sh script. If you have not installed Data Warehouse, skip this section.

1. Open a shell window and navigate to ${MIGRATION_HOME}/Database/Oracle and run ./mig_dw.sh.

   The migration script runs and prompts you with a series of questions:
2. Do you have a backup of your Data Warehouse database? (y/n)
   - If yes, type y to continue.
   - If you do not have a backup, type n to stop the migration, back up your database and run the mig_dw.sh script again.
3. The script uses the ${ORACLE_HOME} environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of ${ORACLE_HOME}>. After the script has verified that ORACLE_HOME is set to ${ORACLE_HOME} it prompts you to validate the value and for the following information. Enter the required information when prompted.
   - Is this the right value?(y/n) answer y if the value is correct.
   - Is your data warehouse database installed on this machine?(y/n)
     - Answer y, if the data warehouse database is installed on this machine.
     - Answer n, if the data warehouse database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID

4. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - `Is this the right value?(y/n)`

     Answer `y` if the value is correct.
   - Enter the staging password (default is *staging*).
   - Enter rpmdw password (default is *rpmdw*).
5. `Are you sure you want to start the migration now? (y/n)`

   To start the migration, answer `y`.
6. Log files are created in the `${MIGRATION_HOME}/Database/Oracle/logs` folder. Look at the log files to see if scripts ran successfully.

Enabling features

Network Diagrams

By default, the Network Diagrams feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID =
'CAN_ACCESS_NETWORK_DIAGRAMS_____'
```

Offline Forms

By default, the Offline Forms feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'CAN_ACCESS_OFFLINE_FORMS%'
```

Non Linear Contouring

By default, the Non Linear Contouring feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'ENABLE_REALLOCATE_REMAINING_WORK%'
```

Improving the Data Warehouse staging initial load

For clients with a large amount of legacy data (more than 1000 projects), the initial load to transfer Rational Portfolio Manager data into the Staging area and further to the Data Warehouse may take a long time. To speed up the initial loading, use the following steps to manually load the data from Rational Portfolio Manager to Staging and then to Data Warehouse.

Note: The following required files are located under the `${MIGRATION_HOME}/DATABASE/ORACLE/plbddl` directory:

- `drop_staging_foreign_keys.sql`
- `small_pre_load.sql`
- `anatab.sql`
- `drop_dw_foreign_keys.sql`

Loading data to Staging area

Loading data to staging area is performed by calling the `SP_LOAD_STAGING` function. It is important to send the correct parameters when calling this function, because these parameters affect both the performance and the functionality of `SP_LOAD_STAGING`. For example, `SP_LOAD_STAGING` deletes all data from the staging

tables before starting the load process. The delete process might take a long time, depending on the amount of data in the tables. If you call SP_LOAD_STAGING with the correct parameters, you can make this function truncate the data rather than deleting them and, therefore, improve the performance.

The description of SP_LOAD_STAGING is:

```
SP_LOAD_STAGING(project_ids, resource_ids, bitflag, rec_user)
```

1. The project_ids and resource_ids parameters are for future use. You can pass NULL for these parameters.
2. The most important parameter is the bitflag parameter. It controls how to clear up the data and what will be loaded into the staging tables. The value of this parameter must be an integer and only the first three bits are used:
   - Pass the value 1, to have the stored procedure load all Rational Portfolio Manager data into the staging tables after deleting the old data.
   - Pass the value 2, to have the stored procedure load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables after deleting the old data.
   - Pass the value 4, to have the stored procedure truncate the staging tables to clear them without loading the Rational Portfolio Manager data into the staging tables. This approach is the fastest way to clear up the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 5, to have the stored procedure truncate the staging tables to clear them, then load all Rational Portfolio Manager data into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 6, to have the stored procedure truncate the staging tables to clear them, then load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
3. The rec_user parameter is the Rational Portfolio Manager user ID that executes the stored procedure. By default, you can pass 'PMO_SUPERVISOR'.

To load data into the staging area (initial load):

Note: During the initial load improvement steps described below, all foreign key constraints are removed before running the SP_LOAD_STAGING function. Also, the SP_LOAD_STAGING function is called with the truncate option for better performance. If you do not want to use the truncate option, call the SP_LOAD_STAGING function with the bitflag value of 2 in step 4 and the value of 1 in step 6.

1. Using sqlplus, connect as the staging user and run the drop_staging_foreign_keys.sql script.
2. While still connected as the staging user in sqlplus, run the following statement to disable STAGING.VERSION_UPDATE trigger:

   ```
   ALTER TRIGGER STAGING.VERSION_UPDATE DISABLE;
   ```

3. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the small_pre_load.sql script.
4. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the following script:

```
COLUMN ERROR FORMAT 9999999999
EXEC SET_DATEFORMAT;
VAR R REFCURSOR;
EXEC :R:=SP_LOAD_STAGING('','',6,'PMO_SUPERVISOR');
COMMIT;
PRINT R;
```

5. Analyze the tables in staging schema. To do so, you can connect as the staging user in sqlplus and run the `anatab.sql` script.
6. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the following script:

```
COLUMN ERROR FORMAT 9999999999
EXEC SET_DATEFORMAT;
VAR R REFCURSOR;
EXEC :R:=SP_LOAD_STAGING('','',5,'PMO_SUPERVISOR');
COMMIT;
PRINT R;
```

7. Using sqlplus connect as staging user and run the following statement to enable `STAGING.VERSION_UPDATE` trigger:

```
ALTER TRIGGER STAGING.VERSION_UPDATE ENABLE;
```

Loading data to data warehouse

To load the data in data warehouse (initial load):

1. Using sqlplus, connect as rpmdw user and run `drop_dw_foreign_keys.sql` to drop foreign keys.
2. Using sqlplus connect as staging user and run the following insert statement to create a new version for data warehouse:

```
EXEC SET_DATEFORMAT;
INSERT INTO RPMDW.VERSION_DIM (VERSION_ID, DATE_ACQUIRED, SERVER_VERSION, SERVER_NAME)
SELECT VERSION_ID, DATE_ACQUIRED, SERVER_VERSION, SERVER_NAME FROM STAGING.VERSION_VW;
COMMIT;
SELECT COALESCE(MAX(VERSION_KEY),1) AS VERSION_KEY, COUNT(*) AS VERSION_NUMBER FROM
RPMDW.VERSION_DIM;
```

   Note: When running the above select statement, you will see two columns. The first column is the version_key. When running the following steps, you must replace the <version_key> with the number in the version_key column.

3. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION(<version_key>,0);
COMMIT;
```

4. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
5. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION2(<version_key>,0);
COMMIT;
```

6. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
7. Using sqlplus connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION3(<version_key>,0);
COMMIT;
```

8. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
9. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_FACTS(<version_key>,0);
COMMIT;
```

10. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.

Importing the new default layouts for common reporting reports (optional)

For information about importing data warehouse common reporting samples into Rational Portfolio Manager, see the *Installation and Upgrade Guide*.

Migrating IBM Rational Portfolio Manager on DB2 for Windows

This section describes how to migrate the Rational Portfolio Manager database from version 7.1.x.x to version 7.1.1.2 on DB2 for Windows.

Prerequisites

- A successful Rational Portfolio Manager version 7.1.x.x
- Rational Portfolio Manager version 7.1.1.2 migration package
- One of the following versions of DB2 supported with this release:
  - DB2 8.2 FP 14
  - DB2 9.1 FP 4
  - DB2 9.5

Definition of terms used in this section

- **DBNAME**: The name of the Rational Portfolio Manager database.
- **DB_USER**: The instance owner. The instance owner is the DB2 Instance, which is defined as logical database server environment.
- **DB_USER_PWD**: Password for the instance owner.
- **CON_USER**: The username of the connected user who is connecting to Rational Portfolio Manager from the Web application. This is the user who connects to the database from the Web application and has been granted rights to update, insert, delete, select on database tables. A Connected User can also be the instance owner.
- **CON_USER_PWD**: The password for the connected user.

You can migrate the database using the schema of your choice:

- **Scenario 1**: The instance owner name is used to connect to the database from the IBM Rational Portfolio Manager Web application. All tables are created using the user name of the instance owner as schema. Table aliases are equivalent to the instance owner name and do not need to be created. Schema names are also equivalent to the instance owner.
- **Scenario 2**: The connected user is the operating system user who will be connecting to the database from the Rational Portfolio Manager Web application. All tables are created using the user name of the instance owner as schema.

Therefore, aliases are created for database tables, where the alias name is the same as the user name for the connected user. Schema names are equivalent to the instance owner name.

Note: You should use the scenario that you are using with your current Rational Portfolio Manager database.

A log file is created for each step that you might need to look at in case of unsuccessful migration. There is one main log file called `DB_CHECK.log` that contains a result report that will be displayed at the end of the migration. Look at the log file to verify that the migration was successful or if any steps failed.

The log files are located in the location specified in the execution plan. There is one main batch file called `migration_7112.bat`, which performs all steps.

Configuring the database migration execution plan

Modify the settings in the `exec_prep.sql` file found in `%MIGRATION_HOME%\Database\DB2\Windows` as shown in the table below. During the migration, the migration script queries this file to run the steps with predefined information, it then records and updates any success and failures and creates a table called `exec_plan` that will be used for support purposes. This file contains the following information:

- Steps run during the migration
- Package location information
- Location of log files
- Instance owner username
- Connected user
- Date the script is executed
- Description of error messages

Note: It is mandatory to edit this file, failure to do so causes the migration to fail.

Note: Make sure to remove the % notations when setting values.

Table 14. Settings for the execution plan

Setting	Notes
%OS_TYPE%	Set this value by replacing the variable %OS_TYPE% with Windows.
%PKG_DIR%	Set this value by replacing %PKG_DIR% with the path to the directory where the `migration_7112.bat` script is located. For example, %MIGRATION_HOME%\Databases\DB2\Windows.
%LOG_DIR%	Set this value by replacing %LOG_DIR% with the location where the log files will be created.
%CON_USER	• If you are using scenario 1, set this value by replacing %CON_USER% with an empty string, for example, ' '. • If you are using scenario 2, set this value by replacing %CON_USER% with the username of the connected user.

Table 14. Settings for the execution plan (continued)

Setting	Notes
%DB_USER%	Set this value by replacing %DB_USER% with the instance owner username.

Migration steps

Before starting the migration, make sure that you have a backup of your current library file before starting the migration because the file `ibmrpm.dll` will overwrite it.

If you are running the Rational Portfolio Manager migration on a DB2 64-bit environment, before starting the migration, you must modify the `createsp.bat` in the `%MIGRATION_HOME%\Databases\DB2\csp` directory as follows:

1. Make a backup copy of `createsp.bat`
2. Open the script `createsp.bat` and remove all instances of the `NOT FENCED` clause.
3. Remove the all instances of `\unfenced` path.
4. Save you changes.
5. Continue to run the `migration_7112.bat` script.

If you are installing the Rational Portfolio Manager database on versions of DB2 9 and onwards, you must enable the DB2TEMPDIR DB2 environment variable. There are two ways to do this, both are described below: the first enables DB2TEMPDIR only as long as the command prompt window where you run the command in is open and the second keeps DB2TEMPDIR enabled by creating the variable in My Computer properties.

1. Run the following command in a command prompt window where the `<path of the sqllib directory>` should be in the following format C:\Progra~1\IBM\SQLLIB:

   ```
   set DB2TEMPDIR=<path of the sqllib directory>
   ```

   Verify that this variable has been set or not, by running the following command:

   ```
   echo %DB2TEMPDIR%
   ```

2. To create DB2TEMPDIR in My Computer properties:
   a. Right click **My Computer** and select **Properties > Advanced**.
   b. Click **Environment Variables**.
   c. In the System Variables section click **New**, you are now in the New System Variable window.
   d. In the variable name field, enter DB2TEMPDIR.
   e. In the Variable Value field, enter: C:\Progra~1\IBM\SQLLIB\
   f. Click **OK** on all the next 3 windows (New Environment Variable window, Environment Variables window, and System Properties window)

To run the `migration_7112.bat` script:

1. Open a terminal window. At the command line prompt, type `db2cmd`.
2. Go to `%MIGRATION_HOME%\Database\DB2\` and run:
   - For scenario 1:

     ```
     migration_7112.bat DBNAME DB_USER_PWD
     ```

- For scenario 2:

  `migration_7112.bat DBNAME DB_USER_PWD CON_USER_PWD`

Steps used when migrating from version 7.1.x.x

The following list includes the steps and the names of log files created for each step of migration process:

1. Checks for the version number in the Rational Portfolio Manager database table to decide from which Rational Portfolio Manager version the migration must be done.
2. Stops and starts the Rational Portfolio Manager database.
3. If using scenario 2, drops aliases for the Rational Portfolio Manager table > `drop_alias.log`
4. Starts the migration process.
5. Drops the triggers of the Rational Portfolio Manager database > `drop_triggers71xx.log`
6. Migrates to V7.1.1.2 > `migration71xx_7112.log`
7. If you used scenario 2, creates aliases for Rational Portfolio Manager tables > `alias.log`
8. If you used scenario 2, grants the connected user rights to access Rational Portfolio Manager tables > `grants.log`
9. Creates triggers for Rational Portfolio Manager V7.1.1.2 > `triggers.log`
10. If Rational Portfolio Manager data warehouse has been installed inside Rational Portfolio Manager database, updates data warehouse tables, recreates the staging and data warehouse views.
11. Runs statistics on tables > `reorgstats.log`
12. Drops all Rational Portfolio Manager stored procedures > `dropsp.log`
13. Creates stored procedure for V7.1.1.2 > `createsp.log`
14. Binds Rational Portfolio Manager V7.1.1.2 code > `bindall.log`
15. Generates a report that contains migration to Rational Portfolio Manager 7.1.1.2 results > `DB_CHECK.log`

Note: In the log files generated through the migration you might see the following SQLSTATE numbers or similar. These can be ignored because they are only warnings:

- SQLSTATE=02000 (...the result set of the query is an empty table)
- SQLSTATE=42704 (...is an undefined name)

Note: In the case that a server error occurs during any of the installation steps, the migration will exit.

Enabling features

Earned Value enablement

If you are using the Earned Value functionality of IBM Rational Portfolio Manager and you want the values to be updated on a regular basis for all projects, then you can schedule a job that will execute the stored procedure call to update these values. You can use the `rollup_ev.sql` file located in the `${MIGRATION_HOME}/Database/DB2/migration` directory by editing the file and adding the correct parameters for the database name, username, and password. The username and password can be the username and password of the instance owner or the connected user depending on the database scenario you are using. This file

connects to the Rational Portfolio Manager database specified and calls the earned value stored procedure to update Earned Value for all projects.

Note: It is a good practice to run the scheduled job during off hours when system usage is minimal.

Enabling Network Diagrams

By default, the Network Diagrams feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID =
'CAN_ACCESS_NETWORK_DIAGRAMS_____'
```

Enabling Offline Forms

By default, the Offline Forms feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'CAN_ACCESS_OFFLINE_FORMS%'
```

Enabling Non Linear Contouring

By default, the Non Linear Contouring feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'ENABLE_REALLOCATE_REMAINING_WORK%'
```

Improving the Data Warehouse staging initial load

For clients with a large amount of legacy data (more than 1000 projects), the initial load to transfer Rational Portfolio Manager data into the Staging database and further to the Data Warehouse may take a long time. To speed up the initial load, use the following steps to manually load the data from Rational Portfolio Manager to Staging and then to Data Warehouse.

Note: All log files generated by the following batch files will be located under`%MIGRATION_HOME%\Database\DB2\migration\RPMDW\logs`. Refer to this directory to check the log files.

Note: To improve the performance of ETL or to improve the initial load of ETL, it is important to apply the correct parameters to the ETL stored procedure that loads data from the Rational Portfolio Manager tables into the staging tables. The stored procedure deletes all data from the staging tables before starting the loading process. The deleting process might take a long time, depending on the amount of data in the tables, that also results in the DB2 transaction log files getting full. For the same reason, to get a much faster process time, we truncate the data instead of deleting them.

Here is the stored procedure name and its parameters:

```
SP_LOAD_STAGING(project_ids, resource_ids, bitflag, rec_user)
```

1. The `project_ids` and `resource_ids` parameters are for future use. You can pass `NULL` for these parameters.
2. The most important parameter is the `bitflag` parameter. It controls how to clear up the data and what will be loaded into the staging tables. The value of this parameter must be an integer and only the first three bits are used:
   - Pass the value 1, to have the stored procedure load all Rational Portfolio Manager data into the staging tables after deleting the old data.

- Pass the value 2, to have the stored procedure load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables after deleting the old data.
- Pass the value 4, to have the stored procedure truncate the staging tables to clear them without loading the Rational Portfolio Manager data into the staging tables. This approach is the fastest way to clear up the staging tables. To use this option, all foreign key constraints must be disabled or removed.
- Pass the value 5, to have the stored procedure truncate the staging tables to clear them, then load all Rational Portfolio Manager data into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
- Pass the value 6, to have the stored procedure truncate the staging tables to clear them, then load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables. To use this option, all foreign key constraints must be disabled or removed.

3. The `rec_user` parameter is the Rational Portfolio Manager user ID that executes the stored procedure. By default, you can pass `'PMO_SUPERVISOR'`.

Note: During the initial load improvement steps described below, all foreign key constraints are removed before running the ETL stored procedure. Also the ETL stored procedure is called with the truncate option. If you want to opt out from this option, call the stored procedure with the bitflag value of 2 in step 3 and the value of 1 in step 6.

If you are using scenario 1 (connecting to the Rational Portfolio Manager database as the instance owner):

1. From the DB2 command prompt logged as the instance owner, locate the `%MIGRATION_HOME%\Database\DB2\migration\RPMDW\` folder and run the batch file:

   ```
   staging.bat DBNAME DB_USER DB_USER_PWD
   ```

2. Execute the following statement to initialize a small number of projects (for example 100 projects) for a pre-load. If you want to initialize for more than 100 projects, open the `%MIGRATION_HOME%\Database\DB2\migration\RPMDW\init_projects.sql` file for editing and replace 100 with the required number. Save and close the file, then run:

   ```
   db2 -tvf init_projects.sql -z %MIGRATION_HOME%\Database\DB2\migration
   \RPMDW\logs\init_projects.log
   ```

   Check the log file. If there are no errors, continue to the next step.

3. Call ETL to pre-load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user DB_USER using DB_USER_PWD
   ```

   then run:

   ```
   db2 "CALL SP_LOAD_STAGING (NULL, NULL, 6, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

4. Run reorg/runstats for all staging tables and indexes:

   ```
   reorg_stagingtables.bat
   ```

5. Rebind all Rational Portfolio Manager packages:

   ```
   db2rbind DBNAME –l db2bind.log all –u DB_USER –p DB_USER_PWD
   ```

6. Call ETL to load the staging area with the following parameters:

```
db2  "CALL SP_LOAD_STAGING (NULL, NULL, 5, 'PMO_SUPERVISOR')"
```

If there are no errors, continue to the next step.

7. Recreate the ETL stored procedure (sp_etl_dw) with the real body:

   ```
   db2 –td@ -f RPM_STAGING_DW_ETL.sql -z %MIGRATION_HOME%\Database\DB2\migration
   \RPMDW\logs\rpm_staging_dw_etl.log
   ```

8. Run the following batch file to transfer the Data Warehouse version to the appropriate Data Warehouse tables:

   ```
   dw_etl.bat DBNAME DB_USER DB_USER_PWD
   ```

If you are using scenario 2 (connecting to the Rational Portfolio Manager database as the connected user):

1. From the DB2 command prompt, locate the %MIGRATION_HOME%\Database\DB2\migration\RPMDW\ folder and run the following batch file:

   ```
   staging.bat DBNAME DB_USER DB_USER_PWD CON_USER CON_USER_PWD
   ```

2. Execute the following statement to initialize a small number of projects (for example 100 projects) for a pre-load. If you want to initialize for more than 100 projects, open the %MIGRATION_HOME%\Database\DB2\migration\RPMDW\init_projects.sql file for editing and replace 100 with the required number. Save and close the file. Connect to database as the instance owner and run:

   ```
   db2 -tvf init_projects.sql -z %MIGRATION_HOME%\Database\DB2\migration
   \RPMDW\logs\init_projects.log
   ```

   Check the log file, if no errors, continue to the next step.

3. Call ETL to pre-load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

   then run:

   ```
   db2 "CALL SP_LOAD_STAGING (NULL, NULL, 6, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

4. Run reorg/runstats for all staging tables and indexes. Connect to Rational Portfolio Manager database as the instance owner:

   ```
   db2 connect to DBNAME user DB_USER using DB_USER_PWD
   ```

   then run:

   ```
   reorg_stagingtables.bat
   ```

5. Rebind all Rational Portfolio Manager packages:

   ```
   db2rbind DBNAME –l db2bind.log all –u CON_USER –p CON_USER_PWD
   ```

6. Call ETL to load the staging area with the following parameters:

   ```
   db2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

   then run:

   ```
   db2  "CALL SP_LOAD_STAGING (NULL, NULL, 5, 'PMO_SUPERVISOR')"
   ```

   If there are no errors, continue to the next step.

7. Recreate the ETL stored procedure (sp_etl_dw) with the real body.

   ```
   db2 connect to DBNAME user CON_USER using CON_USER_PWD
   ```

   then run:

   ```
   db2 –td@ -f RPM_STAGING_DW_ETL.sql -z %MIGRATION_HOME%\Database\
   DB2\Windows\migration\RPMDW\logs\rpm_staging_dw_etl.log
   ```

8. Run the following batch file to transfer the Data Warehouse version to the appropriate Data Warehouse tables:

   ```
   dw_etl.bat DBNAME DB_USER DB_USER_PWD CON_USER CON_USER_PWD
   ```

Importing the new default layouts for common reporting reports (optional)

For information about importing data warehouse common reporting samples into Rational Portfolio Manager, see the *Installation and Upgrade Guide*.

Migrating Rational Portfolio Manager on Oracle for Windows

This section describes how to migrate the Rational Portfolio Manager database from version 7.1.x.x to version 7.1.1.2 on Oracle for Windows.

It is also possible to run the migration scripts from a remote machine. In this case, make sure that you can connect to the remote database using sqlplus.

Note: Rational Portfolio Manager 7.1.1.2 migration script uses `SQLplus.exe` located under `%ORACLE_HOME%\bin` directory. Therefore, you should run the migration scripts on a machine that has this utility.

Prerequisites

- A successful Rational Portfolio Manager 7.1.x.x installation
- Rational Portfolio Manager 7.1.1.2 migration package
- The `SQLplus.exe` utility for running Oracle migration scripts
- One of the following versions of Oracle supported with this release:
  - Oracle 9.2.0.8
  - Oracle 10.2.0.3

Migration steps

Migrating to Rational Portfolio Manager 7.1.1.2 consist of the following steps:

1. Migrating Rational Portfolio Manager schema owner
2. Migrating Staging user
3. Migrating Rational Portfolio Manager connected user (if a connected user is used)
4. Migrating Rational Portfolio Manager Data Warehouse (if installed previously)
5. Loading and restoring sample reports default configuration (optional)
6. Enabling features

Migrating the schema owner (mig_owner.bat)

1. Tablespaces used in the migration scripts are:
   - `PMO_IDX_64K` for indexes
   - `PMO_DATA_64K` for tables
   - `PMO_LOB_64K` for lobs

   Note: If the tablespaces in your Rational Portfolio Manager database are different from the above mentioned names, you must change the name of the tablespaces in the migration scripts in the following file:

   ```
   %MIGRATION_HOME%\Database\Oracle\scripts\step1.sql
   ```

2. Stop the application server associated with the Rational Portfolio Manager database.
3. Shut down the Rational Portfolio Manager database.
4. Start the Rational Portfolio Manager database.
5. Open a command prompt and go to the %MIGRATION_HOME%\Database\Oracle directory and run the script mig_owner.bat.

   The migration script runs and prompts you with a series of questions:
6. Have you perfomed pre_migration step? (y/n)
   - If yes, type y to continue.
   - If you have not, type n to stop the migration, back up your database and run the mig_owner.bat script again.
7. The script uses the %ORACLE_HOME% environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of %ORACLE_HOME%>. After the script has verified that ORACLE_HOME is set to %ORACLE_HOME% it prompts you to validate the value and for the following information. Enter the required information when prompted.
   - Is this the right value?(y/n) answer y if the value is correct.
   - Is your RPM database installed on this machine? (y/n)
     – Answer y, if the Rational Portfolio manager database is installed on this machine.
     – Answer n, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
8. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - Is this the right value?(y/n)

     Answer y if the value is correct.
   - Enter the IBMRPM schema owner
   - Enter the IBMRPM schema owner password
9. After entering the previous information, the script checks the version of the Rational Portfolio Manager database that you currently have and prompts you to validate it.

   Is the above version number correct?(y/n)
   - If the Rational Portfolio Manager database version is correct, answer y.
   - If it is not, answer n. You will then be prompted to enter the correct version of your Rational Portfolio Manager database.

   Note: It is important to enter the version number that corresponds to your Rational Portfolio Manager database in the following format: 7.1.x.x
10. Are you sure you want to migrate your database now? (y/n)

    To start the migration answer y.
11. At the end of migration you will be provided with a migration report. The migration report includes the following information:
    - The current version of the database (which at this level must be 7.1.1.2)
    - The number of invalid objects in the database (which should be 0)
    - The number of objects (needed for 7.1.1.2) for each object type and their status in the migrated Rational Portfolio Manager database

Comparing the number of objects for each object type in the **YOUR_RPM_DATABASE** and **NUMBER_OF_OBJECTS_MUST_BE** columns helps you to check if the migration was successful. These values should be equal.

- The name and type of the missing objects in your database
- The list of error messages generated during DDL migration (if any)

12. Migration log files are created under `%MIGRATION_HOME%\Database\Oracle\logs` folder. It is a good practice to look at the log files to see if migration was successful.
13. Stop the Oracle listener:

    ```
    %ORACLE_HOME%\bin\lsnrctl stop
    ```

14. The `LevelingLib.dll` file located under `%MIGRATION_HOME%\Database\Oracle\leveling\win\[your Oracle version]` folder must be manually copied to `%ORACLE_HOME%\bin` on the database server.
15. Start the Oracle listener:

    ```
    %ORACLE_HOME%\bin\lsnrctl start
    ```

Migrating the Staging user (mig_staging.bat)

Migrating the staging user is a mandatory step in Rational Portfolio Manager 7.1.1.2 migration (whether you have previously installed data warehouse or not); it is done by running the `mig_staging.bat` file. Follow the steps below to install the staging user:

1. Open a command prompt and navigate to `%MIGRATION_HOME%\Database\Oracle` directory and run the `mig_staging.bat` file.

   The migration script runs and prompts you with a series of questions:
2. The script uses the `%ORACLE_HOME%` environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to `<the value of %ORACLE_HOME%>`. After the script has verified that ORACLE_HOME is set to `%ORACLE_HOME%` it will prompt you to validate the value and for the following information. Enter the required information when prompted.
   - `Is this the right value?(y/n)` answer `y` if the value is correct.
   - `Is your RPM database installed on this machine? (y/n)`
     - Answer `y`, if the Rational Portfolio manager database is installed on this machine.
     - Answer `n`, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
3. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - `Is this the right value?(y/n)`

     Answer `y` if the value is correct.
   - Enter the IBMRPM schema owner
   - Enter the password for staging user. The default password is *staging*.
4. The script gathers all the necessary information to start the installation and prompts you to start the migration.

   ```
   Are you sure you want to start the migration now? (y/n)
   ```

   To start the migration, answer `y`.

5. Log files are created in the %MIGRATION_HOME%\Database\Oracle\logs folder. Look at the log files to see if scripts were run successfully.

Migrating the connected user (mig_con_user.bat)

This step is optional and it must be performed if you are using a connected user. To update the connected user:

1. Open a command prompt and change the directory to %MIGRATION_HOME%\Database\Oracle and run mig_con_user.bat.
2. The script uses the %ORACLE_HOME% environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to <the value of %ORACLE_HOME%>. After the script has verified that ORACLE_HOME is set to %ORACLE_HOME% it will prompt you to validate the value and for the following information. Enter the required information when prompted.
   - Is this the right value?(y/n) answer y if the value is correct.
   - Is your RPM database installed on this machine? (y/n)
     - Answer y, if the Rational Portfolio manager database is installed on this machine.
     - Answer n, if the Rational Portfolio manager database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
3. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - Is this the right value?(y/n)

     Answer y if the value is correct.
   - Enter the IBMRPM schema owner.
   - Enter IBMRPM schema owner password.
   - Enter the IBMRPM connected user name.
   - Enter the IBMRPM connected user password.
   - Enter the staging password (default is *staging*).
   - Enter the comprt password (default is *comrpt* if you have not changed it).
   - Enter the sys password.
4. Are you sure you want to migrate your connected user now? (y/n)

   To start the migration, answer y.
5. Migration log files will be created under %MIGRATION_HOME%\Database\Oracle\logs folder. It is a good practice to look at the log files to see if the migration was successful.

Migrating the Data Warehouse (mig_dw.bat)

This section describes the steps to migrate Rational Portfolio Manager Data Warehouse using the mig_dw.bat script. If you have not installed the Data Warehouse, skip this section.

1. Open a command prompt and navigate to %MIGRATION_HOME%\Database\Oracle and run mig_dw.bat.

   The migration script runs and prompts you with a series of questions:
2. Do you have a backup of your Data Warehouse database? (y/n)
   - If yes, type y to continue.

- If you do not have a backup, type `n` to stop the migration, back up your database and run the `mig_dw.bat` script again.

3. The script uses the `%ORACLE_HOME%` environment variable of the machine which you are running the script from. It verifies that ORACLE_HOME is set to `<the value of %ORACLE_HOME%>`. After the script has verified that ORACLE_HOME is set to `%ORACLE_HOME%` it prompts you to validate the value and for the following information. Enter the required information when prompted.
   - `Is this the right value?(y/n)` answer `y` if the value is correct.
   - `Is your data warehouse database installed on this machine?(y/n)`
     - Answer `y`, if the data warehouse database is installed on this machine.
     - Answer `n`, if the data warehouse database is not installed on this machine. You will be prompted to enter the following:
       - TNS string
       - ORACLE_SID
4. The script verifies that ORACLE_SID is set to DB_NAME and prompts you to validate the value and enter the following information:
   - `Is this the right value?(y/n)`

     Answer `y` if the value is correct.
   - Enter the staging password (default is *staging*).
   - Enter rpmdw password (default is *rpmdw*).
5. `Are you sure you want to start the migration now? (y/n)`

   To start the migration, answer `y`.
6. Log files will be created in the `%MIGRATION_HOME%\Database\Oracle\logs` folder. Look at the log files to see if scripts were run successfully.

Enabling features

Enabling Network Diagrams

By default, the Network Diagrams feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE = 1 where ELEMENT_ID =
'CAN_ACCESS_NETWORK_DIAGRAMS_____'
```

Enabling Offline Forms

By default, the Offline Forms feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'CAN_ACCESS_OFFLINE_FORMS%'
```

Enabling Non Linear Contouring

By default, the Non Linear Contouring feature is disabled in this release of Rational Portfolio Manager. To enable, database administrators must run the following query:

```
update TMT_SETTINGS set SETTING_VALUE=1 where ELEMENT_ID like
'ENABLE_REALLOCATE_REMAINING_WORK%'
```

Improving the Data Warehouse staging initial load

For clients with a large amount of legacy data (more than 1000 projects), the initial load to transfer Rational Portfolio Manager data into the Staging database and

further to the Data Warehouse may take a long time. To speed up the initial load, use the following steps to manually load the data from Rational Portfolio Manager to Staging and then to Data Warehouse.

Note: The following required files are located under %MIGRATION_HOME%\DATABASE\ORACLE\plbddl directory:

- drop_staging_foreign_keys.sql
- small_pre_load.sql
- anatab.sql
- drop_dw_foreign_keys.sql

Loading data to Staging area

Loading data to staging area is performed by calling the SP_LOAD_STAGING function. It is important to send the correct parameters when calling this function, because these parameters affect both the performance and functionality of the SP_LOAD_STAGING. For example, SP_LOAD_STAGING deletes all data from the staging tables before starting the load process. The delete process might take a long time, depending on the amount of data in the tables. If we call SP_LOAD_STAGING with the correct parameters, we can make this function truncate the data instead of deleting them and, therefore, improve the performance.

Here is the description of SP_LOAD_STAGING:

```
SP_LOAD_STAGING(project_ids, resource_ids, bitflag, rec_user)
```

1. The project_ids and resource_ids parameters are for future use. You can pass NULL for these parameters.
2. The most important parameter is the bitflag parameter. It controls how to clear up the data and what will be loaded into the staging tables. The value of this parameter must be an integer and only the first three bits are used:
   - Pass the value 1, to have the stored procedure load all Rational Portfolio Manager data into the staging tables after deleting the old data.
   - Pass the value 2, to have the stored procedure load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables after deleting the old data.
   - Pass the value 4, to have the stored procedure truncate the staging tables to clear them without loading the Rational Portfolio Manager data into the staging tables. This approach is the fastest way to clear up the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 5, to have the stored procedure truncate the staging tables to clear them, then load all Rational Portfolio Manager data into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
   - Pass the value 6, to have the stored procedure truncate the staging tables to clear them, then load only the selected or changed Rational Portfolio Manager projects and their related data (including the assigned resources and the system administration data) into the staging tables. To use this option, all foreign key constraints must be disabled or removed.
3. The rec_user parameter is the Rational Portfolio Manager user ID that executes the stored procedure. By default, you can pass 'PMO_SUPERVISOR'.

To load data into the staging area (initial load):

Note: During the initial load improvement steps described below, all foreign key constraints are removed before running the SP_LOAD_STAGING function. Also the SP_LOAD_STAGING function is called with the truncate option for better performance. If you do not want to use the truncate option, call the SP_LOAD_STAGING function with the bitflag value of 2 in step 4 and the value of 1 in step 6.

1. Using sqlplus, connect as the staging user and run the drop_staging_foreign_keys.sql script.
2. While still connected as the staging user in sqlplus, run the following statement to disable the STAGING.VERSION_UPDATE trigger:

   ```
   ALTER TRIGGER STAGING.VERSION_UPDATE DISABLE;
   ```

3. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the small_pre_load.sql script.
4. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the following script:

   ```
   COLUMN ERROR FORMAT 9999999999
   EXEC SET_DATEFORMAT;
   VAR R REFCURSOR;
   EXEC :R:=SP_LOAD_STAGING('','',6,'PMO_SUPERVISOR');
   COMMIT;
   PRINT R;
   ```

5. Analyze the tables in staging schema. To do so, you can connect as the staging user in sqlplus and run the anatab.sql script.
6. Using sqlplus, connect as Rational Portfolio Manager schema owner and run the following script:

   ```
   COLUMN ERROR FORMAT 9999999999
   EXEC SET_DATEFORMAT;
   VAR R REFCURSOR;
   EXEC :R:=SP_LOAD_STAGING('','',5,'PMO_SUPERVISOR');
   COMMIT;
   PRINT R;
   ```

7. Using sqlplus, connect as the staging user and run the following statement to enable the STAGING.VERSION_UPDATE trigger:

   ```
   ALTER TRIGGER STAGING.VERSION_UPDATE ENABLE;
   ```

Loading data to data warehouse

To load the data in data warehouse (initial load):

1. Using sqlplus, connect as rpmdw user and run drop_dw_foreign_keys.sql to drop foreign keys.
2. Using sqlplus, connect as staging user and run the following insert statement to create a new version for data warehouse:

   ```
   EXEC SET_DATEFORMAT;
   INSERT INTO RPMDW.VERSION_DIM (VERSION_ID, DATE_ACQUIRED, SERVER_VERSION, SERVER_NAME)
   SELECT VERSION_ID, DATE_ACQUIRED, SERVER_VERSION, SERVER_NAME FROM STAGING.VERSION_VW;
   COMMIT;
   SELECT COALESCE(MAX(VERSION_KEY),1) AS VERSION_KEY, COUNT(*) AS VERSION_NUMBER FROM
   RPMDW.VERSION_DIM;
   ```

   Note: When running the above select statement, you will see two columns. The first column is the version_key. When running the following steps, you must replace the <version_key> with this number.
3. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION(<version_key>,0);
COMMIT;
```

4. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
5. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION2(<version_key>,0);
COMMIT;
```

6. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
7. Using sqlplus, connect as staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_DIMENSION3(<version_key>,0);
COMMIT;
```

8. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.
9. Using sqlplus, connect as the staging user and run the following script. Remember to replace the <version_key> with the appropriate value:

```
EXEC SET_DATEFORMAT;
EXEC SP_ETL_FACTS(<version_key>,0);
COMMIT;
```

10. Analyze the tables in rpmdw schema. To do so, you can connect as rpmdw user in sqlplus and run the `anatab.sql` script.

Importing the new default layouts for common reporting reports (optional)

For information about importing data warehouse common reporting samples into Rational Portfolio Manager, see the *Installation and Upgrade Guide*.

Deploying Rational Portfolio Manager middleware

This section describes how to deploy the middleware after having successfully migrated your Rational Portfolio Manager database.

1. Before you begin, back up the `rpm-middleware-7.1.1.x.x.war` directory located under `%IBMRPM_WAR_HOME%`.
2. Uninstall your existing application (`rpm-middleware-7.1.x.x.war`).
3. Deploy the `rpm-middleware-7.1.1.2.war` application supplied with this release.

For a complete instruction on deploying the middleware on all supported application servers, refer to the *Installation and Upgrade Guide* supplied with this release.

Chapter 6. Contacting IBM Client Support for Rational software products

If you have questions about installing, using, or maintaining this product, contact IBM Client Support as follows:

The IBM Software Support Internet site provides you with self-help resources and electronic problem submission. The IBM Software Support home page for Rational products can be found at http://www.ibm.com/software/rational/support/.

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