

# HP Project and Portfolio Management Center

Software Version: 9.22

## Release Notes

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Software Release Date: November 2013



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The following table indicates changes made to this document since the last released edition.

#### Document Changes

Publication Date	Summary of Changes
9.22 (2nd Edition, November 2013)	<ul style="list-style-type: none"> <li>• Added instructions about how to install the HP APM for PPM 9.22, see <a href="#">"Roadmap Entity Added to HP APM in PPM Center Version 9.22" on page 76</a></li> <li>• Added information about the SKIP_REQUEST_CREATE_CONFIRMATION_PAGE parameter, see <a href="#">"Request Creation Confirmed Page Skippable" on page 148</a></li> </ul>
9.22 (3rd Edition, December 2013)	<ul style="list-style-type: none"> <li>• Added one more workaround for the issue that <a href="#">PPM Workbench cannot open after installing JRE7u25</a></li> <li>• Updated the <a href="#">"Integrating HP APM with Universal CMDB"</a> section to include more details</li> </ul>
9.22 (4th Edition, January 2014)	<ul style="list-style-type: none"> <li>• Added Swedish support in <a href="#">"Certifications" on page 174</a></li> <li>• Added description about the three jar files contained in the PPM Center version 9.22 zip package in the <a href="#">"Installation Notes" on page 3</a></li> </ul>

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# Chapter 1: Overview

This document is an overview of the changes made to Project and Portfolio Management Center (PPM Center) for version 9.22. It contains important information that is not included in the manuals. You can find information about the following in this document:

- ["Installation Notes" on page 3](#)
- ["New Features in PPM Center 9.22" on page 9](#)
- ["New Features in PPM Center 9.21" on page 85](#)
- ["Enhancement, Integrations, Certifications, and Fixes in PPM Center 9.22" on page 100](#)
- ["Enhancement, Integrations, Certifications, and Fixes in PPM Center 9.21" on page 185](#)
- ["Known Problems and Limitations in PPM Center 9.22" on page 251](#)
- ["Known Problems and Limitations in PPM Center 9.21" on page 261](#)
- ["Documentation Errata" on page 267](#)

## Software and Hardware Requirements

For information about the installation requirements and compatibility with other products, see the *System Requirements and Compatibility Matrix* for PPM Center version 9.22. The support matrix may be updated between releases, and so is only available at the HP Support web site:

<http://support.openview.hp.com/selfsolve/manuals>

## Protecting Your Deployment from Security Vulnerabilities

Make sure you take the necessary precautions to protect your PPM Center deployment from general security vulnerabilities, especially those related to Web server and related infrastructure vulnerabilities. Patch and configure your Web server's operating system and DNS servers to prevent malicious attacks that could put your organization and data at risk. You can take such steps as disabling unused ports or enabling SSL in your environment. Consult your Web server vendor for the latest patches to prevent harmful attacks such as cross-site scripting.

## Chapter 2: Installation Notes

**Note:** The zip package of PPM Center version 9.22 contains three jar files:

- ppm-922-SP2.jar, the installation jar file for PPM Center version 9.22. The installation instructions are provided below.
- ppm-922-LP-multi-lang.jar, language packs installation jar file for PPM Center version 9.22. Required only when you want to install a language pack.

Instructions for installing language packs are provided in the *Release Notes for Language Pack for PPM Center 9.22*, available at the HP Manuals site.

- ppm-922-APM.jar, the latest installation jar file for the HP APM module, offering the new Roadmap feature in addition to all existing HP APM functionalities. Required only when you need to use the Roadmap feature available with the HP APM module on PPM Center version 9.22.

For instructions about installing the HP APM module, see ["Installing HP APM for PPM 9.22" on page 77](#).

This installation procedure includes steps that are valid for PPM Center version 9.22.

To install version 9.22:

1. Back up your database.
2. Back up your customized data.

The upgrade script may overwrite your customized files.

For example, if you configured LDAP integration previously, to avoid data loss, make sure you back up the `LdapAttribute.conf` file, which is located in the `<PPM_Home>/integration/ldap` directory on the PPM Server.

3. Stop the PPM Server. The Service Pack cannot be installed on an active server.
4. Copy the Service Pack file ppm-922-SP2.jar to the `<PPM_Home>` directory. This is the directory where the PPM Server is installed.
5. Change to the `<PPM_Home>/bin` directory.

6. Start the installation using the following command:  

```
sh ./kDeploy.sh -i SP2
```
7. Follow the on-screen instructions to complete the Service Pack installation.
8. Restore your customized data (if any).
9. Start the PPM Server.

**Note:** HP recommends you back up your customized files including scripts before applying version 9.22.

## Out-of-Sync Actuals Data

The following sections describe what to do if the pre-validation process during installation determines that data is not synchronized between the HP Time Management and HP Project Management modules or between the HP Time Management and HP Demand Management modules.

### Data Out of Sync Between HP Time Management and HP Demand Management

If, during the installation of PPM Center 9.22, the pre-validation process determines that actuals data in the HP Time Management and HP Demand Management modules are out of sync, an error occurs and you cannot continue with the installation.

To resolve the problem:

1. Navigate to the `<PPM_Home>/deploy/922/SP2/phases/prevalidation` directory and run the `CorrectDMTMActualsOutOfSync.sql` script.
2. After the `CorrectDMTMActualsOutOfSync.sql` script has run successfully, re-install PPM Center 9.22.

### Data Out of Sync Between HP Time Management and HP Project Management

If, during the installation of PPM Center 9.22, the pre-validation process determines that actuals data in the HP Time Management and HP Project Management modules are out of sync, an error occurs and you cannot continue with the installation.

To resolve the problem:

1. To tag these data for synchronization, navigate to the `<PPM_Home>/deploy/922/SP2/phases/prevalidation` directory and run the `MarkPMTMActualsOutOfSync.sql` script.
2. Re-install PPM Center 9.22.
3. After you successfully install PPM Center 9.22, navigate to the `<PPM_Home>/bin` directory and run the `kPMTMSync.sh` script, as follows, and redirect the output to a file:  
`sh ./kPMTMSync.sh -username<username> -password <password>`

## Supported Upgrades

**Note:** HP strongly recommends upgrading to the latest version of PPM Center. In general, each new PPM Center version includes important product improvements that are not provided in earlier versions.

**Table 1-1 Supported upgrades for current PPM Center versions**

Current PPM Center Version	Can be upgraded to		
	8.0x	9.1x	9.2x
7.5 SP3 or earlier <sup>1</sup>	8.00 or later	9.10 or later	9.20~9.22
7.5 SP4, 7.5 SP5, 7.5 SP6 <sup>1</sup>	8.02 or later	9.10 or later	9.20~9.22
7.5 SP7 <sup>1</sup>	8.03 or later	<b>9.12</b> or later	9.20~9.22
8.00 <sup>2</sup>	8.00.01 or later	9.10 or later	9.20~9.22
8.00.01 <sup>2</sup>	8.02 or later	9.10 or later	9.20~9.22
8.02 <sup>2</sup>	8.03 or later	9.10 or later	9.20~9.22
8.03 <sup>2</sup> (build 1189 and build 1208)	8.04	<b>9.12</b> or later	9.20~9.22
8.04	—	<b>9.14 (build 1460)</b>	9.20~9.22
9.10	—	9.11 or later	9.20~9.22
9.11	—	9.12 or later	9.20~9.22
9.12	—	9.13 or later	9.20~9.22
9.13	—	<b>9.14 (build 1460)</b>	9.20~9.22
9.14 (build 1435 or build 1460)	—	—	9.20~9.22
9.14.0001~9.14.0004 <sup>3</sup>	—	—	9.20~9.22
9.14.0005~9.14.0006 <sup>3</sup>	—	—	9.21, 9.22
9.14.0007~9.14.0009 <sup>3</sup>	—	—	9.22
9.20	—	—	9.21, 9.22
9.21	—	—	9.22

**Table 1-1 Supported upgrades for current PPM Center versions, continued**

Current PPM Center Version	Can be upgraded to		
	8.0x	9.1x	9.2x
<p>1. If you are upgrading from a version prior to version 8.00, incremental upgrades are necessary (for example: version 7.5 to 8.00, followed by 8.00 to 9.10, and then 9.10 to 9.20, and finally 9.20 to 9.22).</p> <p>2. If you are upgrading from version 8.0x to 9.1x, you must initially upgrade to version 9.10 before upgrading to version 9.1x.</p> <p>For example, PPM Center versions 9.10 and 9.11 were released before versions 8.03 and 9.12. Versions 8.03 and 9.12 include improvements to core functionalities that are not supported on the older versions 9.10 and 9.11.</p> <p>If PPM Center is running at version 8.03, do not upgrade to and then run at version 9.10, 9.11, or 9.12. Instead, upgrade from version 8.03 to version 9.10 temporarily without running PPM Center, and then upgrade <b>immediately</b> to version 9.12 or later.</p> <p>3. Defect fixes included in patches (up until 9.14.0004) on top of version 9.14 are rolled into version 9.20. Version 9.21 contains defect fixes included in patches 9.14.0001~9.14.0006. Version 9.22 contains defect fixes included in patches 9.14.0001~9.14.0009.</p> <p>If PPM Center is running at patch 9.14.0005 (or later, up until 9.14.0009), do not upgrade to and then run at version 9.20 or 9.21. Instead, upgrade from patch 9.14.0005 (or later, up until 9.14.0009) to version 9.20 temporarily without running PPM Center, and then upgrade <b>immediately</b> to version 9.22.</p> <p>If PPM Center is running at patch 9.14.0010 or later patch on top of version 9.14, do not upgrade to version 9.22 yet, otherwise you may encounter some regression regarding the defect fixes in 9.14.0010 (and later). You must wait, for the next available patch release, which contains the fixes through your current version. This compatibility information can be found in the potential target release notes (table Supported upgrades for current PPM Center versions).</p>			

## Regenerating Web Service Stubs for Integrating with HP ServiceCenter

If you have integrated your PPM Center deployment with HP ServiceCenter, you can modify which fields are available through Web services, but you must regenerate the Web service stubs for the integration after installing any PPM Center service pack.

After installing the service pack, regenerate the Web service stubs in the PPM Server from the new Web Services Description Language (WSDL) descriptor as follows:

1. Navigate to the `<PPM_Home/bin/sdi>` directory on the PPM Server.
2. Run the script:  

```
sh ./kGenerateServiceCenterStub.sh <wsdl-url> <PPM_Server_Name>
```

where

`<wsdl-url>` represents the ServiceCenter WSDL URL for Change Management.

<PPM\_Server\_Name> represents the subdirectory of <PPM\_Home>/server specified during installation as the value for the KINTANA\_SERVER\_NAME parameter in the server.conf file. (It is not necessarily the actual host name of the server.) When generated, the stubs will be placed under this subdirectory.

For example, run the script:

```
sh ./kGenerateServiceCenterStub.sh http://host:12670/ChangeManagement?wsdl  
kintana
```

**Note:** The stub configuration might fail if the host is not resolvable by name. To resolve the host by name, make an entry in the hosts file for the machine you want to connect. See the documentation for your operating system for the location of the hosts file.

## PPM Community on HPLN

The HP Project and Portfolio Management Center Community on HP Live Network (<http://www.hp.com/go/livenetwork>) is now live! The PPM Community on HPLN ([http://www.hp.com/go/PPM\\_HPLN](http://www.hp.com/go/PPM_HPLN)) is a virtual community for HP Experts, Partners and Customers to collaborate and share knowledge, best practices, and add-on content for the PPM product. You can log in to the PPM Community on HPLN to access the latest Content Packs.

Access to HP Live Network is available at no additional cost to all PPM customers. Customers must log in using an HP Passport account. Customers without Passport accounts can register for free on HP Live Network.



## Chapter 3: New Features in PPM Center 9.22

The following new features are included in PPM Center version 9.22:

- ["Creating a Dashboard Datasource \(and List Portlet\) from a SQL SELECT Statement in the Administration Console SQL Runner" below](#)
- ["Integrating HP APM with Universal CMDB" on page 13](#)
- ["Integrating PPM Center Time Sheets with HP Agile Manager" on page 42](#)
- ["Roadmap Entity Added to HP APM in PPM Center Version 9.22" on page 76](#)

### Creating a Dashboard Datasource (and List Portlet) from a SQL SELECT Statement in the Administration Console SQL Runner

Before version 9.22, if you want to create a Dashboard Datasource, you can only create it from PPM Workbench manually, writing the different parts of the SQL yourself and add all the columns (with their types) one by one.

If you want to create a list portlet, you need to create a new portlet definition, select the datasource, then add all the columns one by one.

Starting from version 9.22, this new feature allows you to create a dashboard datasource and a list portlet from any SQL statement that runs in the Administration Console SQL Runner.

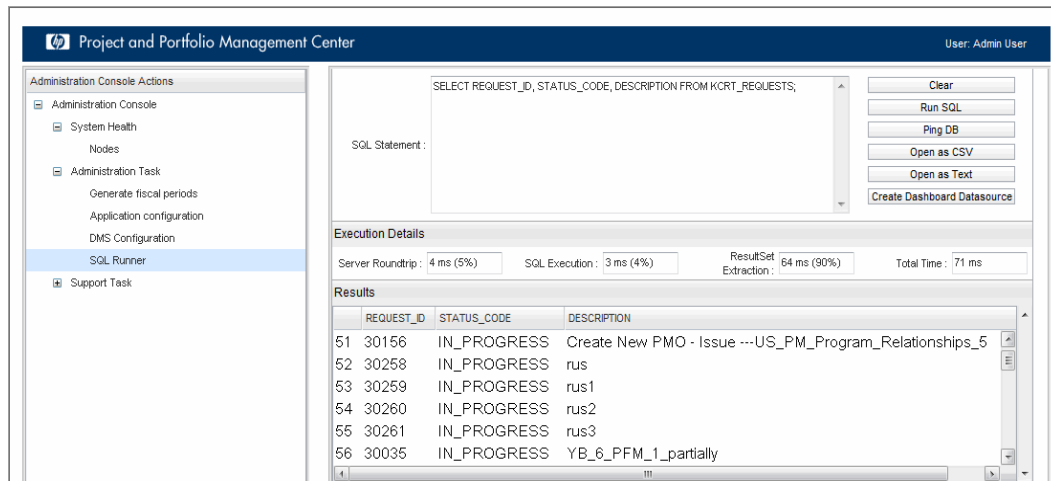
You can choose whether the dashboard and/or the list portlet is enabled or disabled upon creation. Default choice is enabled, however you might want to disable it if it is created on a production environment and that some specific access grants should be added to it to restrict its access before it can be used by PPM Users.

Once created from the Administration Console, the datasource can be edited from PPM Workbench (to add filters and access grants) and the list portlet can be edited from the PPM Center portlet definition page, like any datasource or custom list portlet.

To create a dashboard datasource and a list portlet from the Administration Console,

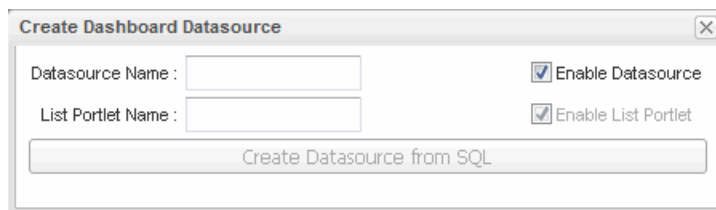
1. Log on to PPM Center.
2. From the menu bar, select **Open > Administration > Open Administration Console**.

3. Under the Administration Console node, select **Administration Task > SQL Runner**.
4. In the SQL Statement text box, run the SQL statement that you want to create a Dashboard Datasource with.



5. Click the **Create Dashboard Datasource** button.

The Create Dashboard Datasource dialog opens.



6. Specify names of the datasource and the list portlet that you want to create as described in the table below.

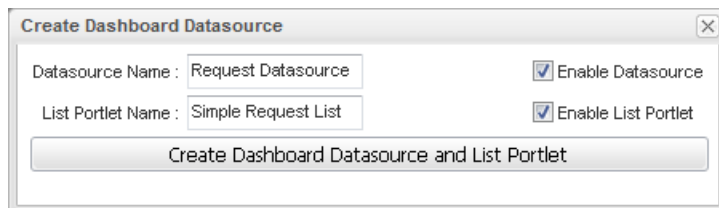
Field/Option	Description
Datasource Name	Specify a name for the datasource that you want to create.
List Portlet Name	Specify a name for the list portlet that you want to create.  The List portlet creation is optional. If you keep this field empty, no list portlet will be created, and button name changes accordingly.

Field/Option	Description
Enable Datasource	Select to enable the datasource upon its creation.
Enable List Portlet	Optional. Select to enable the list portlet upon its creation.  If you choose to enable the List Portlet, any PPM User can add it directly to their dashboard after the portlet creation.

**Note:**

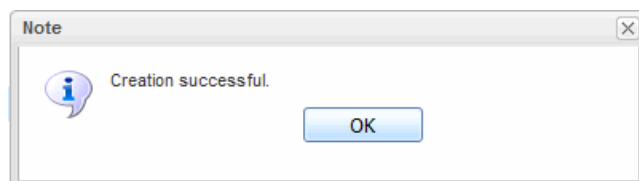
- You CANNOT enable the list portlet but disable the datasource.
- If you enter a name for the list portlet or datasource that already exists, you get an error message.

For example,



7. Click **Create Dashboard Datasource and List Portlet**.

The Creation Successful confirmation pops up.



8. Click **OK**.

9. If you chose to enable the List portlet, any PPM User can now add it directly to their dashboard.

Dashboard - Front Page > Personalize Dashboard > Dashboard - My Dashboard Page

**My Dashboard Page** Reset Cycle Export + Personalize

**Simple Request List**

Preferences:

REQUEST_ID	STATUS_CODE	DESCRIPTION
30,061	IN_PROGRESS	Description
30,174	IN_PROGRESS	
30,181	IN_PROGRESS	
30,182	IN_PROGRESS	
30,183	IN_PROGRESS	

[Export to Excel](#) 1K < Showing 1 to 5 of 200 > 2K

## SQL Syntax Accepted and Limitation

Most of the SQL syntax is accepted as long as it is a `SELECT` statement.

You can use the `*` operator for columns, such as:

```
SELECT * FROM KNTA_USERS;
```

All columns and their types will be discovered automatically.

However, you cannot use bind variables in the SQL. If you need to use bind variables, first create the datasource with constants values set in place of variables, and then edit the datasource definition in the PPM Workbench to add the bind variables.

## Integrating HP APM with Universal CMDB

This section includes the following:

- ["Overview" below](#)
- ["Supported Versions" on page 15](#)
- ["How to Integrate UCMDB and HP APM" on page 15](#)
- ["View UCMDB Data in HP APM" on page 25](#)
- ["Customize the Integration" on page 26](#)
- ["Developer References" on page 30](#)
- ["Troubleshooting and Limitations" on page 39](#)

### Overview

The integration between HP APM and HP Universal CMDB (UCMDB) enables you to share information from UCDMB with HP APM.

You can use the integration to automate the creation and update of applications in HP APM, freeing you from repetitive and manual input of information in HP APM. This also ensures that HP APM is kept up to date with real, accurate, discovered data in your environment.

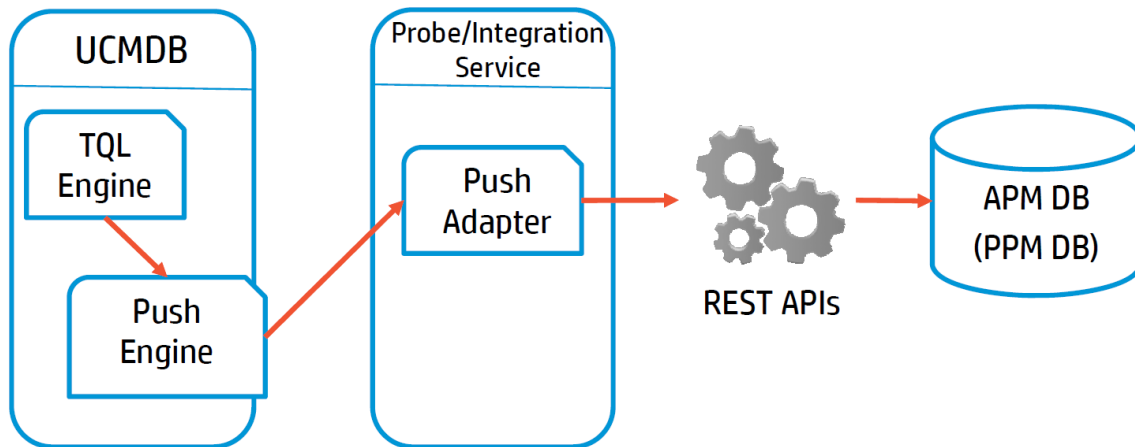
The following table provides an overview of the HP APM integration with UCMDB:

Integration direction	From UCMDB to HP APM
Integration technology	Push adapter
Pushed data	CIs created in UCMDB are pushed to HP APM to create requests in HP APM
HP Universal CMDB adapter	HP APM Push Adapter (APMPushAdapter)

### *How Data is Synchronized Between HP APM and UCMDB*

When referring to the concept of data information, it is important to distinguish between a UCMDB CI (Configuration Item) and an HP APM Application. Both are defined in a different Data Model, and there must be a conversion before transferring CIs in UCMDB to Applications in HP APM.

The following graphic shows the high-level components of the integration:



**Note:** The Push Adapter is executed in the Data Flow Probe/Integration Service process.

UCMDB stores its information using CIs. The integration chooses which data to pull from UCMDB by defining integration TQL queries. Each TQL query defines a superset of data relevant for the integration.

#### The **UCMDB Push Engine**:

- Retrieves the required data from the UCMDB, using the given TQL query.
- Filters the data to include only the data that has changed since the last execution of this synchronization.
- Splits the data into multiple chunks without breaking consistency.
- Sends the information to the Probe/Adapter.

The Push Adapter is a generic framework for easily configuring push adapters, using only XML and [Groovy](#). It allows easy mapping of the data from the UCMDB data model into the HP APM data model, and the transfer of this converted data into the HP APM database through REST APIs called from HP APM.

For more information about push adapter, see **Developing Push Adapters** in the *HP Universal CMDB Developer Reference Guide*.

For details about REST APIs that this integration call from HP APM, see ["REST APIs Called in the Integration" on page 37](#).

For entity mappings and field mappings between HP APM and UCMDB, see ["Default Entity and Field Mappings between HP APM and UCMDB" on page 31](#).

## Supported Versions

The HP APM adapter supports the following:

- Universal CMDB version 10.00 and later
- HP Project and Portfolio Management Center (PPM Center) version 9.22 (and later) where HP APM for PPM 9.20 is installed

## How to Integrate UCMDB and HP APM

To set up integration between UCMDB and HP APM, you must complete the following steps:

- ["Deploy the APM Push Adapter" below](#)
- ["Create an Integration Point between HP APM and UCMDB" on the next page](#)
- ["\(Optional\) Push CI Data from UCMDB to HP APM" on page 20](#)
- ["Schedule Data Push Jobs" on page 24](#)

## *Deploy the APM Push Adapter*

To integrate HP APM with UCMDB, administrators must deploy the APM Push Adapter.

**Note:** If your UCMDB version is 10.10, you can skip the steps below and proceed to ["Create an Integration Point between HP APM and UCMDB" on the next page](#). The APM Push Adapter is deployed by default.

To download the APM Push Adapter zip package and deploy it,

1. Obtain the APM Push Adapter from the HP Live Network.
  - a. Go to the HP Live Network page for Integrations and Other Content for Discovery and Dependency Mapping: <https://hpln.hp.com/node/32/contentfiles?dir=17109>
  - b. If you have not logged in, the HP Passport sign-in page opens.

Provide your User ID and Password, and click **Sign-in**.
  - c. Click **APM integration package** to download the `APMPushAdapter.zip` package.
2. Start the UCMDB server.

3. Open a browser and log on to UCMDB as an administrator.

Example of the UCMDB login page URL:

`http://<UCMDBServerName.Domain>:8080/ucmdb-ui/login_page.jsp`

4. From the left navigation bar, click the **Administration** tab.

5. Click **Package Manager**.

6. Click **Deploy packages to server (from local disk)** .

The Deploy Packages to Server dialog opens.

7. Click **Add** .

8. Browse to the folder where `APMPushAdapter.zip` is located. Select the zip file, and click **Open**.

9. Click **Deploy**.

10. Click **OK** when the following confirmation message displays: Resources were deployed successfully.

## ***Create an Integration Point between HP APM and UCMDB***

1. Log in to UCMDB as an administrator.
2. Navigate to **Data Flow Management > Integration Studio**.

UCMDB displays a list of existing integration points.


3. Click the **New Integration Point**  button.





The New Integration Point dialog box opens.

4. Complete the **Integration Properties** and **Adapter Properties** fields as shown in the following table:

Field (*Required)	Description
Integration Properties section	



Field (*Required)	Description
*Integration Name	Type the name (unique key) of the integration point.
Integration Description	Type a description of the current integration point.
*Adapter	Click the <b>Select Adapter</b>  button and select <b>HP Software Products &gt; APM &gt; APM Push Adapter</b> from the Select Adapter dialog
*Is Integration Activated?	Select this option to indicate the integration point is active.
<b>Adapter Properties</b> section	
*Protocol Type	Select <b>http</b> or <b>https</b> from the drop-down list
*Hostname/IP	Type the hostname or IP Address of the PPM Server. For example, 16.166.16.16 or hostname.
*Port	Type the communication port of the PPM Server. The default value is 80. Example: 30000
*Path	Type the path of the PPM Server. The default value is itg.

Field (*Required)	Description
*Credentials ID	<p>Click the <b>Select Credential Id</b>  button, then select <b>Generic Protocol</b> or <b>DefaultDomain &gt; Generic Protocol</b> in the Protocol pane, and from the Credentials list, select a credential or create a new credential that is to be used by UCMDB to access HP APM.</p> <p>To create a credential for this integration point,</p> <ol style="list-style-type: none"> <li>Click the <b>Select Credential Id</b>  button. The Choose Credentials dialog opens.</li> <li>Click the <b>Create new connection details for selected protocol type</b>  button. The Generic Protocol Parameters dialog opens.</li> <li>Provide values for the following fields and click <b>OK</b>: <ul style="list-style-type: none"> <li><b>Network Scope:</b> Use the default value ALL.</li> <li><b>User Label:</b> Type a label for the credential.</li> <li><b>User Name:</b> Provide the user name for the HP APM account that is to be used by UCMDB to access HP APM.</li> <li><b>Password:</b> Click  and provide the password for the HP APM account that is to be used by UCMDB to access HP APM.</li> </ul> </li> <li>Click <b>OK</b> twice.</li> </ol> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Tip:</b> Users of any of the following security groups can be used as Credentials ID:</p> <ul style="list-style-type: none"> <li>■ APM User</li> <li>■ APM Administrator</li> <li>■ APM Analyst</li> </ul> </div>

Field (*Required)	Description
*Data Flow Probe	<p>The name of the Data Flow Probe/Integration service used to execute the synchronization from.</p> <p>Select <b>IntegrationService</b> for this integration.</p> <p><b>Note:</b> If the <b>IntegrationService</b> option does not exist, consult with your UCMDB administrator for the best selection for your requirements.</p>
Additional Probes	Not required for this integration point.

Below is an example of the completed dialog:

**New Integration Point**

**Integration Properties**

- \* Integration Name: APM\_UCMDB\_integration\_1
- Integration Description: APM-UCMDB integration point 1
- Adapter: APM Push Adapter
- Is Integration Activated: ☒

**Adapter Properties**

- \* Protocol Type: http
- \* Hostname/IP: 16.166.16.16
- \* Port: 30000
- \* Path: itg
- Credentials ID: Generic Protocol: Generic Protocol Credential 1
- \* Data Flow Probe: IntegrationService
- Additional Probes:

\* Mandatory Properties

Test connection

OK Cancel

5. Click **Test Connection** to make sure there is a valid connection.
6. Click **OK**.

The integration point is created and its details are displayed. (It is not saved to the server until you click on the **OK** button)

UCMDB creates a default data push job when creating the integration point. The default data push job includes everything, it runs immediately and performs a Full Synchronization.

**Note:** The first Full Synchronization may take a while to complete.

If needed you may create or edit the existing job. To create or edit and run a customized data push job, see ["\(Optional\) Push CI Data from UCMDB to HP APM" below](#).

For instructions about scheduling the data push job, see ["Schedule Data Push Jobs" on page 24](#).

## ***(Optional) Push CI Data from UCMDB to HP APM***

Data push jobs copy or update CI or CI relationship records from the local UCMDB system to your HP APM system.


To run a customized data push job, complete the following steps:


1. Log in to UCMDB as an administrator.
2. Navigate to **Data Flow Management > Integration Studio**.

UCMDB displays a list of existing integration points.

3. Select the integration point you created for HP APM.
4. Select the default data push job **APM Push**.

Or, if the default data push job does not satisfy your needs, you may add a new data push job as follows:

- a. Click the **New Integration Job**  button in the right panel.
- b. In the **Name** field, type a unique name for the job.

- c. Click the **Add Query**  button to add existing TQL queries to the job.

UCMDB creates a default data push job when creating the integration point for HP APM. The following table lists the Topology Query Language (TQL) queries in the default data push job. If required, you may create, update, or remove TQL queries for the push job. You may also need to update the mapping. See .

**Note:** To access these OOTB TQL queries for push, navigate to **Modelling > Modeling Studio > Resources**, select **Queries** from the drop-down list for the **Resource Type** field and then navigate to **Root > Integration > APM Push**.

TQL Query	Description
<b>APM Location Push</b>	Pushes Location CIs.  Mapping XML: pushMappingAPMLocation.xml
<b>APM Process Push</b>	Pushes BusinessProcess CIs.  Mapping XML: pushMappingAPMProcess.xml
<b>APM Process Relation Clear Push</b>	Clears old relations between processes in HP APM.  This TQL query synchronization must have been run BEFORE the 'APM Process Relation Push' TQL query synchronization.  Mapping XML: pushMappingAPMProcessRClear.xml
<b>APM Process Relation Push</b>	Pushes relations between Processes (pushed by APM Process Push) to other business elements or to processes.  BusinessProcess CIs must have been pushed before this TQL query synchronization in the 'APM Process Push' TQL query synchronization.  Mapping XML: pushMappingAPMProcessR.xml
<b>APM Server Push</b>	Pushes Node CIs (Computers, Network Devices, etc.).  Mapping XML: pushMappingAPMServer.xml





TQL Query	Description
<b>APM Server Relation Clear Push</b>	<p>Clears old relations between Servers in HP APM.</p> <p>This TQL query synchronization must have been run BEFORE the 'APM Server Relation Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMServerRClear.xml</p>
<b>APM Server Relation Push</b>	<p>Pushes relations between Servers (pushed by APM Server Push) to other servers.</p> <p>Node CIs must have been pushed before this TQL query synchronization in the 'APM Server Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMServerR.xml</p>
<b>APM Application Push</b>	<p>Pushes BusinessApplication CIs.</p> <p>Location, BusinessProcess, and/or Node CIs must have been pushed before this TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMAApplication.xml</p>
<b>APM Application Relation Clear Push</b>	<p>Clears old relations (except for the downstream relations) between Applications in HP APM.</p> <p>This TQL query synchronization must have been run BEFORE the 'APM Application Relation Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMAApplicationRClear.xml</p>
<b>APM Application Relation Push</b>	<p>Pushes relations (except for the downstream relations) between Applications (pushed by APM Application Push) to other business elements or to nodes.</p> <p>BusinessApplication CIs must have been pushed before this TQL query synchronization in the 'APM Application Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMAApplicationR.xml</p>

TQL Query	Description
<b>APM Application Relation Clear Down Push</b>	<p>Clears old downstream relations between Applications in HP APM.</p> <p>This TQL query synchronization must have been run BEFORE the 'APM Application Relation Down Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMAApplicationDownRClear.xml</p>
<b>APM Application Relation Down Push</b>	<p>Pushes downstream relations between Applications (pushed by APM Application Push) to other business elements or to nodes.</p> <p>BusinessApplication CIs must have been pushed before this TQL query synchronization in the 'APM Application Push' TQL query synchronization.</p> <p>Mapping XML: pushMappingAPMAApplicationDownR.xml</p>

- d. Select the **Allow Deletion** option for each query.

This allows deletion of synchronized data in HP APM when data in UCMDDB are deleted. Otherwise requests created in HP APM as a result of synchronization remain even when their original data in UCMDDB are deleted.

**Note:** For scheduling configuration, see ["Schedule Data Push Jobs" on the next page](#).

- e. Click **OK**.
- f. Save the integration point.
5. Run the job manually to see if the integration job works properly:
- To push all the relevant data for the job, click the All Data Synchronization  button (or **Full Synchronization** ).
  - To push only the changes in the data since the job last executed, click the Changes Synchronization  button (or **Delta Synchronization** .
6. The job is in **Running** status. Wait for the job to complete; click the **Refresh**

 button multiple times as needed until the job is completed.

You can also look at the Query tab as that gives a progress bar against the query it is running.


7. When the job is completed, the job status becomes one of the following depending on the results:
  - Succeeded
  - Passed with failures
  - Failed
8. Click the **Statistics** tab to view the results; if any errors occur, click the **Query Status** tab and **Job Errors** tab for more information. For more information about errors, see ["Troubleshooting and Limitations" on page 39](#).

## ***Schedule Data Push Jobs***

UCMDB allows you to schedule job executions directly from a data push job.

1. Log in to UCMDB as an administrator.
2. Navigate to **Data Flow Management > Integration Studio**.

UCMDB displays a list of existing integration points.

3. Select the integration point you created for the APM - UCMDB integration.
4. Select the APM Push job.
5. Click the **Edit Integration Job**  button.

The Edit Integration Job dialog opens.

**Note:** UCMDB allows you to define two different schedules for two types of data push: **Changes Synchronization** (or **Delta Synchronization**) and **All Data Synchronization** (or **Full Synchronization**). It is recommended to use the Changes Sync schedule to only synchronize changes and avoid synchronizing the entire set of data each time.

6. Define a schedule for Changes Synchronization or Delta Synchronization.



- a. Click on the **Changes Synchronization** tab (or **Delta Synchronization**).
  - b. Select the **Scheduler enabled** option.
  - c. Select the scheduling options you want to use.
7. Click the **All Data Synchronization** tab (or **Full Synchronization**) and select the scheduling options you want to use.
  8. Click **OK**.
  9. Save the integration point.

## View UCMDB Data in HP APM

After a push job is successfully completed, you can search for and verify that the pushed CI/relationship data is in HP APM.

To view UCMDB data in HP APM,

1. Log on to PPM Center.
2. On the **Open** menu, click **Application Portfolio > Search Entities**.

The Search Entities page opens.

3. In the **Entities** section, click one of the following entities:

- Application
- Location
- Process
- Server

The Search: APM - <Entity> page opens.

In this example, click **Application** and the Search: APM - Application page opens.

4. Click **Search**.

The Search Results page displays request search results.

5. Click any **Application No** to view an APM - <Entity> request.

## Customize the Integration

This section includes:

- ["Overview" below](#)
- ["Customize an Existing Mapping" on the next page](#)
- ["Add a New Mapping to the Integration" on page 28](#)

### Overview

This section contains details about the architecture of the integration.

### Data Flow Architecture

1. The Push Engine executes the TQL query.
2. For a differential flow, the data is compared to the last synchronized data, and only the changes are forwarded.
3. Data is converted into Composite CIs (instances of data according to the TQL Root elements).
4. Data is then pushed to the Push Adapter.
5. The Push Adapter loads the correct mapping for the specific TQL query.
6. All dynamic\_mappings are executed and saved to maps, to allow usage in the next mapping stage.

For more information, see **Developing Push Adapters** in the *HP Universal CMDB Developer Reference Guide*.

7. Data is sent to HP APM database via REST APIs from HP APM, where REST APIs converts data to HP APM compatible data.

### Integration TQL Queries

A TQL query used for the integration must contain a root query node.

Any attribute used in the mapping flow of the Push Adapter must be marked in the selected layout of the query node. Each TQL query may only have one mapping.

For more information, see **Data Flow Management > Integration > Integration Studio > Integration Studio User Interface > Integration Jobs Pane**.

## ***Customize an Existing Mapping***

This example shows you how to add the NAME attribute to the integration including the TQL query and Push Adapter Mapping. It allows the integration to push the NAME attribute to Location in HP APM.

After completing the following steps, you may run the job with the customized mapping:

### **1. Add the NAME attribute to the APM Location Push TQL query layout.**

In this step we add the NAME attribute of the Location to the integration TQL query (APM Location Push TQL) so that we can use the attribute and value in the mapping.

- a. Navigate to **Modeling > Modeling Studio > Resources** and select the **Queries Resource Type**.
- b. Navigate to **Query: Root > Integration > APM Push > APM Location Push**.
- c. Select **Root**, right-click and select **Query Node Properties**.
- d. Go to the Element Layout tab.
- e. Move the **Name** to the Specific Attributes box.
- f. Click **OK**.
- g. Save the Query.

### **2. Add the NAME Mapping to the pushMappingAPMLocation.xml push adapter mapping.**

In this step we take the value from the TQL result and remodel it to the HP APM Data Model.

- a. Navigate to **Data Flow Management > Adapter Management > Packages > APMPushAdapter > Configuration Files > pushMappingAPMLocation.xml**.
- b. Navigate to the **<target\_ci\_type name="fields">** XML tag.
- c. Below the tag, add the following XML tag to hold the value of the Description:

```
<target_mapping name="REQ.DESCRPTION" datatype="STRING" value="APMPushFunctions.substring(Root['name'],200)"/>
```

where, "REQ.DESRIPTION" is the request Name field token of Location.

- d. Click **OK**.


## ***Add a New Mapping to the Integration***

This example shows how to add a new TQL query and push-mapping to the integration. It also shows how to push Locations from UCMDB to HP APM. It consists of the following steps:

### ***Step 1: Create a TQL Query***

1. Navigate to **Modeling > Modeling Studio > New > Query**.
2. From the **CI Types** tab, add a **Location** to the query.
3. Right-click the **Location Query Node** and select **Query Node Properties**.
4. Rename the **Element Name** to **Root**.
5. Navigate to the **Element Layout** tab.
6. Select **Select attributes for layout**.
7. In the **Attributes condition** drop down, select **Specific Attributes**, and add the **Name** attribute
8. Click **OK**.
9. Save the query to **Root > Integration > APM Push > APM Location Push**.

### ***Step 2: Create a Push-Mapping***

1. Navigate to **Data Flow Management > Adapter Management > APMPushAdapter**.
2. Click the **Create new resource**  button and select **New Configuration File**.
3. Type the following Name: **APMPushAdapter/mappings/pushMappingAPMLocation.xml**.
4. Select the **APMPushAdapter** package.
5. Click **OK**.

6. Copy the following into the newly created XML file:

```
<integration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <info>
    <source name="UCMDB" versions="10.0" vendor="HP"/>
    <target name="APM" versions="2.0" vendor="HP"/>
  </info>
  <import>
    <scriptFile path="mappings.scripts.AMPushFunctions"/>
  </import>
  <targetcis>
    <source_instance_type query-name="APM Location Push" root-element-name="Root" >
      <target_ci_type name="request">
        <target_mapping name="uuid" datatype="STRING" value="Root['global_id']"/>
        <target_mapping name="requestType" datatype="STRING" value="'APM - Location'"/>
        <target_mapping name="description" datatype="STRING" value="Root['name']"/>
      </target_ci_type>
      <target_ci_type name="fields">
        <target_mapping name="REQ.DESCRPTION" datatype="STRING" value="APMPushFunctions.subString(Root['name'],200)"/>
      </target_ci_type>
    </source_instance_type>
  </targetcis>
</integration>
```


In the following line:


```
<target_mapping name="requestType" datatype="STRING" value="'APM - Location'"/>
```

The value is the request type name in HP APM. In this example, it is APM - Location.




7. Click **OK**.

### ***Step 3: Create a Job with the New TQL Query***

1. Navigate to **Data Flow Management > Integration Studio**.
2. Create an Integration Point with HP APM.
3. In the **Integration Jobs** tab, click the **New Integration Job**  button .

4. Insert a job name in the **Name** field.
5. Click the  button, and choose the **APM Location Push query**.
6. Click **OK**.

### ***Step 4: Run the Job***

1. Click on the job created in "[Step 3: Create a Job with the New TQL Query](#)" on the previous [page](#).
2. Click the All Data Synchronization  button (or **Full Synchronization** ).
3. Wait for the job to finish. You should click the **Refresh**  button to see progress.
4. Make sure that the status is **Succeeded**.

### ***Step 6: View the Results***

1. Log on to PPM Center.
2. On the **Open** menu,
  - Click **Application Portfolio > Search Entities**, then in the **Entities** section, click **Location**. Or,
  - Click **Search > Requests**, then from the **Request Type** drop-down list, select **APM - Location**.
3. Click **Search**.

The Search Results page displays request search results.

## **Developer References**

This section includes the following:

- ["Adapter" on the next page](#)
- ["Default Entity and Field Mappings between HP APM and UCMDB" on the next page](#)
- ["REST APIs Called in the Integration" on page 37](#)

## ***Adapter***

This integration job uses the adapter called APM Push Adapter. It is displayed as APM Push in the Job Name.

## ***Input CI Type***

destination\_config

## ***Triggered CI Data***

Name	Value
adapterId	\${ADAPTER.adapter_id}
attributeValues	\${SOURCE.attribute_values}
credentialsId	\${SOURCE.credentials_id}
destinationId	\${SOURCE.destination_id}

## ***Adapter Parameters***

Name	Value
credentialsId	
domain	itg
host	
port	80
probeName	
protocolType	http

## ***Default Entity and Field Mappings between HP APM and UCMDB***

The following sections describe out of the box mappings that are available with the APM Push Adapter for integration with HP APM and UCMDB.

The following table provides an overview of type mappings between HP APM entities and UCMDB CI Types:

HP APM Entity	PPM Center Request Type	UCMDB CI Type	Remarks
Application	APM - Application	BusinessApplication	For detailed mappings, see <a href="#">"Default Field Mappings between HP APM Application and UCMDB BusinessApplication" below</a> .
Process	APM - Process	BusinessProcess	For detailed mappings, see <a href="#">"Default Field Mappings between HP APM Process and UCMDB BusinessProcess" on page 34</a> .
Location	APM - Location	Location	For detailed field mappings, see <a href="#">"Default Field Mappings between HP APM Location and UCMDB Location" on page 35</a> .
Server	APM - Server	Node	For detailed field mappings, see <a href="#">"Default Field Mappings between HP APM Server and UCMDB Node" on page 36</a> .

### ***Default Field Mappings between HP APM Application and UCMDB BusinessApplication***

The following table describes the default field mappings that can be modified for the integration between the HP APM entity of **Application** and the UCMDB CI Type of **BusinessApplication**.

HP APM Field Name and Field Type	UCMDB CI Attribute and Field Type
Name KNTA_PROJECT_NAME Text Field - 300	Name name string
Updated By <sup>a</sup>	(N/A)



HP APM Field Name and Field Type	UCMDB CI Attribute and Field Type
Create On <sup>b</sup> CREATION_DATE Date	(N/A)
Purpose APM_APP_PURPOSE Text Field - 4000	Description description string
Business Criticality <sup>c</sup> APM_RATING_BUSINESS_CRIT Drop Down List	BusinessCriticality business_criticality integer
Created By <sup>a</sup> CREATED_BY Auto Complete List	(N/A)
Supported Processes APM_SUPPORTED_PROCESSES Auto Complete List	Name (of CI Type <b>BusinessProcess</b> ) name (of CI Type <b>BusinessProcess</b> ) string
Downstream Applications APM_DOWNSTREAM_APPS Auto Complete List	Name (of downstream CI Type <b>BusinessApplication</b> ) name (of downstream CI Type <b>BusinessApplication</b> ) string
Upstream Applications APM_UPSTREAM_APPS Auto Complete List	Name (of upstream CI Type <b>BusinessApplication</b> ) name (of upstream CI Type <b>BusinessApplication</b> ) string
Service Level Agreement APM_APP_SLA Text Field - 200	Name (of CI Type <b>ServiceLevelAgreement</b> ) name (of CI Type <b>ServiceLevelAgreement</b> ) string
Servers APM_SERVER_LIST Auto Complete List	Name (of CI Type <b>Node</b> ) name (of CI Type <b>Node</b> ) string
Database APM_DATABASE_LIST Text Field - 200	Name (of CI Type <b>Database</b> ) name (of CI Type <b>Database</b> ) string

HP APM Field Name and Field Type	UCMDB CI Attribute and Field Type
<p>a. The HP APM account you provided when creating the integration point (see <a href="#">"Create an Integration Point between HP APM and UCMDB" on page 16</a>).</p> <p>b. Time when the request is created for the first time in HP APM.</p> <p>c. The following mapping rule is used for this mapping:  <code>&lt;target_mapping name="REQD.APM_RATING_BUSINESS_CRIT" datatype="STRING" value="APMPushFunctions.getPropertyValue('bc', Root['business_criticality']).toString() , ''"/&gt;</code>            where the definition of 'bc' token is defined as follows in the <code>server.properties</code> field:</p> <p>bc.0=0 - Least critical            bc.1=1 - Slightly critical            bc.2=2 - Less than average            bc.3=3 - More than average            bc.4=4 - Critical            bc.5=5 - Highly critical</p> <p>When synchronizing the <b>Business Criticality</b> field from UCMDB to HP APM, if the value is '1' in UCMDB, then the field value will be set to '1 - Slightly critical' in APM.</p>	

## Default Field Mappings between HP APM Process and UCMDB BusinessProcess

The following table describes the default field mappings that can be modified for the integration between the HP APM entity of Process and the UCMDB CI Type of BusinessProcess.

HP APM Field Name, Database ID, and Field Type	UCMDB CI Attribute, Database ID, and Field Type
Process Name DESCRIPTION Text Field - 200	Name name string
Parent Process APM_PARENT Auto Complete List	Name of parent <b>BusinessProcess</b> name of parent <b>BusinessProcess</b> string
Description APM_DESCRIPTION Text Area - 4000	Description description string
Created By <sup>a</sup> CREATED_BY Auto Complete List	(N/A)

HP APM Field Name, Database ID, and Field Type	UCMDB CI Attribute, Database ID, and Field Type
Created On <sup>b</sup> CREATION_DATE Date	(N/A)
<p>a. The HP APM account you provided when creating the integration point (see <a href="#">"Create an Integration Point between HP APM and UCMDB" on page 16</a>)</p> <p>b. Time when the request is created for the first time in HP APM.</p>	

## ***Default Field Mappings between HP APM Location and UCMDB Location***

The following table describes the default field mappings that can be modified for the integration between the HP APM entity of Location and the UCMDB CI Type of Location.

HP APM Field Name, Database ID, and Field Type	UCMDB CI Attribute, Database ID, and Field Type
Location Name DESCRIPTION Text Field - 200	Name name string
Description APM_DESCRIPTION Text Field - 4000	Description description string
Address APM_LOC_ADDRESS Text Field - 200	StreetAddress+ExtendedStreetAddress street_address+extended_street_address string+string
Postal Code APM_LOC_ZIPCODE Text Field - 20	PostalCode postal_code string
Country APM_LOC_COUNTRY Text Field - 200	CountryOrArea country_or_area string

HP APM Field Name, Database ID, and Field Type	UCMDB CI Attribute, Database ID, and Field Type
Region APM_LOC_REGION DDL	Region region string
Longitude APM_LONGITUDE Text Field - 40	Longitude longitude string
Latitude APM_LATITUDE Text Field - 40	Latitude latitude string
City APM_LATITUDE Text Field - 200	City <sup>a</sup> city string
State/Province APM_STATE Text Field - 200	State <sup>a</sup> state string
a. The CI attribute is removed from UCMDB version 10.x, but exists in earlier versions of UCMDB. For UCMDB instances that upgraded from an earlier version to 10.x, this CI attribute exists but is read-only. If the CI attribute has a value, the value can be synchronized to HP APM, otherwise the HP APM field remains empty after you run the synchronization push job in UCMDB.	

## ***Default Field Mappings between HP APM Server and UCMDB Node***

The following table describes the default field mappings that can be modified for the integration between the HP APM entity of Server and the UCMDB CI Type of Node.

HP APM Field Name, Token, and Component Type	UCMDB CI Attribute Display Name, Name, and Type
Server Name DESCRIPTION Text Field - 200	Name name string

HP APM Field Name, Token, and Component Type	UCMDB CI Attribute Display Name, Name, and Type
Description APM_DESCRIPTION Text Area - 4000	Description description string (value size: 1000)
IP Address APM_IP_ADDRESS Text Field, Max Length: 15	IP Address (of <b>IpAddress</b> ) ip_address (of <b>IpAddress</b> ) string
OS APM_OS Drop-down List	OsDescription os_description string
Running Software APM_RUNNING_SOFTWARE Text Area - 4000	ProductName:Name (of <b>RunningSoftware</b> ) product_name:name (of <b>RunningSoftware</b> ) product_name_enum:string
Location APM_LOCATION Auto Complete List	Name (of <b>Location</b> ) name (of <b>Location</b> ) string

## ***REST APIs Called in the Integration***

The following HP Demand Management REST APIs are called in this integration to convert data from UCMDB into HP APM compatible data:

- Get a request

For more information, see **Get Details of a Request** section of the *RESTful Web Services Guide* for PPM Center 9.20.

- Create a request

For more information, see **Create/Update a Request** section of the *RESTful Web Services Guide* for PPM Center 9.20.

- Update a request

For more information, see **Create/Update a Request** section of the *RESTful Web Services Guide* for PPM Center 9.20.

- Delete a request

Added in version 9.22. For more information, see ["Delete a Request" below](#)

## Delete a Request

**Request:** `http://<PPM_Server_IP>:<port>/itg/rest/dm/requests/{reqId}`

**HTTP Method:** DELETE

**Description:** Delete a request with a specific ID. To perform this operation, you must be in one or more of the authorized security groups for the create/update action.

**Request path variables:**

Attribute	Description	Required?
reqId	Request ID. Indicates which request will be deleted.	Yes

**Response entity body:**

- **on success:** When the operation is successfully executed, no message is returned. However, the REST API automatically calls the GET operation and returns the following message in Response Header (with empty message body):

Status Code: 204 No Content  
Cache-Control: no-cache  
Date: Mon, 26 Aug 2013 09:20:29 GMT  
Expires: -1  
Pragma: no-cache

- **on failure:** The following message codes are returned if the operation fails:

Message Code	Message	Cause	Possible Corrective Action
PPMC_WSE108	Not Found	The quest is not found.	The request ID is not passed or the request of this ID doesn't exist.
PPMC_WSE001	Internal Server Error	There was an error when you tried to delete a request.	N/A

Message Code	Message	Cause	Possible Corrective Action
PPMC_WSE116	Internal Server Error	There was an error when you tried to delete a request.	N/A

**Limitation:**

This operation supports field security check, but it ignores user interface (UI) rules or status dependency. Such constraints have to be validated and enforced on the client side before this operation is invoked.

## Troubleshooting and Limitations

This section includes the following:

- ["Limitations" below](#)
- ["Troubleshooting Problems" on the next page](#)
- ["Logs" on page 41](#)

### **Limitations**

- The Data Flow Probe or Integration Service must be installed on a Windows OS.
- For requests created in HP APM from CIs pushed from UCMDB, any changes made in HP APM are overwritten when you run the data push job in UCMDB.
- The APM Application request form holds a single value for Location, therefore it is designed to push only one value for Location of the Application from the UCMDB BusinessApplication.

In the definition of Location of the Application (see the `pushMappingAPMApplicationR.xml` file), the Location of the Server is used for the Location of the Application is used. For an Application that contains multiple servers, select one of the servers and then you can get its Location.

- For value mappings between UCMDB and HP APM, certain mapping rules are followed.

For example, when synchronizing the Business Criticality field of Application, the following mapping rule is used for the mapping:

```
<target_mapping name="REQD.APM_RATING_BUSINESS_CRIT" datatype="STRING" value="
APMPushFunctions.getPropertyValue('bc', Root['business_criticality'].toString(
) , '')"/>
```

where the definition of 'bc' token is defined as follows in the

`<APMPushAdapter.zip>/mappings/scripts/server.properties` file:

```
bc.0=0 - Least critical
bc.1=1 - Slightly critical
bc.2=2 - Less than average
bc.3=3 - More than average
bc.4=4 - Critical
bc.5=5 - Highly critical
```

When synchronizing the **Business Criticality** field from UCMDB to HP APM, if the value is '1' in UCMDB, then the field value will be set to '1 - Slightly critical' in APM.

If you need to use this value mapping for other fields from UCMDB to APM, make sure you customize the mapping by following the example above.

- This integration does not support synchronizing values in languages that are not supported by UCMDB. For example, Simplified Chinese.
- The ";" character is not supported. If a UCMDB CI name contains a ";" character, it would be treated as a separator and two entries would show up in HP APM after synchronization.

## ***Troubleshooting Problems***

- **Problem:** Some UCMDB CIs include characters that are not supported in APM Entities. For example, semicolon (;).

**Solution:** The suggested solution is to modify the content synchronized from UCMDB to APM. You can use the Replace function to replace the unsupported characters for this field mapping in the XML mapping file. However, note that this may cause inconsistent content between UCMDB and APM.

An example, in the `pushMappingAPMApplication.xml` file, the semicolon character (;) is replaced with a space:

```
<target_mapping name="REQ.KNTA_PROJECT_NAME" datatype="STRING" value="APMPushF
unctions.stringReplace(Root['name'], ';', ' ')" />
```



- **Problem:** For some fields, the field value lengths between HP APM and UCMDB are different, therefore you may need to customize the field mapping. You can follow the example below:

Example

Use a substring as illustrated below to limit the field length to 200 characters:

```
<target_mapping name="REQ.DESRIPTION" datatype="STRING" value="APMPushFunctions.substring(APMPushFunctions.stringReplace(Root['name'],';', ' '),200)"/>
```

## Logs

The push adapter framework uses a different logging system for the normal fcmbd.adapters.\*.log files.

To change the level of the log files to debug, edit the following file:

- On the Data Flow Probe machine:

```
..\DataFlowProbe\conf\log\fcmbd.push.properties
```

- If using the integration service, on the UCMDB server:

```
..\UCMDB Server\Integrations\conf\log\fcmbd.push.properties
```

Change the log level to DEBUG:

```
loglevel=DEBUG
```

The integration generates fcmbd.push.\* logs in the following folder:

- On the Data Flow Probe machine:

```
..\DataFlowProbe\runtime\log\
```

- If using the integration service, on the UCMDB server:

```
..\UCMDB Server\Integrations\runtime\log\
```

## Integrating PPM Center Time Sheets with HP Agile Manager

This section contains the following:

- ["Introduction to Integrating PPM Center Time Sheets with HP Agile Manager" below](#)
- ["Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.2" on page 46](#)
- ["Configuring the Integration between PPM Center Time Sheets and HP Agile Manager" on page 49](#)
- ["Importing Agile Effort from HP Agile Manager to PPM Center Time Sheets " on page 51](#)
- ["Troubleshooting and Limitations" on page 73](#)

### Introduction to Integrating PPM Center Time Sheets with HP Agile Manager

Version 9.22 implemented this new feature to extend the capability of the integration solution between PPM Center and HP Agile Manager. The integration between PPM Center time sheets and HP Agile Manager allows end users to import agile effort from HP Agile Manager into their PPM Center time sheets, freeing them from reporting their time repeatedly and thus ensuring data consistency between different management tools. This integration also ensures information sharing between product development teams and project managers, which facilitates project execution with right decisions.

This integration is a one-way (from HP Agile Manager to PPM Center) and one-multiple mapping relationship (one time sheet to multiple releases).

Implementation of the feature includes the following:

- Leveraged and enhanced the existing Agile Manager Integration Plug-in for PPM

For more information about the plug-in, see ["Compatibility of Agile Manager Integration Plug-in for PPM" on page 46](#).

- Introduced new server configuration parameters

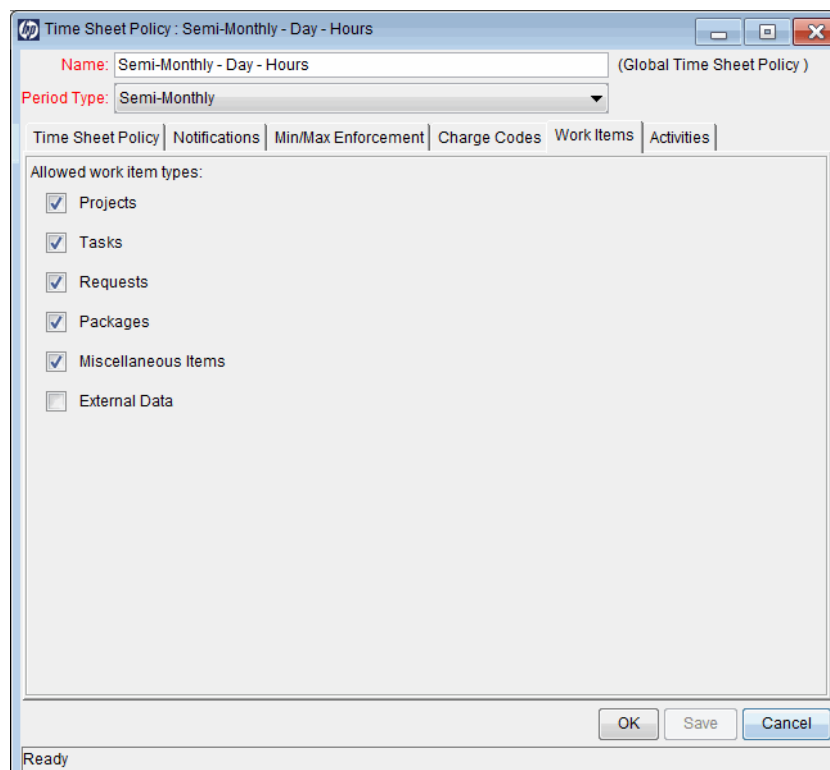
Parameter Name	Description, Usage	Default and Valid Values
ENABLE_TM_WORK_ITEM_EXTERNAL_DATA	<p>Setting the parameter to true makes the <b>External Data</b> option available in the following PPM Workbench windows:</p> <ul style="list-style-type: none"> <li>■ On the Work Items and Activities tabs of the Time Sheet Policy window</li> </ul> <p>Selecting the <b>External Data</b> option on the <b>Work Items</b> tab ensures that,</p> <ul style="list-style-type: none"> <li>○ The <b>Add External Data</b> option is available in the <b>Add Items</b> action list of the Time Sheet page</li> <li>○ The <b>External Data</b> option is available on the Create Work Allocations page as a work item type.</li> </ul> <p>For information about the usage of activities, see the <i>HP Time Management Configuration Guide</i> and the <i>HP Time Management User's Guide</i>.</p> <ul style="list-style-type: none"> <li>■ In the Work Item Type drop-down list (under the Dependencies section) of the Override Rule window</li> </ul> <p><b>Note:</b> Changes made to the time sheet policy and override rules apply to new time sheets only.</p>	<p>Default: true</p> <p>Valid values: true, false</p>

Parameter Name	Description, Usage	Default and Valid Values
MAX_ CONCURRENT_ AGM_REST_CALL_ FOR_TIMESHEET	Specifies the maximum number of concurrent users to import time information from HP Agile Manager.	Default: 10  Valid values: integer  Recommended value range: 1~50

- Introduced a new time sheet item type **External Data** to the HP Time Management module.

Features available with the new item type include:

- Enable/Disable External Data items to have time information imported and tracked in PPM Center



- Charge code can be allocated to External Data items
- Override rules can be applied to External Data items

- Work allocations can be applied on External Data items

- Activities can be specified on External Data items

## How Data is Imported from HP Agile into PPM Center Time Sheets

After users click **Add External Data** on their time sheets, select **HP Agile Manager** from the **Select an external system** drop-down list, and provided required credentials, the Agile Manager Integration Plug-in for PPM calls HP Agile Manager REST APIs to get data in the following sequence,

1. Get release list for a specific project from HP Agile Manager
2. Get sprint list from available releases, where the sprints shall fall into the user's current time sheet period
3. Get backlog list from qualified sprints

A qualified sprints shall satisfy the following criteria:

- The sprint start date is the same or later than the time sheet period start date
- The sprint end date is same as or earlier than the time sheet period end date.

If the time sheet period contains unqualified sprints, the effort in these unqualified sprints will not be retrieved by the plug-in. Users will get a warning message when the release contains unqualified sprints.

4. Get task list by assign-to value and status value, where assign-to value is the HP Agile Manager user email address, and the status value is Completed.
5. Then the Agile Manager Integration Plug-in for PPM,
  - a. Adds together values for the **Invested (h)** field for all returned tasks for each of the releases
  - b. Imports the total effort of a release as an entry
  - c. Divides the total effort by available working days in the current time sheet period, and
  - d. Fills the average effort value to each of the working days in the time line.

For details about the REST APIs, see ["REST APIs Called in the Integration" on page 54](#).

## Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.2

To integrate PPM Center time sheets with HP Agile Manager, administrators must download and install the free Agile Manager Integration Plug-in for PPM. This is a one-time action.

### ***Compatibility of Agile Manager Integration Plug-in for PPM***

The table below describes compatibility of the Agile Manager Integration Plug-in for PPM with PPM Center.

Agile Manager Integration Plug-in for PPM version	PPM Center version		
	9.20	9.21	9.22
1.0	X	—	—
1.1 <sup>a</sup>	X	X	—
1.2 <sup>b</sup>	—	—	X

Agile Manager Integration Plug-in for PPM version	PPM Center version		
	9.20	9.21	9.22
<p><b>a.</b> Though version 1.1 plug-in can be deployed on both versions (9.20 and 9.21) of PPM Center, system behaves differently due to the new feature available with PPM Center 9.22 ("<a href="#">Associating Waterfall Projects to PPM Center Tasks</a>" on page 85):</p> <ul style="list-style-type: none"> <li>When deployed on PPM Center version 9.20, users see the same <b>Agile Project</b> tab on the Task Details page and <b>Agile Project Timeline</b> tab on the Project Overview page; When deployed on PPM Center version 9.21, the Agile Project tab is merged into the new <b>Hybrid Project</b> tab on the Task Details page, and the Agile Project Timeline tab is merged into the <b>Timeline</b> tab on the Project Overview page. For more information, see "<a href="#">System Behavioral Differences with the Enhanced Agile Manager Integration Plug-in for PPM</a>" on page 238</li> <li>On PPM Center version 9.21, two new charts are available for linked agile projects on the Timeline tab of the Project Overview page.</li> </ul> <p><b>b.</b> For new users of the integration solution between PPM Center and HP Agile Manager, you can simply download and deploy version 1.2 of the Agile Manager Integration Plug-in for PPM on PPM Center version 9.22 instance. See "<a href="#">Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1</a>" on page 240</p> <p>For existing users of the integration solution between PPM Center and HP Agile Manager, after upgrading PPM Center to version 9.22, to continue to use the integration solution and/or to use the new feature, make sure you download and deploy version 1.2 of the Agile Manager Integration Plug-in as early as possible. Otherwise the integration may not work due to changes made by HP Agile Manager.</p>			

## Installation Instructions

To download and install the Agile Manager Integration Plug-in for PPM:

1. Obtain the plug-in bundles from the HP Live Network.
  - a. Go to the [PPM Community on HP Live Network](#).
  - b. On the PPM Community home page, click **Content Catalog**.
  - c. Click **Agile Manager Integration Plug-in for PPM** (where HP is the provider).
  - d. Click **Downloads**.
 

The Agile Manager Integration Plug-In for PPM - Downloads page opens.
  - e. Click the **Agile Manager Integration Plug-In for PPM 1.2** folder.
  - f. Click **ppm-922-AgilePlugin.zip** to download the package.

This package contains the following two bundles:

Bundle name	Description
ppm-922-PluginAgile.jar	Contains basic structure of version 1.2 plug-in for integrating PPM Center with agile project management tools.
ppm-922-PluginAgileManagement.jar	Contains version 1.2 plug-in files specifically for integrating PPM Center with HP Agile Manager product, including: <ul style="list-style-type: none"><li>◦ Integrating PPM Center tasks with HP Agile Manager releases, and</li><li>◦ Integrating PPM Center time sheets with HP Agile Manager</li></ul>

2. Stop PPM Server.
3. Unzip the package and copy the two bundles to the `<PPM_Home>` directory.
4. Deploy the bundles by running the following commands from the `<PPM_Home>/bin` directory:

```
sh ./kDeploy.sh -i PluginAgile
sh ./kDeploy.sh -i PluginAgileManagement
```
5. Repeat step 3 and step 4 for each of the server nodes in a cluster.
6. Restart PPM Server.

## ***Entities Installed by the Agile Manager Integration Plug-in for PPM Version 1.2***

The following entities are installed:

- The Agile Integration Solution configuration page

The Agile Integration Solution option is now available on the integration configuration landing page. Administrators can register HP Agile Manager servers on the Agile Integration Solution configuration page.

- Agile Solution Sync Service



The Agile Solution Sync Service synchronizes status and progress charts of agile projects from HP Agile Manager to PPM Center. The default synchronization interval is 24 hours. You can set the synchronization interval on the Schedule Services page.

- For the integration between PPM Center tasks and HP Agile Manager only:
  - The "Associate Agile Project to this Task" section and the **Mapping Agile Project** button on the **Hybrid Project** tab of the Task Details page
  - Support for displaying Gantt charts of associated agile projects on the **Timeline** tab of the Project Overview page
- For the integration between PPM Center time sheets and HP Agile Manager only:
  - In the Import External Data window, **HP Agile Manager** appears as an available value for the **Select an external system** field. Selecting **HP Agile Manager** loads more configuration settings to the window.

If the Agile Manager Integration Plug-in is not deployed, the **Select an external system** field is empty.

## Configuring the Integration between PPM Center Time Sheets and HP Agile Manager

This section describes the steps that PPM Center administrators must perform to set up the integration between PPM Center time sheets and HP Agile Manager.

### *Prerequisites*

Make sure you satisfy the following prerequisites before you can proceed to set up the integration:

- PPM Center is on version 9.22 and the Agile Manager Integration Plug-in for PPM version 1.2 is installed.
- You have obtained a valid HP Agile Manager account.

## Setting Up the Integration

To set up the integration,

1. Log on to PPM Center as administrator.
2. (Optional) Launch the Administration Console and check that the ENABLE\_TM\_WORK\_ITEM\_EXTERNAL\_DATA server configuration parameter is set to true.

The parameter is set to true by default. In case you changed the parameter value to false, change it back to true.

3. In the PPM Workbench, enable the **External Data** option on the Work Items tab of the desired time sheet policy.
  - a. From the menu bar, select **Open > Administration > Open Workbench** (or **Open Workbench on Desktop**).

The PPM Workbench opens.

- b. From the shortcut bar, select **Time Mgmt > Time Sheet Policies**.

The Time Sheet Policy Workbench opens.

- c. Click **List**.
- d. From the **Results** tab, select and open the desired time sheet policy.

In this example, the Semi-Monthly - Day - Hours time sheet policy opens.

- e. Click the **Work Items** tab.
- f. Select the checkbox for the **External Data** option.

**Note:** This setting applies to new time sheets only. Existing time sheets still load the old time sheet policy, therefore users cannot add external data to their old time sheets.

- g. Click **OK**.

4. Add an agile integration configuration for the target HP Agile Manager server system on the integration landing page.

For detailed instructions, see *Chapter 11, Integrating PPM Center with HP Agile Manager* in the *HP Solution Integrations Guide*.

## Importing Agile Effort from HP Agile Manager to PPM Center Time Sheets

To import agile effort from HP Agile Manager into your PPM Center time sheet,

1. Log on to PPM Center.
2. From the menu bar, select **Create > Time Sheet**.

The Create Time Sheet page appears.

3. Complete the following fields or option:
  - Time Period
  - Resource
  - Description
  - Include Items from My Items List

For detailed information about these fields, see *HP Time Management User's Guide*.

4. Click **Create**.

The time sheet is created and the Edit Time Sheet page appears.

5. Click **Add Items**, and then select **Add External Data** from the available actions.

The Import External Data window appears.

6. From the **Select an external system** drop-down list, select **HP Agile Manager**.

More configuration settings are loaded.

Import External Data

**Import Actual Effort from External Systems**

**Select an external system**

HP Agile Manager

**Select a system server**

Please select an agile server...

**Enter username and password that you use to log on to server**

Username:

Password:

Next Cancel

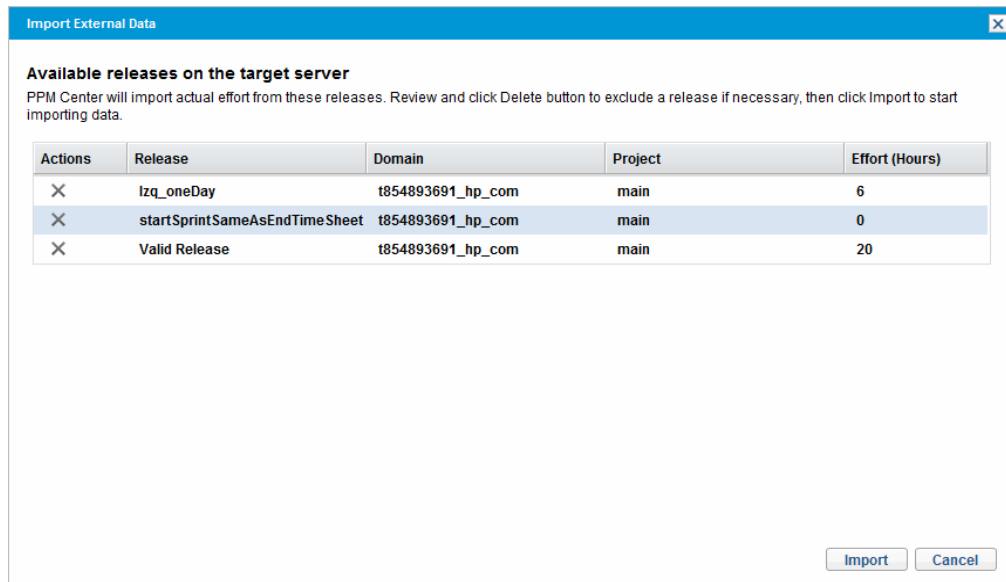
7. From the **Select a system server** drop-down list, select an HP Agile Manager server that was configured by your administrator on the integrations landing page.
8. In the **Username** and **Password** fields, enter the username and password of your HP Agile Manager account.

By default, the username is the current login user's email address in PPM Center. You can edit the username if the email address is not the HP Agile Manager login account.

9. Click **Next**.

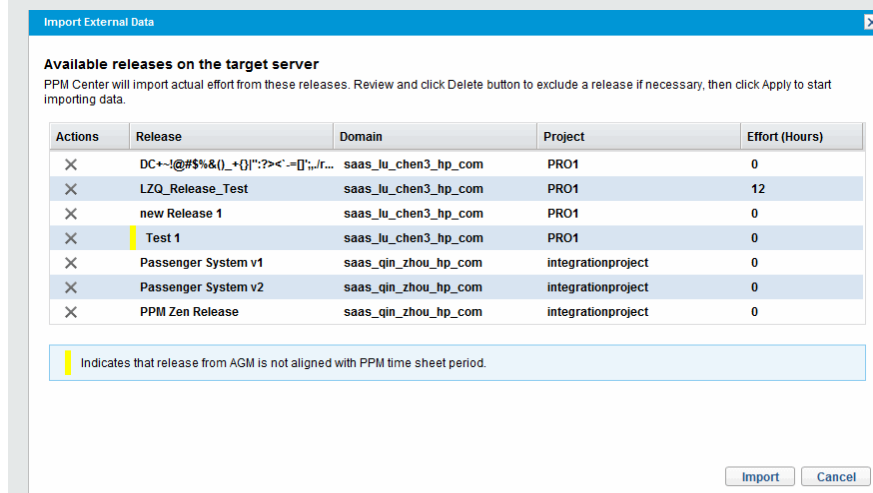
The system retrieves and loads effort data for tasks with status of **Done** from available releases in HP Agile Manager.

**Note:** It takes around 40 seconds to retrieve and load the effort data.



Review the list of available releases. If necessary, you can click the X icon to remove the unwanted release from the list.

**Note:** If you see a warning message as shown in the screenshot below, it indicates that the release from HP Agile Manager is not aligned with the PPM Center time sheet period.



10. Click **Import**.

The HP Agile Manager effort are imported and distributed to each of the working days of the time sheet.

The time sheet line **Item** name is displayed in the following format:

<HP\_Agile\_Server\_Name>:<Release\_Name>  
<Domain\_Name>><Project\_Name>

The imported entries are displayed under the **External Data** section.

11. Review and edit the time sheet lines if necessary.
12. Click **Save** or **Save&Submit**.

## REST APIs Called in the Integration

The following HP Agile Manager REST APIs are called in this integration to retrieve and import data from HP Agile Manager into PPM Center time sheets.

Sequence and Description	HP Agile Manager REST API called
1. Get domain list	https://<AgileManager_Server_URL>/qcbn/rest/domains/
2. Get project list of one domain	https://<AgileManager_Server_URL>/qcbn/rest/domains/<domain_name>/projects/
3. Get release list of one project	https://<AgileManager_Server_URL>/qcbn/rest/domains/<domain_name>/projects/<project_name>/releases/

Sequence and Description	HP Agile Manager REST API called
4. Get a specific release	<code>https://&lt;AgileManager_Server_URL&gt;/qcbn/rest/domains/&lt;domain_name&gt;/projects/&lt;project_name&gt;/releases?query={id[&lt;release_id&gt;]}</code>
5. Get sprint list of one release	<code>https://&lt;AgileManager_Server_URL&gt;/qcbn/rest/domains/&lt;domain_name&gt;/projects/&lt;project_name&gt;/release-cycles?query={parent-id[&lt;release_id&gt;]}</code>
6. Get backlog list of sprints	<code>https://&lt;AgileManager_Server_URL&gt;/qcbn/rest/domains/&lt;domain_name&gt;/projects/&lt;project_name&gt;/release-backlog-items?query={entity-type [requirement];sprint-id[&lt;sprint_id1&gt; OR &lt;sprint_id2&gt; OR ...]}</code>
7. Get task list of one backlogs by assign-to and status	<code>https://&lt;AgileManager_Server_URL&gt;/qcbn/rest/domains/&lt;domain_name&gt;/projects/&lt;project_name&gt;/project-tasks?query={release-backlog-item-id [&lt;backlog_id1&gt; OR &lt;backlog_id2&gt; OR ...];assigned-to[&lt;agile_user_mail_address&gt;];status[Completed]}</code>

## Data Table Changes

This section describes the changes to the data model as a result of the implementation of this integration solution.

### Table changes in 9.22 as compared to 9.21

Table Name	Impact	Change Details
<a href="#">PPM_INT_TIMESHEET_DATA</a>	Added in 9.22	
<a href="#">PPM_INT_WORK_ITEM_SET</a>	Added in 9.22	
<a href="#">ITG_ACTIVITIES</a>	Modified in 9.22	Added the following column: <ul style="list-style-type: none"> <li>IS_USED_FOR_ITG</li> </ul>
<a href="#">KTMG_POLICIES</a>	Modified in 9.22	Added the following two columns: <ul style="list-style-type: none"> <li>ITG_ACTIVITIES_REQUIRED_FLAG</li> <li>WORKITEM_INT_ENABLED_FLAG</li> </ul>

**Table changes in 9.22 as compared to 9.21, continued**

Table Name	Impact	Change Details
<a href="#">TM_TIME_SHEETS</a>	Modified in 9.22	Added the following two columns: <ul style="list-style-type: none"><li>• ITG_ACTIVITIES_REQUIRED_FLAG</li><li>• WORKITEM_INT_ENABLED_FLAG</li></ul>



## ***PPM\_INT\_TIMESHEET\_DATA***

This table stores time sheet line data that created by imported external data..

### ***Foreign Keys***

Primary Key Table	Primary Key Column	Foreign Key Column
PPM_INT_CONFIGURATIONS	SOLUTION_ID	SOLUTION_ID
PPM_INT_WORK_ITEM_SET	WORK_ITEM_SET_ID	WORKING_SET_ID

### ***Column Descriptions***

Column Name	Null?	Data Type	Description
ID	NOT NULL	NUMBER(19)	Identifier for time
SOLUTION_ID	NOT NULL	NUMBER(19)	The Integration solution Id
NAME	NOT NULL	VARCHAR2(200)	The time sheet line name
WORKING_SET_ID	NOT NULL	NUMBER(19)	ID of the work set that the time sheet line belongs to
DATA_JSON	NOT NULL	VARCHAR2(4000)	The json formatted data of external data for time sheet
DESCRIPTION	NOT NULL	VARCHAR2(4000)	Description of the time sheet line
EFFORT	NOT NULL	NUMBER	The effort of imported external data for time sheet line. DEFAULT: 0
ERROR_MESSAGE	NOT NULL	VARCHAR2(4000)	The error message when retrieve external time sheet line data
CREATION_DATE	NOT NULL	DATE	Date record was created

### ***Indexes***

This table uses no indexes.

## ***Sequences***

Sequence Name	Sequence Type
PPM_INT_TIMESHEET_DATA_S	ID

## ***PPM\_INT\_WORK\_ITEM\_SET***

This table stores data for integrated work item sets.

### ***Foreign Keys***

This table uses no foreign keys.

### ***Column Descriptions***

Column Name	Null?	Data Type	Description
WORK_ITEM_SET_ID	NOT NULL	NUMBER(19)	Identifier for work item set ID
WORK_ITEM_SET_NAME	NOT NULL	VARCHAR2(200)	Identifier for work item set name
CREATION_DATE	NOT NULL	DATE	Date record was created

### ***Indexes***

This table uses no indexes.

### ***Sequences***

This table uses no sequences.

## ITG\_ACTIVITIES

This table stores the definitions for activities.

### Foreign Keys

Primary Key Table	Primary Key Column	Foreign Key Column
KNTA_USERS	USER_ID	LAST_UPDATED_BY
KNTA_USERS	USER_ID	CREATED_BY

### Column Descriptions

Column Name	Null?	Data Type	Description
ACTIVITY_ID	NOT NULL	NUMBER	System-generated identifier
VERSION	NOT NULL	NUMBER	System-generated version for the entity. This column must not be updated manually
ACTIVITY_NAME	NOT NULL	VARCHAR2 (255)	Defines the name given to this activity
DESCRIPTION	NULLABLE	VARCHAR2 (650)	Describes the activity.
ENABLED_FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether the activity is enabled
CATEGORY_CODE	NULLABLE	VARCHAR2 (255)	SOP 98-1 Category for the activity
CAPEX_OPEX_ENABLED_FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether the activity can be capitalized. Y indicates that the activity can be capitalized.
IS_USED_FOR_REQUEST	NULLABLE	VARCHAR2 (1)	Indicates whether the activity can be used for requests

Column Name	Null?	Data Type	Description
IS_USED_FOR_ASSET	NULLABLE	VARCHAR2 (1)	Indicates whether the activity can be used for assets
IS_USED_FOR_PACKAGE	NULLABLE	VARCHAR2 (1)	Indicates whether the activity can be used for packages
IS_USED_FOR_PROJECT	NULLABLE	VARCHAR2 (4)	For the token evaluation engine. Contains the primary key of a table (see KNTA_TOKEN). The reference to this table is used to resolve all the tokens from this context after update
IS_USED_FOR_TASK	NULLABLE	VARCHAR2 (4)	For the token evaluation engine. Contains the primary key of a table (see KNTA_TOKEN). The reference to this table is used to resolve all the tokens from this context after update
IS_USED_FOR_MISC	NULLABLE	VARCHAR2 (1)	Indicates whether the activity can be used for miscellaneous items.
CREATED_BY	NOT NULL	NUMBER	Identifier for the user who created the record
CREATION_DATE	NOT NULL	DATE	Date record was created
LAST_UPDATED_BY	NOT NULL	NUMBER	Identifier for the user who last updated the record
LAST_UPDATE_DATE	NOT NULL	DATE	Date record was last updated
DEFINITION_LANGUAGE	NOT NULL	VARCHAR2 (40)	Default definition language
IS_USED_FOR_ITG	NOT NULL	VARCHAR2 (1)	(Added in 9.22) Flag to show whether this activity can be used on External Data items in time sheet

## ***Indexes***

Index Name	Index Type	Sequence	Column Name
SYS_C005200169	UNIQUE	1	ACTIVITY_NAME
SYS_C005201533	UNIQUE	1	ACTIVITY_ID

## ***Sequences***

Sequence Name	Sequence Type
ITG_ACTIVITIES_S	ACTIVITY_ID

## ***KTMG\_POLICIES***

This table stores information about time sheet policies that can be associated with time sheet users.

### ***Foreign Keys***

Primary Key Table	Primary Key Column	Foreign Key Column
KNTA_USERS	USER_ID	CREATED_BY
KNTA_USERS	USER_ID	LAST_UPDATED_BY
KTMG_PERIOD_TYPES_NLS	PERIOD_TYPE_ID	PERIOD_TYPE_ID

### ***Column Descriptions***

Column Name	Null?	Data Type	Description
POLICY_ID	NOT NULL	NUMBER	System-generated identifier
CREATION_DATE	NOT NULL	DATE	Date record was created
CREATED_BY	NOT NULL	NUMBER	Identifier for the user who created the record
LAST_UPDATE_DATE	NOT NULL	DATE	Date record was last updated
LAST_UPDATED_BY	NOT NULL	NUMBER	Identifier for the user who last updated the record
ENTITY_LAST_UPDATE_DATE	NOT NULL	DATE	Date a record in the entity was last updated
POLICY_NAME	NOT NULL	VARCHAR2 (80)	User defined name for the policy
DESCRIPTION	NULLABLE	VARCHAR2 (240)	Description of the policy
PERIOD_TYPE_ID	NOT NULL	NUMBER	Foreign key to KTMG_PERIOD_TYPES table that determines the duration of the period

Column Name	Null?	Data Type	Description
TIME_ENTRY_DURATION_CODE	NOT NULL	VARCHAR2 (30)	Whether the user will be logging time by the day or some other defined period
TIME_ENTRY_UNIT_CODE	NOT NULL	VARCHAR2 (30)	If entering time by a Period, whether entering the time in hours or as a percent of the hours in the period.
PERIOD_HOURS_CALC_TYPE_CODE	NULLABLE	VARCHAR2 (30)	Lookup code for 'TMG - Time Period Calculation Types'. Determines how the number of hours in a period are calculated.
PERIOD_HOURS	NULLABLE	NUMBER	Number of hours in the Period if the PERIOD_HOURS_CALC_TYPE_CODE is fixed.
WORKDAY_HOURS	NULLABLE	NUMBER	Number of hours in a day if the PERIOD_HOURS_CALC_TYPE_CODE is the number of days times the hours in each day.
OVERRIDE_WORK_ALLOC_CC_FLAG	NOT NULL	VARCHAR2 (1)	Either 'Y' or 'N'. Determines whether any existing charge codes for the Work Allocation will be overridden by the resource charge code.
DUPLICATE_ALLOWED_FLAG	NOT NULL	VARCHAR2 (1)	Flag to specify duplicate time sheets (multiple time sheets for the same period) is allowed or not.
TIMESHEET_REQUIRED_FLAG	NOT NULL	VARCHAR2 (1)	Flag to specify if the resource is required to fill in a time sheet
MAX_HOURS_PER_DAY	NULLABLE	NUMBER	Specifies allowed maximum total hours per day
MAX_HOURS_PER_TIMESHEET	NULLABLE	NUMBER	Specifies allowed maximum total hours per time sheet
MIN_HOURS_PER_TIMESHEET	NULLABLE	NUMBER	Specifies allowed minimum total hours per time sheet



Column Name	Null?	Data Type	Description
MIN_MAX_ HOURS_CALC_ TYPE_CODE	NULLABLE	VARCHAR2 (30)	Lookup code for 'TMG - Time Period Calculation Types'. Determines how the number of hours in a period are calculated.
PREVENT_ VIOLATION_ FLAG	NOT NULL	VARCHAR2 (1)	Flag to determine whether the time sheet can be released when there is a violation on the policy
GLOBAL_ POLICY_FLAG	NOT NULL	VARCHAR2 (1)	Specifies if the policy is the default policy for all resources without a policy
AUTO_ APPROVAL_ FLAG	NOT NULL	VARCHAR2 (1)	Indicates whether the user's time is automatically approved
MAX_ PERCENT_ PER_ TIMESHEET	NULLABLE	NUMBER	If entering in percent, what is the maximum percentage allowed.
MIN_ PERCENT_ PER_ TIMESHEET	NULLABLE	NUMBER	If entering in percent, what is the minimum percentage allowed.
REQ_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is required to enter activities on their time sheet for requests (Y/N)
TSK_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is required to enter activities on their time sheet for tasks (Y/N)
PKG_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is required to enter activities on their time sheet for packages (Y/N)

Column Name	Null?	Data Type	Description
MISC_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is required to enter activities on their time sheet for misc items (Y/N)
ACTIVITIES_ DISPLAY_FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to specify activities on their time sheet for work items (Y/N)
EXP_HRS_ DISPLAY_FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the time sheet is showing the expected hours (Y/N)
WORKITEM_ REQ_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to have requests as work items on their time sheet (Y/N)
WORKITEM_ PRJ_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to have projects as work items on their time sheet (Y/N)
WORKITEM_ TSK_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to have tasks as work items on their time sheet (Y/N)
WORKITEM_ PKG_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to have packages as work items on their time sheet (Y/N)
WORKITEM_ MSC_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is allowed to have misc as work items on their time sheet (Y/N)
PRJ_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether the user is required to enter activities on their time sheet for project items (Y/N)

Column Name	Null?	Data Type	Description
ALLOW_ EMPTY_LINE_ FLAG	NULLABLE	NUMBER	Level how to deal with the empty time sheet line in a time sheet
ITG_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (1)	(Added in 9.22) Flag to show whether the activity is required on Item type External Data of the time sheet policy
WORKITEM_ ITG_ENABLED_ FLAG	NOT NULL	VARCHAR2 (1)	(Added in 9.22) Flag to show whether External Data is enabled as an work item of the time sheet policy

## Indexes

Index Name	Index Type	Sequence	Column Name
KTMG_POLICIES_U1	UNIQUE	1	POLICY_ID
KTMG_POLICIES_U2	UNIQUE	1	POLICY_NAME

## Sequences

Sequence Name	Sequence Type
KTMG_POLICIES_S	POLICY_ID

## ***TM\_TIME\_SHEETS***

This table stores the definition of each time sheet including the copied policy information from the resource's time sheet policy.

### ***Foreign Keys***

Primary Key Table	Primary Key Column	Foreign Key Column
ITG_TRUSTEE	TRUSTEE_ID	BASE_TRUSTEE_ID
KNTA_SECURITY_GROUPS_NLS	SECURITY_GROUP_ID	BILLING_APPROVER_SEC_GRP_ID
ITG_CALENDAR	CALENDAR_ID	CALENDAR_ID
KNTA_USERS	USER_ID	CREATED_BY
KNTA_USERS	USER_ID	LAST_UPDATED_BY
KTMG_PERIODS	PERIOD_ID	PERIOD_ID
RSC_RESOURCES	RESOURCE_ID	RESOURCE_ID

### ***Column Descriptions***

Column Name	Null?	Data Type	Description
TIME_SHEET_ID	NOT NULL	NUMBER	System-generated identifier
VERSION	NOT NULL	NUMBER	System-generated version for the entity. This column must not be updated manually
RESOURCE_ID	NOT NULL	NUMBER	Identifies the Resource that this time sheet belongs to.
PERIOD_ID	NULLABLE	NUMBER	Identifies the period for which this time sheet tracks actuals

Column Name	Null?	Data Type	Description
CALENDAR_ID	NOT NULL	NUMBER	Identifies the unique internal calendar for the time sheet. It is used by the system to keep track of actual information and must not be modified. This calendar does not reference the Resource's calendar.
STATUS_CODE	NULLABLE	NUMBER	Indicates the status of the time sheet
DESCRIPTION	NULLABLE	VARCHAR2 (650)	Describes the time sheet. This value defaults to the format "Resource - Period".
SEQ	NULLABLE	NUMBER	Contains the internal order of time sheets for display when a Resource has multiple time sheets for a given period.
EXCEPTION_MESSAGE	NULLABLE	VARCHAR2 (650)	Stores the policy exceptions for display in the time sheet, if any exceptions exist.
BASE_TRUSTEE_ID	NULLABLE	NUMBER	Identifies the billing approver of the time sheet if it is configured to be a participant group.
BILLING_APPROVER_SEC_GRP_ID	NULLABLE	NUMBER	Identifies the billing approver of the time sheet if it is configured to be a Security Group.
TIME_ENTRY_DURATION_CODE	NULLABLE	VARCHAR2 (255)	Indicates the granularity of effort entered into the time sheet. This is controlled by the time sheet Policy. Valid values are DAY and PERIOD.
TIME_ENTRY_UNIT_CODE	NULLABLE	VARCHAR2 (255)	Indicates the unit of measurement for time entry into the time sheet. This is controlled by the time sheet Policy. Valid values are HOURS and PERCENT.
PERIOD_HOURS_CALC_TYPE_CODE	NULLABLE	VARCHAR2 (255)	Indicates the setting for calculating the number of hours in a period. This is controlled by the time sheet policy. Valid values are WORKDAY and FIXED.

Column Name	Null?	Data Type	Description
PERIOD_ HOURS	NULLABLE	NUMBER	If PERIOD_HOURS_CALC_TYPE_CODE is set to FIXED, this column indicates the fixed number of hours in a period.
WORKDAY_ HOURS	NULLABLE	NUMBER	If PERIOD_HOURS_CALC_TYPE_CODE is set to WORKDAY, this column indicates the number of hours in a working day.
DUPLICATE_ ALLOWED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether multiple time sheets are allowed in a given period.
MIN_MAX_ HOURS_ CALC_TYPE_ CODE	NULLABLE	VARCHAR2 (255)	Indicates the setting for calculating the number of hours when checking for minimum and maximum requirements. This is controlled by the time sheet Policy.
TIME_SHEET_ REQUIRED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether a Resource must submit a time sheet for every period.
MAX_HOURS_ PER_DAY	NULLABLE	NUMBER	Indicates the maximum number of hours per day a Resource may log time for in the time sheet.
MAX_HOURS_ PER_TIME_ SHEET	NULLABLE	NUMBER	Indicates the maximum number of hours per time sheet a Resource may log.
MIN_HOURS_ PER_TIME_ SHEET	NULLABLE	NUMBER	Indicates the minimum number of hours per time sheet a Resource must log.
MAX_ PERCENT_ PER_ TIMESHEET	NULLABLE	NUMBER	Indicates the maximum percentage allowed on the time sheet.
MIN_ PERCENT_ PER_ TIMESHEET	NULLABLE	NUMBER	Indicates the minimum percentage required on the time sheet.

Column Name	Null?	Data Type	Description
PREVENT_ VIOLATION_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether a Resource is prevented from submitting a time sheet if there are policy violations.
REQ_ ACTIVITIES_ REQUIRED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether Activities are required to be added to Request items on the time sheet.
TSK_ ACTIVITIES_ REQUIRED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether Activities are required to be added to Task items on the time sheet.
PRJ_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Activities are required to be added to Project items on the time sheet.
PKG_ ACTIVITIES_ REQUIRED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether Activities are required to be added to Package items on the time sheet.
MISC_ ACTIVITIES_ REQUIRED_ FLAG	NULLABLE	VARCHAR2 (1)	Indicates whether Activities are required to be added to Miscellaneous items on the time sheet.
WORKITEM_ REQ_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Requests can be added as work item to the time sheet.
WORKITEM_ TSK_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Tasks can be added as work item to the time sheet.

Column Name	Null?	Data Type	Description
WORKITEM_ PRJ_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Projects can be added as work item to the time sheet.
WORKITEM_ PKG_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Packages can be added as work item to the time sheet.
WORKITEM_ MSC_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (4)	Indicates whether Miscellaneous can be added as work item to the time sheet.
CREATED_BY	NOT NULL	NUMBER	Identifier for the user who created the record
CREATION_ DATE	NOT NULL	DATE	Date the record was created
LAST_ UPDATED_BY	NOT NULL	NUMBER	Identifier for the user who last updated the record
LAST_ UPDATE_ DATE	NOT NULL	DATE	Date record was last updated
ALLOW_ EMPTY_LINE	NOT NULL	NUMBER	Level how to deal with empty time sheet lines in this time sheet
ITG_ ACTIVITIES_ REQUIRED_ FLAG	NOT NULL	VARCHAR2 (1)	(Added in 9.22) Flag to show whether the activity is required on Item type External Data for the specific time sheet
WORKITEM_ INT_ ENABLED_ FLAG	NOT NULL	VARCHAR2 (1)	(Added in 9.22) Flag to show whether External Data is enabled as an work item for the specific time sheet



## Indexes

Index Name	Index Type	Sequence	Column Name
FKF38627E05BD31FCB_I	NONUNIQUE	1	BASE_TRUSTEE_ID
FKF38627E05F1CC5BE_I	NONUNIQUE	1	CALENDAR_ID
FKF38627E0A1B1A5A3_I	NONUNIQUE	1	RESOURCE_ID
FKF38627E0A7DB71D8_I	NONUNIQUE	1	BILLING_ APPROVER_SEC_ GRP_ID
SYS_C005201597	UNIQUE	1	TIME_SHEET_ID
TM_TIME_SHEETS_N1	NONUNIQUE	1	PERIOD_ID

## Sequences

Sequence Name	Sequence Type
TM_TIME_SHEETS_S	TIME_SHEET_ID

## Troubleshooting and Limitations

This section includes the following:

- ["Limitations" below](#)
- ["Troubleshooting Problems" on the next page](#)

### Limitations

- When you run the following HP Time Management reports, if you set the **Work Item Type** filter to **External Data**, and the **Work Item Set** filter to **HP Agile Manager**, no values are available for **Work Item**:
  - Actual Time Summary
  - Time Sheet Summary

- Work Allocation Details
- When you set filters for the following HP Time Management portlets, if you set **Work Item Type** to **External Data**, and **Work Item Set** to **HP Agile Manager**, no values are available for **Work Item**:
  - Time Sheet Totals by Work Item
  - Time Sheet Totals by Resource Group
  - Work Allocation Details
  - Work Item Set Actuals vs. Allocations
- **External Data** is available for the following HP Time Management portlets only:
  - Time Sheet Totals for Direct Reports
  - Approve Time Sheets
  - Work Item Set Actuals vs. Allocations
  - Time Sheet Totals by Resource Group
  - Time Sheet Totals by Resource
  - My Time Sheets

**External Data** is not available for the following portlets:

- Time Sheet Totals by Work Item
- Work Allocation Details
- My Tasks
- My Work Items

## ***Troubleshooting Problems***

**Problem:** Importing the agile effort data for multiple times during the time period range does not automatically update the effort data in your PPM Center time sheet that you imported previously. Instead, it adds new time lines into your time sheets. You need to manually remove the old time lines of data.

**Solution:** Import your agile effort only once for each time period, approaching the end of the current period, so that the latest and more accurate effort data can be retrieved and imported.

## Roadmap Entity Added to HP APM in PPM Center Version 9.22

This section contains the following topics:

- ["Overview of the Roadmap Entity" below](#)
- ["Upgrading from HP APM for PPM 9.20" on the next page](#)
- ["Installing HP APM for PPM 9.22" on the next page](#)
- ["Creating Roadmap Entities" on page 79](#)
- ["Editing Roadmap Entities" on page 83](#)

### Overview of the Roadmap Entity

A new entity Roadmap is introduced to HP APM for PPM 9.22.

A Roadmap entity is a roadmap for an individual application/service, or a group of applications/services, including lifecycle statuses (roadmap phases) and milestones. You can create a roadmap entity for any other existing APM entity.

To use the Roadmap entity, you need to install HP APM for PPM 9.22. See ["Installing HP APM for PPM 9.22" on the next page](#).

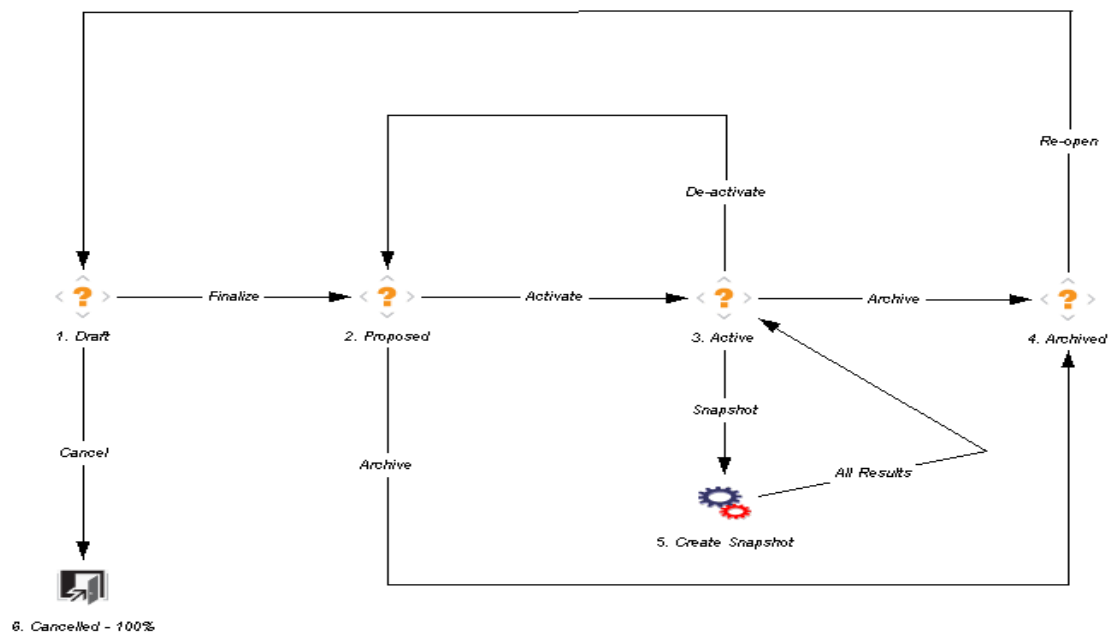
**Note:** If your organization has no plan to use the Roadmap entity, there is no need to install the HP APM for PPM 9.22. After upgrading PPM Center to version 9.22, you can continue to use the existing functionalities provided by HP APM for PPM 9.20.

You can create, search, or edit a Roadmap entity like any other application entities. For information about creating and editing Roadmap entities, see ["Creating Roadmap Entities" on page 79](#) and ["Editing Roadmap Entities" on page 83](#). For more information about using the application entities, see the *Application Portfolio Management User's Guide* and the *Application Portfolio Management Analyst's Guide*.

### Roadmap Workflow

After you create a roadmap, it must follow a process, that is roadmap workflow, to reach its conclusion. Roadmap status is assigned automatically as the roadmap moves through its workflow.

The figure below illustrates the default workflow steps for a roadmap.



As an APM administrator, you can configure the roadmap workflow to handle any of your business process.

## Upgrading from HP APM for PPM 9.20

If you are on HP APM for PPM version 9.20, follow the steps below to upgrade to HP APM for PPM version 9.22:

1. Upgrade PPM Center to version 9.22.

For more information, see the ["Installation Notes" on page 3](#).

2. Install PPM Center Best Practices.
3. Deploy HP APM for PPM version 9.22.

For more information, see ["Installing HP APM for PPM 9.22" below](#).

## Installing HP APM for PPM 9.22

Before you install HP APM, PPM Center version 9.22 and PPM Center Best Practices must be installed.

For information about installing PPM Center and PPM Center Best Practices, see the *Installation and Administration Guide* for PPM Center.

Complete the following steps to install HP APM on the PPM Server:

1. Back up the database and file system for the PPM Server.
2. Verify that the PPM Server is running.
3. Copy the file ppm-922-APM.jar to the <PPM\_Home> directory. This is the directory where your PPM Center instance is installed.
4. Change to the <PPM\_Home>/bin directory.
5. Start the installation by typing the following command:

```
sh ./kDeploy.sh -i APM
```

6. Follow the on-screen instructions to complete the installation.
7. Stop the PPM Server.
8. Compile the JSP files using the following command:

```
sh ./kJSPCompiler.sh
```

9. (Optional) Delete PPM Center's cache in the following directories:

```
<PPM_Home>/server/<PPM_Server_Name>/tmp  
<PPM_Home>/server/<PPM_Server_Name>/work
```

10. Start the PPM Server.
11. Verify the installation. Type:

```
sh ./kDeploy.sh -l
```

where the last character in the command is the lowercase letter "l".

The name APM should appear in the list of installed modules. For example, you should see the following entry:

Deployment	Version	Deployed	Description
APM	922	<date and time>	HP Application Portfolio Management

**Note:** If you are running PPM Center in a clustered environment, repeat the installation procedure for each PPM Server.

## Creating Roadmap Entities

You can create, search for, or edit roadmap entities like any other application entities.

To create a Roadmap entity,

1. From the menu bar, select **Open > Application Portfolio > Create Entities**.
2. Select **Roadmap** in the **Entities** section.

The Create New APM-Roadmap page opens.

**Note:** For more ways to create a new entity, see the *Application Portfolio Management User's Guide*.

3. Enter information in the following sections:

- ["Identity" below](#)
- ["Phases" on the next page](#)
- ["Milestones" on page 81](#)

### Identity

In the Identity section, enter the fundamental information that identifies the roadmap.

**Note:** The Identity section is a subsection of the header section.

The screenshot shows the 'Identity' section of the 'Create New APM-Roadmap' page. It contains the following fields and values:

Identity	
Roadmap ID:	Roadmap Status:
30185	New
*Roadmap Type:	Created On:
Application	September 11, 2013
Created By:	
Admin User	
*Entity:	
HR Portal	

The table below describes the Identity fields.

Field (*Required)	Description
Roadmap ID	ID of the roadmap
Roadmap Status	<p>Read-only. Available roadmap statuses include:</p> <ul style="list-style-type: none"> <li>■ <b>New</b> - The roadmap is created but not submitted.</li> <li>■ <b>Draft</b> - The roadmap is submitted but not finalized.</li> <li>■ <b>Proposed</b> - The roadmap is finalized but not activated.</li> <li>■ <b>Active</b> - The roadmap is activated but not archived.</li> <li>■ <b>Cancelled</b> - The roadmap is cancelled.</li> <li>■ <b>Archived</b> - The roadmap is archived.</li> </ul>
Roadmap Type*	<p>Available roadmap types include:</p> <ul style="list-style-type: none"> <li>■ Application</li> <li>■ Portfolio</li> </ul> <p><b>Note:</b> These two types are available by default. Customized roadmap types can be created in the PPM Workbench by the APM administrator to meet your organization's business needs and requirements.</p>
Created On	Read-only. The date on which the roadmap was created
Created By	Read-only. The full name of the user who created the roadmap
Entity*	<p>The entity for which the roadmap is created</p> <p><b>Note:</b> If an entity has a roadmap that is in "Active" status, you are not able to create another roadmap for this entity.</p>

## Phases

In the Phases section, enter the information of the phases the roadmap would go through.



Phases

— Roadmap Phases

Edit

Seq ▲	Name	Type	Link	Start Date	End Date	Active
1	Requirement	Evaluation		September 1, 2013	October 16, 2013	Y
2	Design	Operational		October 17, 2013	November 1, 2013	N
3	Build	Operational		November 2, 2013	January 1, 2014	N
4	Deploy	Operational		January 2, 2014	February 1, 2014	N

Export to Excel

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Show 5 Each Page

The table below describes the Roadmap Phases fields.

Field (*Required)	Description
Seq	Sequence of the roadmap phase
Name	Name of the roadmap phase
Type	Type of the roadmap phase. Available values include: <ul style="list-style-type: none"> <li>■ Evaluation</li> <li>■ Planned</li> <li>■ Operational</li> <li>■ Archived</li> <li>■ Planned Decommissioned</li> </ul> <p><b>Note:</b> These five types are available by default. APM administrator can create customized types of roadmap phases in the PPM Workbench to meet your organization's business needs and requirements.</p>
Link	URL or any other kind of link of the roadmap phase
Start Date	Start date of the roadmap phase
End Date	End date of the roadmap phase
Active	Indicates whether or not the roadmap phase is active

### Milestones

In the Milestones section, enter the information of the milestones you set for the roadmap.

Roadmap Milestones						
 Edit						
Seq	Code	Name	Type	Date	Decision	URL
1	N	Finalize requirement	Business Function/Business Capability	October 16, 2013		
2		Deliver	Release	January 1, 2014		

[Export to Excel](#)
Page 1 of 1
Show 5 Each Page

The table below describes the Roadmap Milestone fields.

Field (*Required)	Description
Seq	Sequence of the roadmap milestone
Code	Code of the roadmap milestone
Name	Name of the roadmap milestone
Type	<p>Type of the roadmap milestone. Available values include:</p> <ul style="list-style-type: none"> <li>■ Major Decision Point</li> <li>■ Minor Decision Point</li> <li>■ Release</li> <li>■ De-Investment</li> <li>■ Business Function/Business Capability</li> <li>■ Technology Capability</li> </ul> <p><b>Note:</b> These six types are available by default. Customized types of roadmap milestones can be created in the PPM Workbench by the APM administrator to meet your organization's business needs and requirements.</p>
Date	Date of the roadmap milestone
Decision	Decision that has been made in this milestone
URL	URL of the milestone information

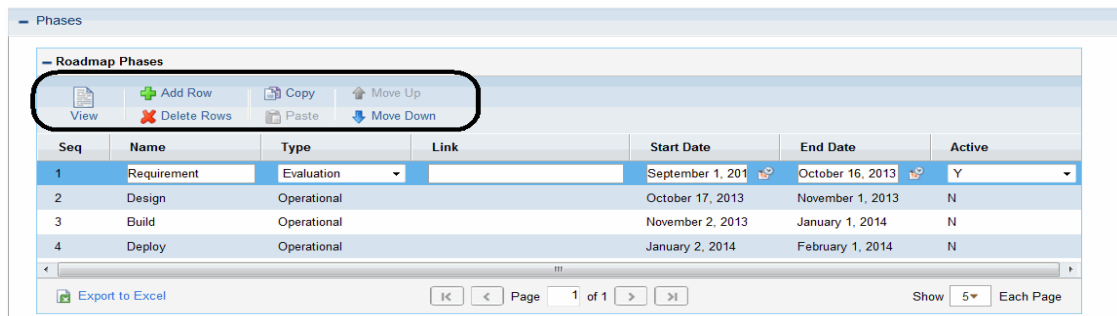
- Complete other fields as necessary.
- Click **Submit**.

## Editing Roadmap Entities

- "Edit Roadmap Phases" below
- "Edit Roadmap Milestones" below

### Edit Roadmap Phases

To edit Roadmap Phases, click **Edit**. The Roadmap Phases section changes into the Edit view.



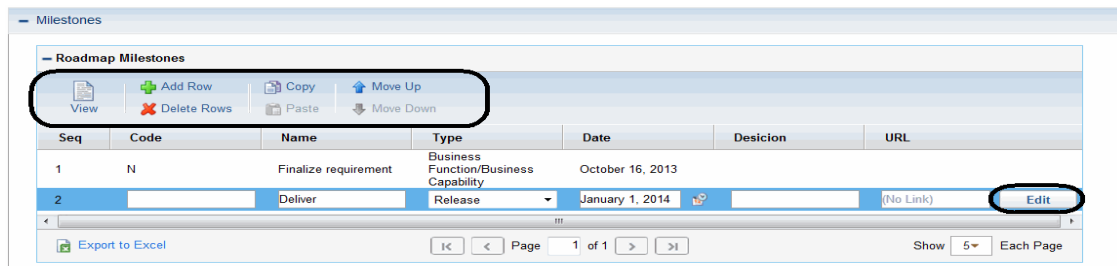
Seq	Name	Type	Link	Start Date	End Date	Active
1	Requirement	Evaluation		September 1, 2013	October 16, 2013	Y
2	Design	Operational		October 17, 2013	November 1, 2013	N
3	Build	Operational		November 2, 2013	January 1, 2014	N
4	Deploy	Operational		January 2, 2014	February 1, 2014	N

Under the Edit view, you can do the followings to edit the phases:

- Edit the existing phases information
- Add a new phase by clicking **Add Row**
- Delete a phase by clicking **Delete Row** after selecting the phase you want to delete
- Create a phase based on an existing phase by selecting the existing phase and then clicking **Copy** and **Paste**
- Adjust the phases sequence by clicking **Move Up** or **Move Down** after selecting the desired phase

### Edit Roadmap Milestones

To edit Roadmap Milestones, click **Edit**. The Roadmap Milestones section changes into the Edit view.



Under the Edit view, you can do the followings to edit the milestones:

- Edit the existing milestones information
- Add a new milestone by clicking **Add Row**
- Delete a milestone by clicking **Delete Row** after selecting the milestone you want to delete
- Create a milestone based on an existing milestone by selecting the existing milestone and then clicking **Copy** and **Paste**
- Adjust the milestones sequence by clicking **Move Up** or **Move Down** after selecting the desired milestone

**Note:** If you want to edit the URL field of a milestone, you may have to click **Edit** at the end of the milestone line to open the Link Properties window.

## Chapter 4: New Features in PPM Center 9.21

The following new features are included in PPM Center version 9.21:

- **Integrating PPM Center tasks with HP ALM Releases**

The integration between PPM Center tasks and HP ALM Releases implemented in version 9.21 is an extension of the capability of the integration between PPM Center projects and HP ALM. The integration extension enables project managers to manage multiple HP ALM releases with one PPM Center project by integrating project tasks with HP ALM releases.

For more information, see ["Integrating PPM Center Tasks with HP ALM Releases" on page 211](#)

- **Associating Waterfall Projects to PPM Center Tasks**

Waterfall projects refer to the traditional IT projects that are developed and managed with PPM Center using the waterfall methodology.

Version 9.21 implemented this new feature in the HP Project Management module. The new feature allows project managers to associate other waterfall projects as subprojects to tasks of a PPM Center project. This means that project managers can manage multiple subprojects from within a master project.

For more information, see ["Associating Waterfall Projects to PPM Center Tasks" below](#).

Using this feature in combination with the integration between PPM Center tasks and HP Agile Manager, project managers can manage hybrid IT projects comprised of both waterfall subprojects and agile subprojects centrally from a PPM Center project. For more information, see ["Viewing and Managing Hybrid Projects " on page 242](#).

## Associating Waterfall Projects to PPM Center Tasks

This section covers the following topics:

- ["New Tabs Introduced " on the next page](#)
- ["Mapping Rules" on page 87](#)
- ["Associating a Waterfall Project to a PPM Center Task" on page 88](#)

- ["Deleting a Mapping from the Task Details Page" on page 91](#)
- ["Viewing Details of Waterfall Projects" on page 92](#)

## New Tabs Introduced

Starting from version 9.21, the following tabs are available with the HP Project Management module by default:

- The **Hybrid Project** tab on the Task Details page

The **Hybrid Project** tab is available on the Task Details page together with the **Mapping Waterfall Project** button. Project managers can start to associate a waterfall project to a PPM Center task from here. For more information, see ["Associating a Waterfall Project to a PPM Center Task" on page 88](#).

**Note:** No additional configuration work is required for mapping waterfall projects to tasks.

The screenshot shows the 'Task Details: 36 - Build Prototype' page. At the top right are icons for Save, Done, and More. Below is a 'Statistics' section with fields for Name (Build Prototype), Status (Pending Predecessor), Sequence # (36), % Complete (0), Activity, Priority (500), and Description. Below this are checkboxes for 'Mark task as milestone', 'This is a major milestone', and 'Milestone automatically completes'. The 'Project Path' is 'Passenger System > III. Prototype > Build Prototype'. A horizontal tab bar contains 'Schedule', 'Resources', 'Exceptions / Warnings', 'Cost', 'Notifications', 'Notes', 'References', 'Hybrid Project' (which is selected), and 'Quality'. Below the tabs, a message states: 'You can associate either of the following as a subproject to this task:'. Two bullet points follow: 'Another PPM project (also known as waterfall project), or' and 'An agile application development project that is managed within an agile development management tool, if your administrator has deployed the Agile Integration Plugins. If you do not see the "Associate Agile Project to this Task" option, contact your administrator.' Below this is the section 'Associate Another PPM Project to this Task' which contains a blue button labeled 'Mapping Waterfall Project'.

- The **Timeline** tab on the Project Overview page

By default, the **Timeline** tab displays a consolidated timeline view of the master project as well as details of all mapped waterfall subprojects.

Before associating waterfall projects or agile projects as subprojects to PPM Center tasks, you may want to review the ["Mapping Rules" on the next page](#) first.

Then, as subproject managers, you can start to associate waterfall projects to PPM Center tasks. See ["Associating a Waterfall Project to a PPM Center Task" on page 88](#).

As project managers, you can view and manage multiple waterfall subprojects centrally from a master PPM Center project. See ["Viewing Details of Waterfall Projects" on page 92](#).

## Mapping Rules

When mapping a task to a waterfall project, make sure that the task meets the following criteria:

- The task is a leaf task.
- The task is neither a milestone nor a summary task.

**Note:** If a task was changed from a milestone or a summary task to a leaf task, then it is qualified for mapping to a waterfall project. That is to say, only current status of the task matters.

- The task has no actuals rolled up from PPM Center.

For example, if you set a task status to **In Process**, then it would have actual start date, so it cannot be mapped to any waterfall project.

- The task is not synchronized from an integrated product.
- The task is not mapped to any waterfall project or agile project.
- Microsoft Project-related tasks

A task under Microsoft Project Controlled mode or Shared mode is not available for mapping to a project. If the task is changed from Microsoft Project Controlled mode to PPM Controlled mode, it is available for mapping to a project.

- RFC tasks

If a task is already mapped to an RFC in Service Manager, it is not available for mapping to a project.

If a task does not satisfy the above criteria, a warning message is displayed on the Hybrid Project tab, indicating that the task cannot be mapped to a waterfall project as well as the reasons why it cannot be mapped.

## ***Important Notes about Mapping***

When mapping a task to a waterfall project, also consider the following:

- Microsoft Project Controlled mode

For a task that is available for mapping to an agile project or a waterfall project, changing the Integration Mode of the master project results in tasks under the project not available for mapping.

If you do so, a warning message may display on the Quality tab of the Task Details page, indicating that the mapping is not valid anymore, and that the synchronization will suspend.

Mapped tasks or imported tasks are not editable on the standard user interface.

You can not switch the mode of a task if it is already mapped to an agile project or a waterfall project.

- For imported and mapped tasks, you cannot use time sheet to track their time.

## **Associating a Waterfall Project to a PPM Center Task**

To associate a waterfall project as a subproject to a PPM Center task,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.

The Search Projects page opens.

3. Locate and open the desired project.
4. On the Project Summary tab of the Project Overview page, click **Edit Work Plan** in the Work Plan portlet.

The Work Plan for <Project\_Name> page displays.

5. Open the Task Details page for the desired task that you want to associate to, and go to the **Hybrid Project** tab.



**Task Details: 36 - Build Prototype**

Save Done More

**Statistics**

Name: Build Prototype Status: Pending Predecessor Sequence #: 36 % Complete: 0 Activity: Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: Passenger System > III. Prototype > Build Prototype

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project Quality

You can associate either of the following as a subproject to this task:

- Another PPM project (also known as waterfall project), or
- An agile application development project that is managed within an agile development management tool, if your administrator has deployed the Agile Integration Plugins. If you do not see the "Associate Agile Project to this Task" option, contact your administrator.

Associate Another PPM Project to this Task

Mapping Waterfall Project

6. Click **Mapping Waterfall Project**.

The **Please choose a target project** section displays a list of available waterfall projects that meet the following criteria:

- Not the master project itself.

The project status is not Canceled or Completed.

- The project is not mapped to any other task.
- The project timeline falls between the start date and finish date of the master project that the task belongs to.
- The project can be viewed or edited by the current user. That is, the current user shall have one of the following Project Mgmt: access grants:
  - Edit All Projects
  - Edit Projects
  - View Projects
  - View All Projects

**Task Details: 36 - Build Prototype**

Save Done More

**Statistics**

Name: Build Prototype Status: Pending Predecessor Sequence #: 36 % Complete: 0 Activity: Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: Passenger System > III. Prototype > Build Prototype

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project Quality

Please choose a target project

Project No	Project Name	Project Manager	Project Status	Project Start (period)	Project Finish (period)
31661	AP Web Interface	Joseph Banks	Detailed Project Definition	June 2013	August 2013
31357	Bill Pay - QA Testing Project	Mary River	In Testing	January 2013	June 2013
31357	Bill Pay - QA Testing Project	Mary River	In Testing	January 2013	June 2013
31356	Bill Pay Application	Jack Foster	Check Test Completion Status	January 2013	July 2013
30711	Business Unit Integration	Joseph Banks	Detailed Project Definition	February 2013	December 2013
30840	Call Center Upgrade	Nicole Smith	Assign Project Manager	January 2013	December 2013
32386	Commerce Center 6.0	Jack Foster	Define Project	March 2013	December 2013
30631	CRM One World	Joseph Banks	Detailed Project Definition	July 2013	March 2014
30662	Distribution Access	Nicole Smith	Assign Project Manager	January 2013	June 2013
31782	Education Systems	Joseph Banks	Detailed Project Definition	January 2013	July 2013

Showing 1 - 10 of 44

Cancel Confirm

7. Select a project from the list and click **Confirm**.

The one-one mapping relationship is established, with the following information displayed right away:

- Mapping information, including project name of the waterfall project you just associated and the last successful synchronization time
- Details of the waterfall project, including the following:
  - Project summary information
  - The Milestones portlet

**Task Details: 36 - Build Prototype**

Save Done More

**Statistics**

Name: Build Prototype Status: Pending Predecessor Sequence #: 36 % Complete: 0 Activity: Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: Passenger System > III. Prototype > Build Prototype

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project Quality

Project: AP Web Interface (#31661) Last successful run time: 2013-04-28 10:54:38

Overall Health: Green Project Manager: Joseph Banks Project Status: Detailed Project Definition Phase: Project Project Plan Period: June 2013 to August 2013 Project Region: US Progress: 0%

**Milestones**

Milestone	Scheduled Finish	Actual Finish	Owners
Requirements Sign-Off	8/15/12		
Design Approval	8/29/12		
Prototype Sign-Off	8/29/12		
Purchases - Capitalized	8/7/12		
Purchases - Expensed	8/7/12		
Detailed Design Approval	9/11/12		
Complete Build	10/2/12		
System Test Sign-Off	10/5/12		
Integration Test Sign-Off	10/5/12		
U. Business Acceptance	10/16/12		
U. Go Live	10/23/12		

## Deleting a Mapping from the Task Details Page

To delete a mapping from the Hybrid Project tab of the Task Details page,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.

The Search Projects page opens.

3. Locate and open the desired project.
4. Go to the Task Details page for the desired task that you want to remove the mapping you already established for it, and go to the **Hybrid Project** tab.

Task Details: 32 - Second Level Solution Review

Statistics

Name: Second Level Solu Status: Pending Predecessor Sequence #: 32 % Complete: 0 Activity: Design Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: Passenger System > II. Solution Design > Second Level Solution Review

Schedule Resources Exceptions / Warnings Cost Notifications Notes References **Hybrid Project** Quality

Project: Second Level Solution Review (#34338) Last successful run time: 2013-04-12 05:21:58

Overall Health: Green Project Manager: Admin User Project Status: In Planning Phase: Project Plan Period: March 2013 to July 2013 Project Region: Germany Progress: 0%

Milestone	Scheduled Finish	Actual Finish	Owners
Genehmigung Anforderungen	3/13/13		
Implementierung abgeschlossen	3/25/13		
Testen	4/26/13		
Go Live	5/22/13		

5. Click **X**.

A prompt dialog pops up.

6. Click **OK**.

The mapping is removed, and the **Hybrid Project** tab returns to its initial state.

You can click **Mapping Waterfall Project** to map the task to another waterfall project as needed.

## Viewing Details of Waterfall Projects

Once the one-one mapping relationship between a PPM Center task and a waterfall project is established, the master project displays the waterfall project information on the Hybrid Project tab of the Task Details page immediately.

**Task Details: 69 - Perform System Test**

Save Done More

**Statistics**

Name: Perform System Te Status: Pending Predecessor Sequence #: 59 % Complete: 0 Activity: Testing Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: Passenger System > VII Test > System Test > Perform System Test

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project Quality

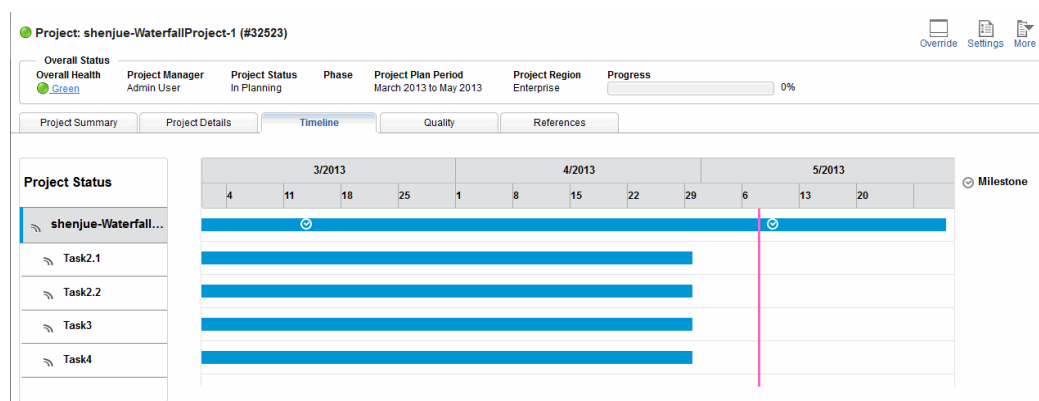
Project: Bill Pay - QA Testing Project (#31357) Last successful run time: 2013-04-29 08:44:31

Overall Health Green Project Manager Mary River Project Status In Testing Phase Project Project Plan Period January 2013 to June 2013 Project Region US Progress 0%

Milestone	Scheduled Finish	Actual Finish	Owners
Test Plan Defined	4/11/13		
Test Environment Ready	5/10/13		
Test Scenarios Ready	7/3/13		
Tests Completed	7/24/13		

Project managers and subproject managers, depending on their access grants, can view and manage their projects from the following tabs:

- The **Timeline** tab on the Project Overview page
  - By default, the **Timeline** tab displays a consolidated timeline view of the master project and the subprojects.



**Note:** If a milestone is not in the project period (between the planned start date and the planned finish date) for the project it belongs to, the milestone will not display.

- Clicking a task in the project navigation tree displays details of the mapped waterfall project.

The screenshot displays the 'Project Overview' page for 'shenjue-WaterfallProject-1 (#32823)'. The page includes a navigation tree on the left with tasks Task2.1, Task2.2, Task3, and Task4. The main content area shows project details for 'Project\_16778\_4o5sT(#30797)' with a green status. It includes sections for Milestone Summary (stating 'There are no milestones'), Project Cost (Financial Summary), and EV Summary (Planned Value, Earned Value, Actual Cost, Schedule Variance, Cost Variance, SPI, CPE). The Project Cost section includes a table for Financial Summary with columns for Total Forecast, Forecast To End Of Current Month, Actual Total, and Planned To Date. The EV Summary section includes a table with columns for Planned Value, Earned Value, Actual Cost, Schedule Variance, Cost Variance, SPI, and CPE.

The following details of the mapped waterfall project are displayed:

- Project summary

To view more details for the waterfall project, click project name to open the Project Overview page directly or in a new tab.

- The Milestone Summary portlet

You can click each of the milestones to drill down to details.

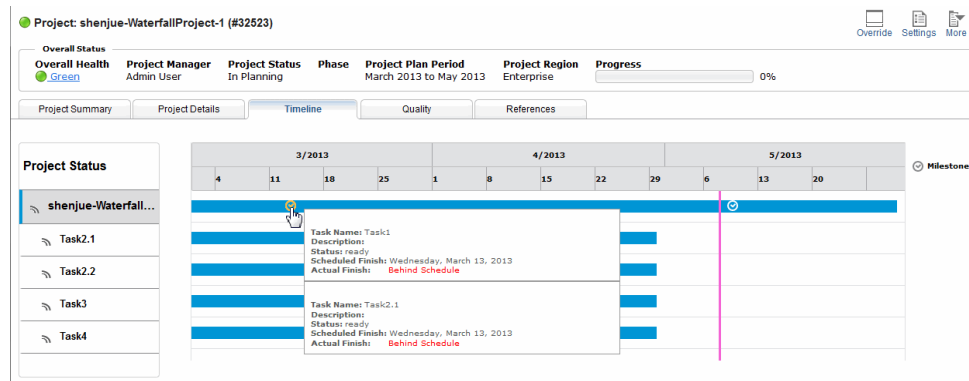
- The Project Cost portlet

**Note:** The Project Cost portlet is not available until you have enabled the Financial Management setting on the Cost and Effort policy of the mapped waterfall project. For more information, see ["Enable the Project Cost Portlet " on page 95](#).

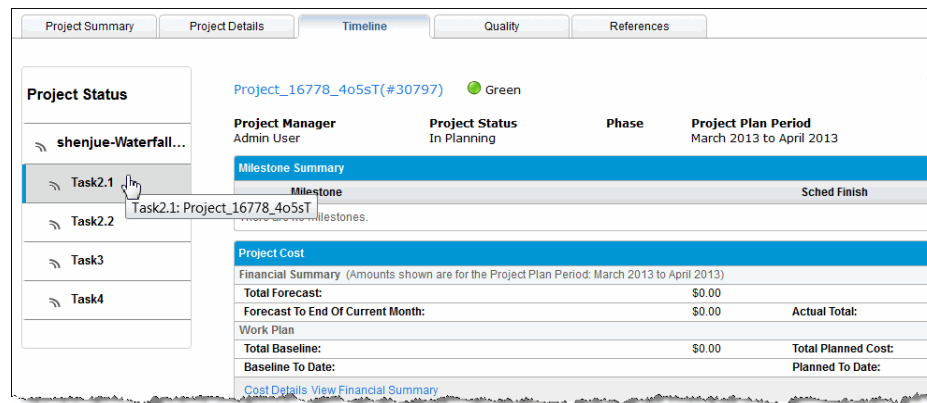
- The EV Summary portlet

**Note:** The EV Summary portlet is not available until you have a) enabled the Financial Management setting of the mapped waterfall project and b) created a baseline for the mapped waterfall project. For more information, see ["Enable the Project Cost Portlet " on page 95](#) and ["Enable the EV Summary Portlet " on page 96](#).

- Placing your mouse over a milestone displays details of the milestone.



- Placing your mouse over a task displays the task's one-one mapping relationship in the format of <Task\_Name>:<Mapped\_Project\_Name>.





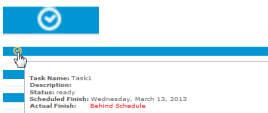
- The Hybrid Project tab on the Task Details page

This tab displays similar information of a mapped waterfall project as those displayed on the Timeline tab.

## Project Indicators

Version 9.21 introduced the following icons and colors as project indicators to facilitate your project management work:

Project Indicator	Description
	A waterfall project
	Timeline for a waterfall project

Project Indicator	Description
	A milestone of a waterfall project. Placing mouse over the milestone displays milestone details.

## Enable the Project Cost Portlet

To display the Project Cost portlet on the Timeline tab,

1. On the Timeline tab of the Project Overview page of your master project, click a desired task that is mapped to a waterfall project in the navigation pane.

The details of the waterfall project display in the right pane.

2. Right click the waterfall project name in the right pane and select **Open Link in New Tab**.

The Project Overview page of the waterfall project opens in a new tab.

3. Click **Settings** on the top right corner of the page.

The Project Settings page opens.

4. Click the **Cost and Effort** policy in the navigation pane.

The Cost and Effort policy page opens.

5. Scroll down to the Financial Management section.

6. Select the **Enable Financial Management for work plan** option and other options as illustrated below:

Financial Management
☒ Enable Financial Management for work plan

Planned labor costs on the work plan will be:

- ☒ Automatically calculated based on scheduled effort and rates
- ☐ Manually entered on tasks and rolled up to summary tasks

Actual labor costs on the work plan will be:

- ☒ Automatically calculated based on actual effort and rates
- ☐ Manually entered on tasks and rolled up to summary tasks

Costs on the Financial Summary

- ☐ Calculate the forecasted labor costs from the staffing profile.
- ☐ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☐ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)

7. Click **Done**.

8. Return to the Task Details page or the Project Overview page of the master project.
9. Go to the **Timeline** tab of the Project Overview page and click the task you just configured.

The Project Cost portlet is now available and displays data.

The same information are also displayed on the Hybrid Project tab of the Task Details page for the linked task.

## ***Enable the EV Summary Portlet***

To display the EV Summary portlet for a waterfall subproject on the Timeline tab,

1. Make sure you have enabled the Financial Management setting for the waterfall project.

For more information, see ["Enable the Project Cost Portlet " on the previous page.](#)

2. On the Timeline tab of the Project Overview page of your master project, in the navigation pane, click the desired task that is mapped to a waterfall project.

The details of the waterfall project display in the right pane.

3. Right click the waterfall project name in the right pane and select **Open Link in New Tab**.

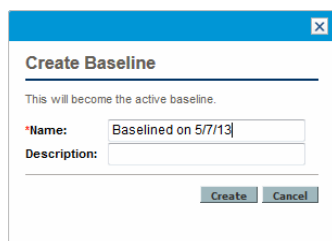
The Project Overview page of the waterfall project opens in a new tab.

4. On the Project Summary tab of the waterfall project, click **Edit Work Plan** in the Work Plan portlet.

The Work Plan for <Project Name> page displays.

5. Click **Actions > Create a Baseline**.

The Create Baseline dialog displays.



6. Provide a name and description for the new baseline in the **Name** and **Description** fields.



7. Click **Create**.
8. Return to the the Project Overview page of the master project.
9. Go to the **Timeline** tab of the Project Overview page and click the task you just configured.

The EV Summary portlet is now available in the details pane for the associated waterfall project.

The EV Summary portlet is also displayed on the Hybrid Project tab of the Task Details page for the linked task.

## ***View Waterfall Project Details from the Timeline Tab***

To view details of a mapped waterfall project from the Timeline tab of the Project Overview page,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.
3. Provide search criteria in desired fields and click **Search**.
4. Locate your project and open it.

The Project Overview page displays.

5. Go to the **Timeline** tab.
  - If no tasks are mapped to any waterfall or agile projects, only the timeline for the current project displays.
  - If sub-project managers have mapped their tasks to waterfall projects, the **Timeline** tab displays a consolidated timeline view of the master project and all waterfall subprojects.
6. To view details of a mapped waterfall subproject, click the task in the navigation tree.

**Tip:** You can display name of the mapped waterfall project by placing your mouse over a task.

The details of the waterfall project display.

For each of the associated waterfall projects, you can see similar details of the project as those shown on the Hybrid Project tab of the Task Details page.

7. To view details of the waterfall subproject, you can,
  - Click the project name to open the project in its own Project Overview page;
  - Click a milestone to open the milestone details page;
  - Click **Cost Details** or **View Financial Summary** in the Project Portlet to open the Cost Details page or the Financial Summary page for the project.

## View Waterfall Project Details from the Hybrid Project Tab

To do so,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.
3. Provide search criteria in desired fields and click **Search**.
4. Locate your project and open it.
5. On the Project Summary tab, click **Edit Work Plan** in the Work Plan portlet.
6. Locate your task and open it.

The Task Details page displays.

7. Go to the **Hybrid Project** tab.

The Hybrid Project tab displays details of the mapped waterfall project.

## Chapter 5: Enhancement, Integrations, Certifications, and Fixes in PPM Center 9.22

- ["Enhancements"](#)
- ["Integrations"](#)
- ["Certifications"](#)
- ["Fixes"](#)

### Enhancements

The following enhancements are included in PPM Center version 9.22:

Module	Enhancements
<b>Administration Console</b>	<ul style="list-style-type: none"><li>• <a href="#">"Enhanced kSupport Tool" on the next page</a></li></ul>
<b>Deployment Management</b>	<ul style="list-style-type: none"><li>• <a href="#">"Patch Uninstaller" on page 106</a></li></ul>
<b>Documentation</b>	<ul style="list-style-type: none"><li>• <a href="#">"Added Help Menu and Provided PPM Center Documentation As An Online Help System" on page 107</a></li><li>• <a href="#">"Tracing PPM Center Data" on page 110</a></li><li>• <a href="#">"Advice about Using PPM Center Database DMS and PPM Center External Database DMS" on page 120</a></li></ul>
<b>Integrations</b>	<ul style="list-style-type: none"><li>• <a href="#">"Enhancements to the Integration of PPM Center Tasks with HP ALM Releases" on page 157</a></li><li>• <a href="#">"Enhancements to the Integration between PPM Center and ALM (Using ALM)" on page 169</a></li></ul>
<b>PPM Workbench</b>	<ul style="list-style-type: none"><li>• <a href="#">"Added Buttons in the List Validation Window" on page 126</a></li></ul>
<b>MLU Support</b>	<ul style="list-style-type: none"><li>• <a href="#">"Improved Behavior of SQL Drop-Down/Auto-Complete Fields in MLU" on page 129</a></li></ul>

Module	Enhancements
HP Resource Management	<ul style="list-style-type: none"><li>• <a href="#">"Enhancements to the HP Resource Management Module" on page 131</a></li></ul>
Usability Enhancements	<ul style="list-style-type: none"><li>• <a href="#">"Request Creation Confirmed Page Skippable" on page 148</a></li><li>• <a href="#">"Enhancements to the Project Details Page" on page 149</a></li><li>• <a href="#">"Prompt Added on the Project Overview and Time Sheet Pages" on page 150</a></li><li>• <a href="#">"Enhanced Data Entry Error Message" on page 150</a></li><li>• <a href="#">"Enhanced Export to Excel Functionality" on page 150</a></li></ul>
Compliance	<ul style="list-style-type: none"><li>• <a href="#">"Enhanced Encryption Algorithm for PPM Center" on page 152</a></li></ul>

## Enhanced kSupport Tool

Running `kSupport.sh` script gathers information helpful to HP Software Support in diagnosing system problems. The kSupport tool is designed to serve as a troubleshooting knowledge system for PPM Center. Embedding into the tool the knowledge gathered from supporting PPM Center customers around the world, HP expects the tool to make PPM Center self-diagnosable and self-healable. The flexible interface of the tool makes it easy to absorb new knowledge as PPM Center develops and HP Software Support's knowledge grows.

In PPM Center version 9.22, this tool is enhanced for better retrieving the information by introducing SuperSupport functionalities.

Instead of gathering massive information without categorization, the new SuperSupport functionalities enable you to:

- ["Search Server Logs by Time Range and Keywords" below](#)
- ["Collect Categorized Information Based on Modules" on the next page](#)

## ***Search Server Logs by Time Range and Keywords***

The new **Super support information** checkbox section added on the Generate Support Information page in the Administration Console allows you to search logs by specifying time range and keywords.

Collect all logs and reports.

☐ **Super support information**

Start time : 
End time : 
Logs search key :

☐ **Super support modules**

<input checked="" type="checkbox"/> <b>Core</b>	PPM Center Core
<input checked="" type="checkbox"/> <b>DBChangeCheck</b>	PPM Center DB object change check, e.g. Package, Trigger, Index, etc.
<input checked="" type="checkbox"/> <b>FileSystemCheck</b>	PPM Center File System Modification Check, e.g. JSPs, JSs, etc.
<input checked="" type="checkbox"/> <b>SeedDataCheck</b>	PPM Center Database Seed Data Check
<input type="checkbox"/> <b>Performance</b>	PPM Center Performance Check
<input type="checkbox"/> <b>ErrorPageCollector</b>	Collect Erroneous PPM Web Page
<input type="checkbox"/> <b>Dashboard</b>	Dashboard
<input type="checkbox"/> <b>DM</b>	Demand Management
<input type="checkbox"/> <b>RM</b>	Resource Management
<input type="checkbox"/> <b>PJM</b>	Project Management
<input type="checkbox"/> <b>PFM</b>	Portfolio Management
<input type="checkbox"/> <b>TM</b>	Time Management
<input type="checkbox"/> <b>FM</b>	Financial Management
<input type="checkbox"/> <b>ALM-QC10</b>	ALM/Quality Center 10 Integration
<input type="checkbox"/> <b>ALM-QC11</b>	ALM/Quality Center 11 Integration
<input type="checkbox"/> <b>DMS</b>	Document Management Solution
<input type="checkbox"/> <b>ALM-SDI</b>	HP Service Manager Integration with PPM request
<input type="checkbox"/> <b>LDAP</b>	LDAP integration
<input type="checkbox"/> <b>SM-RFC</b>	HP Service Manage RFC integration with PPM task
<input type="checkbox"/> <b>uCMDB</b>	Universal CMDB integration
<input type="checkbox"/> <b>WebServer</b>	Web server integration
<input type="checkbox"/> <b>SSO</b>	SSO integration

☐ **Run SQLs**

If specifying both the time range and the keywords, you can retrieve logs containing the keywords within the time range. This helps quickly locate the desired information from the massive logs and avoid getting outdated logs.

**Note:** If the time zone of PPM Server has been changed, the logs cannot be extracted correctly by the specified time range.

## Collect Categorized Information Based on Modules

The new **Super support modules** checkbox section added on the Generate Support Information page in the Administration Console allows you to gather information based on modules.

Collect all logs and reports.

☐ **Super support information**

Start time :

End time :

Logs search key :

☐ **Super support modules**

<input checked="" type="checkbox"/> <b>Core</b>	PPM Center Core
<input checked="" type="checkbox"/> <b>DBChangeCheck</b>	PPM Center DB object change check, e.g. Package, Trigger, Index, etc.
<input checked="" type="checkbox"/> <b>FileSystemCheck</b>	PPM Center File System Modification Check, e.g. JSPs, JSs, etc.
<input checked="" type="checkbox"/> <b>SeedDataCheck</b>	PPM Center Database Seed Data Check
<input type="checkbox"/> <b>Performance</b>	PPM Center Performance Check
<input type="checkbox"/> <b>ErrorPageCollector</b>	Collect Erroneous PPM Web Page
<input type="checkbox"/> <b>Dashboard</b>	Dashboard
<input type="checkbox"/> <b>DM</b>	Demand Management
<input type="checkbox"/> <b>RM</b>	Resource Management
<input type="checkbox"/> <b>PjM</b>	Project Management
<input type="checkbox"/> <b>PfM</b>	Portfolio Management
<input type="checkbox"/> <b>TM</b>	Time Management
<input type="checkbox"/> <b>FM</b>	Financial Management
<input type="checkbox"/> <b>ALM-QC10</b>	ALM/Quality Center 10 Integration
<input type="checkbox"/> <b>ALM-QC11</b>	ALM/Quality Center 11 Integration
<input type="checkbox"/> <b>DMS</b>	Document Management Solution
<input type="checkbox"/> <b>ALM-SDI</b>	HP Service Manager Integration with PPM request
<input type="checkbox"/> <b>LDAP</b>	LDAP integration
<input type="checkbox"/> <b>SM-RFC</b>	HP Service Manage RFC integration with PPM task
<input type="checkbox"/> <b>uCMDB</b>	Universal CMDB integration
<input type="checkbox"/> <b>WebServer</b>	Web server integration
<input type="checkbox"/> <b>SSO</b>	SSO integration

☐ **Run SQLs**

For example, if you want to gather information for the HP Demand Management module only, you can just select the **DM** checkbox. The retrieved information for the HP Demand Management module is stored in the `<kSupport_Zip_File>/etc/DM` directory.

In addition to traditional PPM Center modules, such as **DM**, **RM**, and, **PjM**, and typical integration modules, such as **DMS**, **ALM/QC**, and **uCMDB**, the super support modules include six more modules: **Core**, **Performance**, **ErrorPageCollector**, **DBChangeCheck**, **FileSystemCheck**, and **SeedDataCheck**. Running the script on the **Core** module, you can gather common information not related to any specific modules, and on the **Performance** module, you can gather information about PPM Center performance.

In order to proactively detect some common configuration errors, data missing issues, potential data corruption issues, and so on, the enhanced kSupport tool can perform some sanity checks for several modules, especially for integration modules. The sanity check is designed based on best

practices of PPM Center Support, so it may help find out the causes for some system issues in less time.

**Note:**

- If an integration module is not enabled, you cannot retrieve support information for that module by selecting the checkbox for the corresponding module here.
- The checkboxes for the **Core**, **DBChangeCheck**, **FilesystemCheck**, and **SeedDataCheck** modules are always selected by default, no matter which modules you select. That means the script is always run for these four modules.
- Specifying the time range in the **Super support information** checkbox section also helps retrieve some database queries within the time range. For example, if you specify the time range and select the **DMS** checkbox, only the integration events within the time range will be retrieved.

**Collect Modified Data**

Data users have modified are collected everytime `kSupport.sh` is run on the following three mandatorily selected modules.

- **DBChangeCheck**. The script compares the baseline data with user's database objects, such as packages, triggers, and indexes. The retrieved comparison report is stored in the `<kSupport_Zip_File>/etc/DBChangeCheck` directory.
- **FileSystemCheck**. The script compares the baseline data with user's file system, such as jsp, js, and class files in the `<PPM_HOME>/server/<NODE>/deploy/itg.war` directory and `<PPM_HOME>/server/<NODE>/deploy/dashboard.war` directory. The retrieved comparison report is stored in the `<kSupport_Zip_File>/etc/FileSystemCheck` directory, and the modified files are stored in the `<kSupport_Zip_File>/etc/FileSystemCheck/modifiedfiles` directory.
- **SeedDataCheck**. The script compares the baseline seed data with user's seed data, such as request status, workflows, and portlet definitions. The retrieved comparison report is stored in the `<kSupport_Zip_File>/etc/SeedDataCheck` directory.

**Collect HTML Source Codes for Error Pages**

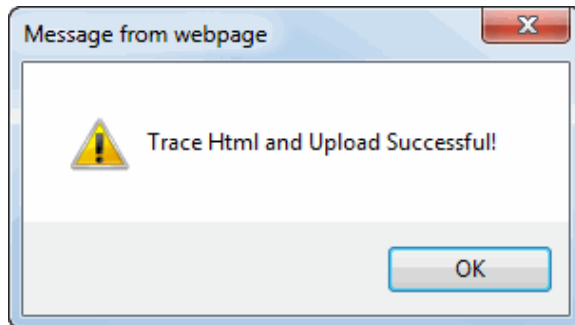
Collecting HTML source codes for JS errors on PPM Center standard user interface can help address these errors more quickly.

To collect HTML source codes,



1. Log on to PPM Center.
2. Navigate to the page you want to trace.
3. From the menu bar, select **My Links > Trace Html and Upload**.

A dialog box pops up.



4. Click **OK**.
5. Navigate to the Generate Support Information page in the Administration Console.
6. Select **ErrorPageCollector** in the **Super support modules** section.
7. Click **Generate**.

HTML source codes for error pages are stored in the `<kSupport_Zip_File>/etc/ErrorPageCollector` directory.

**Note:**

- After you generate support information in the Administration Console, the recently traced error pages will be cleaned.
- Not only error pages but also normal pages can be traced.
- If you are using Internet Explorer 9.0, and open the Developer Tools, you may not be able to trace HTML. To address this issue, do one of the following:
  - Do not use the Developer Tools when tracing HTML.
  - Refresh the page when Developer Tools is opened.

## Patch Uninstaller

Starting from version 9.22, when you deploy the service pack bundle, a basic full backup of your PPM Center system is performed, including the following system folders: bin, conf, icons, integration, lib, pdf, rml, scripts, server, sql, utilities, work, security.

The Patch Uninstaller included in version 9.22 allows you to uninstall the 9.22 files and roll back your PPM Center file system to the status before 9.22 was deployed, using the full backup files. Note that only the File System changes are rolled back. After rollback of SP2, make sure you manually restore PPM Center database to the status before SP2 was deployed, otherwise the system will NOT work properly.

To uninstall the 9.22 service pack and roll back the file system to its previous status,

1. Stop PPM Server.
2. Navigate to the `<PPM_Home>/bin` directory.
3. Run the following command:  
  

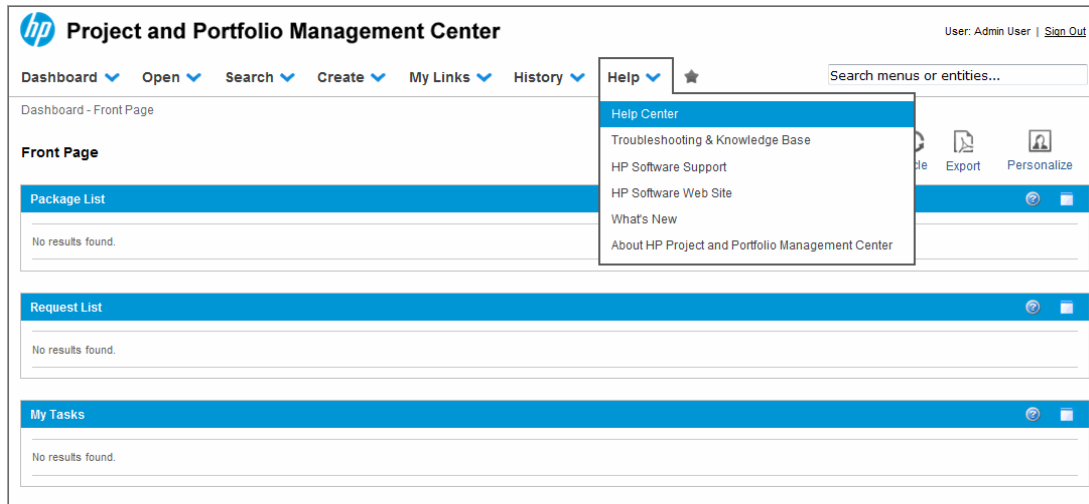
```
sh ./kDeploy.sh -rollback
```
4. Follow the on-screen instructions when prompted.
5. Restart PPM Server.

**Note:** The rollback operation does not roll back the `kDeploy.sh` script itself.

## Added Help Menu and Provided PPM Center Documentation As An Online Help System

As a part of the continuous effort in improving the PPM Center documentation accessibility, the following are available with version 9.22:

- The Help menu is added to the standard PPM Center user interface



Starting from version 9.22, the **Help** menu replaces the **Open > Product Information** menu in earlier versions of PPM Center:

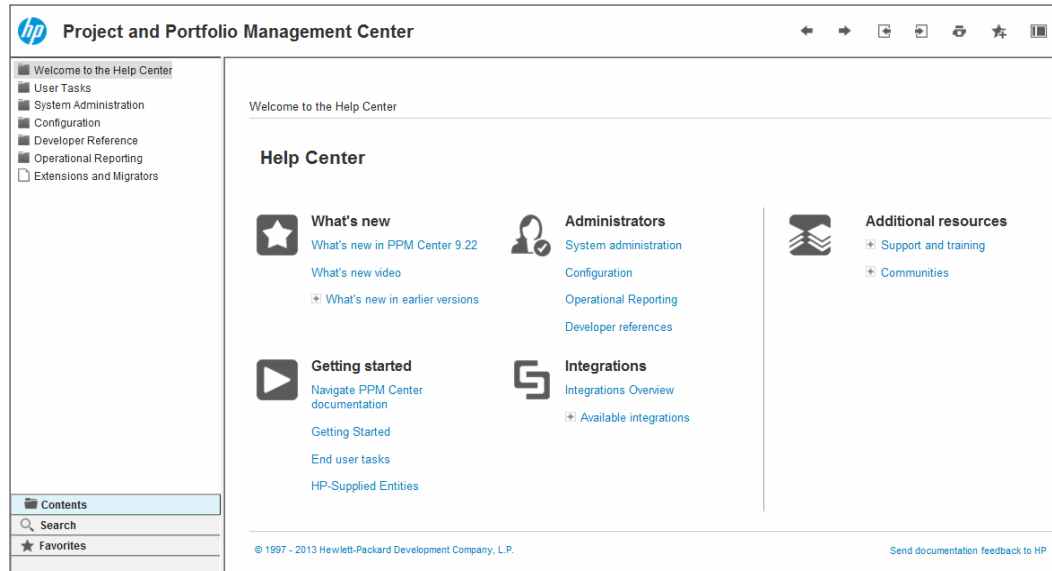
- The **Help > Help Center** submenu replaces the **Open > Product Information > Documentation Library** submenu in earlier versions.
- The **Help > About HP Project and Portfolio Management Center** submenu replaces the **Open > Product Information > About HP Project and Portfolio Management Center** submenu in earlier versions.
- The following new menu options are added:
  - **Troubleshooting & Knowledge Base**
  - **HP Software Support**
  - **HP Software Web Site**
  - **What's New**

- **PPM Center documentation is now provided as an online help system**

To access the online help system of the PPM Center documentation,

- a. From the **Help** menu, click **Help Center**.

The Help Center home page for PPM Center documentation opens.



- b. To navigate the online help system, expand a folder of your interest in the navigation pane and click the topic of your interest.

- **The PDF version of PPM Center documentation are also included with the product**

This enables end users to access the PDF version of PPM Center documentation easily, especially for users who have no access to the [HP Manuals Site](#).

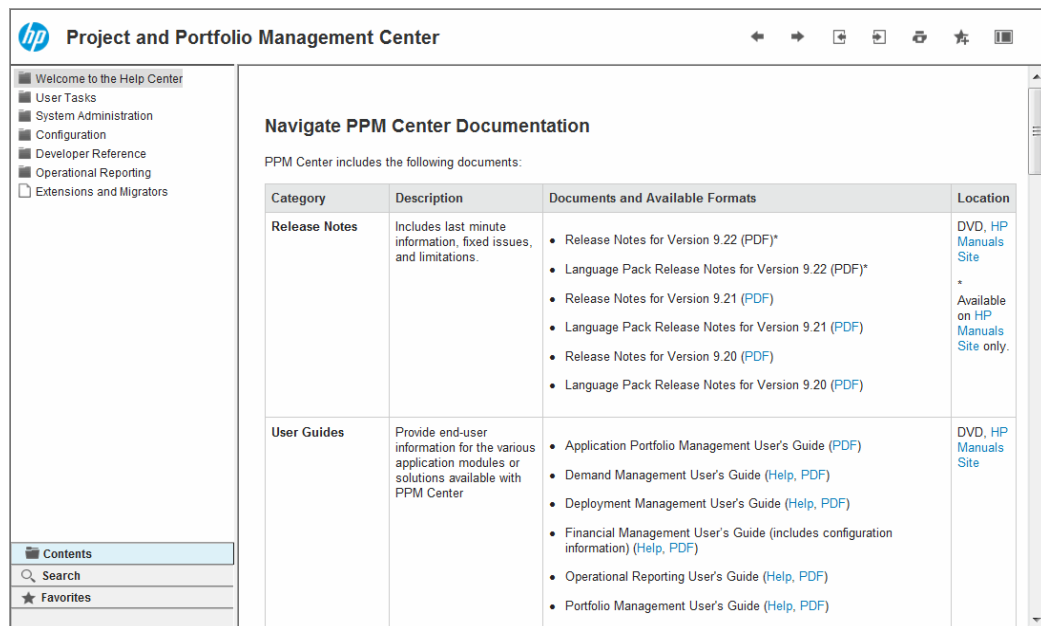
To access PDF version of PPM Center documentation included with the product,

- a. From the **Help** menu, click **Help Center**.

The Help Center home page for PPM Center documentation opens.

- b. In the **Getting started** section, click **Navigate PPM Center Documentation**.

The Navigate PPM Center Documentation page opens.



- c. Locate a document of your interest and click the **PDF** link for the document.

The PDF document opens in a new window.

**Note:** Most of documents in the PPM Center documentation set are available in both online help and PDF format. Only some less used documents are still available in PDF format only.

**Tip:** For PPM Center administrators who would like to access all PDF files, go to the `<PPM_Home>/itg/pdf/manual/Content/PDFs` directory.

## How to Search Help Center

To search Help Center, click the **Search** button at the bottom left corner of the Help Center Home page.

You can search for a single word, multiple words, or a specific combination of words that are always next to each in the same order. To search for a specific combination of words, enter the search words within quotation marks. For example: "out-of-the-box KPIs".

## Tracing PPM Center Data

This section describes:

- ["Calculating Unmet Demand" below](#)
- ["Calculating Estimated Remaining Effort" below](#)
- ["Configuring Project Health" on the next page](#)
- ["Calculating HP Financial Management Data" on page 112](#)
- ["Calculating Data in Financial Summary" on page 115](#)
- ["Calculating Data in Scenario Comparison" on page 118](#)

### ***Calculating Unmet Demand***

For information about calculating unmet demand, see "Analyzing Resource Pools" under Chapter 4 and Appendix B of *HP Resource Management User's Guide*.

### ***Calculating Estimated Remaining Effort***

This section describes how PPM Center calculates the Estimated Remaining Effort (ERE) of a task.

ERE is an estimated value derived from actuals, which means that having actuals is key to reflecting changes in ERE. If there are no actuals, PPM Center resets ERE to zero.

If actuals have been logged against a task, the ERE value gets updated whenever the **% Complete** field on the Task Details page is modified. This means that ERE is not reset to zero and stays in sync with changes in the **% Complete** field.

If you manually input ERE, % Complete is calculated as  $\text{Actual Effort} / (\text{Actual Effort} + \text{ERE})$

If you manually input % Complete, ERE is calculated as one of the following:

- $\text{ERE} = \text{Scheduled Effort (SE)} - \text{Actual Effort (AE)}$
- $\text{ERE} = (\text{Last ERE} + \text{Last AE}) - \text{AE}$

## Configuring Project Health

This section includes additional information about configuring schedule health and cost health of a project. For more information about configuring project health, see "Schedule Health", "Cost and Earned Value Health", "Project Health", and "Issue Health" under Chapter 3 of *HP Project Management User's Guide*.

### Configuring Schedule Health

On the project settings page, the Schedule Health policy controls the project's schedule health indicator, as well as determines the active exception rules for a project.

In the **Health** section, you can specify the following two rules:

- Percent of tasks that have Exceptions to turn the Schedule Health Red
- Percent of tasks that have Exceptions to turn the Schedule Health Yellow

For example, you set the first rule to 60 and the second to 30. If the percent of tasks that have exceptions is less than 30%, the schedule health indicator is green. If the percent of tasks that have exceptions is more than 30% but less than 60%, the indicator is yellow. Otherwise, the indicator is red. The percent of tasks that have exceptions is calculated as  $\text{Count of Exceptional Tasks} / \text{Count of Total Tasks}$ .

**Note:** When calculating the count of total tasks, PPM Center does not include the summary task or tasks whose status is either "Completed" or "Cancelled".

### Configuring Cost and Earned Value Health

The Cost and Earned Value Health policy controls whether or not to track the cost health for a project, and if so, which metrics will be evaluated to determine health. It is used to indicate the health of a project in terms of its cost.

If you do not select the **For prior months, if actual costs exceed the plan of record by** checkbox when defining the Cost and Earned Value Health policy, the cost health of a project is that of its root task. If you select the **For prior months, if actual costs exceed the plan of record by** checkbox, the cost health of a project represents the factor in the worst condition. The cost health of a project turns red, when either the cost health of the root task or the indicator for the **For prior months, if actual costs exceed the plan of record by** checkbox is red.

The indicator for the **For prior months, if actual costs exceed the plan of record by** checkbox is determined by the value of BudgetOverrun which is calculated as follows:

- If either pastActualTotal past or ForecastTotal is null, BudgetOverrun = 0
- If pastForecastTotal > 0, BudgetOverrun = (pastActualTotal - pastForecastTotal) \* 100 / pastForecastTotal
- If pastForecastTotal = 0 and pastActualTotal > 0, BudgetOverrun = 100
- If both pastForecastTotal and pastActualTotal is zero, BudgetOverrun = 0

Values of pastActualTotal and pastForecastTotal are loaded according to the following queries:

For pastActualTotal,

```
select sum(s.actual_total_lcl)
from fm_forecast_actual_period_sum s, ppm_fiscal_periods_nls p
where s.PERIOD_ID = p.FISCAL_PERIOD_ID and p.period_type = 4
and s.FORECAST_ACTUAL_ID = {financial summary.Forecast().Id()}
and p.seq >= {startPeriod.getSequence()} and p.seq < (select p1.seq from ppm_fiscal_periods_nls p1
where p1.start_date <= sysdate and p1.end_date >= sysdate and p1.period_type = 4)
```

For pastForecastTotal,

```
select sum(s.plan_total_lcl)
from fm_forecast_actual_period_sum s, ppm_fiscal_periods_nls p, fm_financial_summary ffs
where ffs.active_fs_id = {financial summary.Id()} and ffs.plan_of_record_flag = 'Y'
and s.PERIOD_ID = p.FISCAL_PERIOD_ID and p.period_type = 4
and s.FORECAST_ACTUAL_ID = ffs.forecast_actual_id
and p.seq >= {startPeriod.getSequence()} and p.seq < (select p1.seq from ppm_fiscal_periods_nls p1
where p1.start_date <= sysdate and p1.end_date >= sysdate and p1.period_type = 4)
```

## Calculating HP Financial Management Data

This section describes additional information about calculating HP Financial Management data items.

For more information about calculating HP Financial Management data, see Chapter 5 of *HP Financial Management User's Guide*.



## ***Cost Performance Index (CPI)***

CPI is calculated as follows:

- If EV is null, CPI is null
- If Actual Cost != 0,  $CPI = EV / \text{Actual Cost}$
- If Actual Cost = 0, and
  - If EV = 0, CPI = 1
  - If EV != 0, CPI = 0

## ***Schedule Performance Index (SPI)***

SPI is calculated as follows:

- If EV is null, SPI is null
- If PV != 0,  $SPI = EV / PV$
- If PV = 0, and
  - If EV = 0, SPI = 1
  - If EV != 0, SPI = 0

## ***Earned Value (EV)***

If a task is the summary task, its EV is calculated as Sum (EV of all its child tasks).

If a task is the leaf task, its EV is calculated as follows:

- If there is no task baseline, EV is null
- If the EV\_ALLOW\_PRORATING server configuration parameter is set to true,  $EV = \text{Baseline Cost} * \% \text{ Complete}$
- If the EV\_ALLOW\_PRORATING server configuration parameter is set to false, and

- If % Complete = 100, EV = Baseline Cost
- If % Complete < 100, EV = 0

## ***Planned Value (PV)***

### **Calculating Schedule Start and Schedule Finish Dates**

If the PV\_USE\_ACTIVE\_BASELINE\_DATES server configuration parameter is set to true and task baseline exists,

- Schedule start is the schedule start date of the task baseline
- Schedule finish is the schedule finish date of the task baseline

Otherwise,

- Schedule start is the schedule start date of the task
- Schedule finish is the schedule finish date of the task

### **Calculating PV**

For all tasks,

- If there is no task baseline, PV is null.
- If task baseline exists, in one of the following cases, PV = 0:
  - The task status is cancelled, or
  - The schedule start date of the task is null, or
  - Schedule start is later than the current system date

If a task is the summary task, its PV is calculated as Sum (PV of all its child tasks).

For leaf tasks, if task baseline exists and

- If schedule end is earlier than the current system date, PV = Baseline Cost
- Otherwise, PV = Baseline Cost \* (passed days / total days)

In this formula, passed days is calculated as follows:

- If schedule start is the current system date, passed days = 1.
- If the PV\_USE\_ACTIVE\_BASELINE\_DATES server configuration parameter is set to true, passed days = Today's Date - Baseline Start Date]
- Otherwise, passed days = Today's Date - Start Date

Total days is calculated as follows:

- If the PV\_USE\_ACTIVE\_BASELINE\_DATES server configuration parameter is set to true, total days = Baseline Finish Date - Baseline Start Date
- Otherwise, total days = Finish Date - Start Date

## ***Calculating Data in Financial Summary***

This section describes how PPM Center calculates data in a financial summary.

### ***Calculating Forecasted Labor Costs From Staffing Profile***

You can specify whether forecasted labor costs on the financial summary are to be calculated (rolled up) from the staffing profile. If this option is selected, separate, non-editable forecast lines are automatically created in the financial summary to reflect the staffing profile estimates, including the percentage split between capital and operating costs.

The forecast labor cost of a staffing profile equals to the total sum of forecast labor costs of all positions in this staffing profile. The forecast labor cost of a particular position is calculated as follows:

Forecast Labor Cost of a Position = Sum (Forecast Labor Cost of Assignment/Promise of the position) + (Unmet Demand \* Cost rate of the position)

where,

Forecast Labor Cost of Assignment = Total committed effort of the assigned resource \* Cost rate of the resource

Forecast Labor Cost of Promise = Total promised effort of the assignment \* Cost rate of the position

The cost rate of a position/resource is determined by the cost rule described in ["Best Matching Strategy" on page 117](#).

**Note:** If there is over allocation on assignments, the unmet demand becomes negative. To include cost of over allocation, the calculation of forecast labor cost ignores the negative unmet demand.

The following table describes cost factors used for calculating the forecast labor cost.

**Table 4-2. Cost factors and entities to which they apply**

Entity	Relevant Cost Factors
Forecast labor cost of a position	<p><b>Role:</b> Role of the position.</p> <p><b>Region:</b> Region of the staffing profile where the position belongs.</p> <p><b>Resource Type:</b> Resource type of the position.</p> <p><b>Project:</b> If the parent entity of the staffing profile where the position belongs is a project, the project is included as a cost factor.</p> <p><b>Org Unit:</b> If the default resource pool of the position is defined, the default org unit of the resource pool is included as a cost factor.</p>
Forecast labor cost of an assignment	<p>Role: If the role of the assigned resource is defined, use it. Otherwise, use the role of the position to which the resource is assigned.</p> <p>Region: If the region of the assigned resource is defined, use it. Otherwise, use the region of the staffing profile where the resource belongs.</p> <p>Resource Type: If the resource type of the assigned resource is defined, use it. Otherwise, use the resource type of the position to which the resource is assigned.</p> <p>Resource: Resource assigned to the position.</p> <p>Department: If the department of the assigned resource is defined, it is included as a cost factor.</p> <p>Project: If the parent entity of the staffing profile where the assigned resource belongs is a project, the project is included as a cost factor.</p> <p>Org Unit: If the primary Org Unit of the assigned resource is defined, it is included as a cost factor.</p>

The forecast labor cost is not updated immediately when you change cost factors described in ["Table 4-2. Cost factors and entities to which they apply" above](#). Instead, it is recalculated based on the latest cost factors when the SP-FS sync service is triggered by effort or status change of the

position or assignment. PPM Center does not keep or consider historic cost rates after you change cost factors.

**Note:** If you change the cost rate by clicking the Add New Rate button on the Edit Cost Rule page and specify a effective start date in the pop-up window, PPM Center keeps and considers historic cost rates when calculating the forecast and actual labor costs for periods earlier than the effective start date.

For more information about calculating forecast labor cost, see "Configuring a Lifecycle Entity Financial Summary for Capitalization and Roll-Ups" under Chapter 4 of *HP Financial Management User's Guide*.

## Best Matching Strategy

PPM Center calculates a score for each cost rule and considers the rule with the highest score as the best matching one. Cost rate of a position/resource used in the calculation of forecast labor cost is the one defined in the best matching rule.

Before calculating a score for a cost rule, PPM Center checks whether the cost rule and the position/resource contain the same cost factor and whether values of the factor are the same. If yes, the cost factor is considered matching. Then, scores of cost rules are calculated as follows:

- If a cost rule contains no matching cost factors, it is considered not applicable and gets -1 point.
- If a cost rule contains one or more matching cost factors, PPM Center assigns  $2^n$  points to each matching factor according to its priority. Priorities of cost factors are configured on the Change Cost Factors page (**Open > Administration > Financials > Change Cost Factors**). In the **Selected Columns** field, all cost factors are listed according to their priorities from top to bottom.

For example, if a cost rule contains four cost factors and they are all matching factors, the factor of top priority gets  $2^4 = 16$  points; the one of second priority gets  $2^3 = 8$  points; the one of third priority gets  $2^2 = 4$  points; and the last one gets  $2^1 = 2$  points. The score of this cost rule is the sum of all points its factors get. In this example, it is  $16 + 8 + 4 + 2 = 30$  points.

- If a cost factor contains no value, it is considered as a wildcard factor. PPM Center assigns one point to each wildcard factor.
- Besides matching and wildcard factors, all other cost factors get no point.
- If a cost rule is not the default one, add one point to its score. Therefore, if a cost rule contains the same cost factors with the default cost rule, it gets a higher score than the default one.

**Note:** There is at least one matching rule, that is, the default rule which cannot be deleted and whose cost factors are all wildcard factors.

## ***Actual Labor Cost Period Break Down***

The actual efforts you log in time sheets and work plans are in a continuous range. However, when rolling up the actual labor cost to the financial summary, PPM Center breaks it down into periods. The cost of each month is calculated as follows:

Actual Labor Cost of month n = Total Actual Cost \* Working days in month n / Total working days during the period when actual efforts are logged

For example, a resource has been working on a task from July 17<sup>th</sup> to August 20<sup>th</sup>, 2013 and costs USD \$10000. Data used when calculating the actual labor cost of this resource is as follows:

- Total actual cost is USD \$10000.
- Total working days from July 17<sup>th</sup> to August 20<sup>th</sup> is 25 days.
- Working days in July is 11 days.
- Working days in August is 14 days.

**Note:** Working days are calculated according to the calendar of the resource.

Therefore, actual labor cost of this resource in July is  $\text{USD } \$10000 \times 11/25 = \text{USD } \$4400$ , while that in August is  $\text{USD } \$10000 \times 14/25 = \text{USD } \$5600$ .

The calculation of actual labor cost is the same for part time and full time resources.

For more information about calculating forecast labor cost, see "Configuring a Lifecycle Entity Financial Summary for Capitalization and Roll-Ups" under Chapter 4 of *HP Financial Management User's Guide*.

## ***Net Present Value and Total Nominal Return***

For information about net present value and total nominal return, see Appendix A of *HP Portfolio Management User's Guide*.

## ***Calculating Data in Scenario Comparison***

Data on the **Role Availability** tab of the Scenario Details page are calculated as follows:

- **Total FTE Required** comes from all the staffing profiles attached to the lifecycle entities included in the scenario comparison.

**Note:** Total FTE Required does not reflect the real-time data. Instead, it is aggregated by the Staffing Profile Period Sum Update Service configured on the Schedule Services page.

- **Total FTE Available** comes from the resource pool defined in the **Calculate Total Available Resources for comparison from the following Resource Pools** field on the Scenario Comparison page.
- **Resource Difference** is calculated as Total FTE Available - Total FTE Required.

For more information about calculating data in the scenario comparison, see Chapter 5 of *HP Portfolio Management User's Guide*.

## Advice about Using PPM Center Database DMS and PPM Center External Database DMS

This section provides advice for DBAs about using PPM Center Database DMS and PPM Center External Database DMS, including:

- ["Choosing Between PPM Center Database DMS and PPM Center External Database DMS" below](#)
- ["Conducting Tablespace Management" on the next page](#)
- ["PPM Center Database DMS Environments Examples" on page 123](#)

### ***Choosing Between PPM Center Database DMS and PPM Center External Database DMS***

The only difference between the two solutions is that when PPM Center External Database DMS is in use, all the documents contents, indexes, and versions metadata are stored in a separate database schema, not in the PPM Center schema. Therefore, the only DMS related table that will always be stored in PPM Center schema is the KNTA\_DOCUMENTS table, which contains basic document information. In this case, you can choose whether to store the separate DMS schema and the PPM Center schema on the same Oracle server or not. Both scenarios are supported.

HP advises that you use PPM Center External Database DMS if you:

- Have large amounts of attachments (more than 50 GB), or
- Need to apply different settings or maintenance policies to PPM Center business data and attachments. For example, you have to apply different schema-level backup or data integrity policies.

PPM Center External Database DMS allows for a greater flexibility in database settings and tablespace management, as you can tune them in a way other than from PPM Center schema. By using PPM Center External Database DMS, it is easier to make sure that PPM Center database is not impacted if a very fast-growing document amount results in the lack of available space on a tablespace used by DMS tables or indexes, or on the server disk storage.

For more information about configuring PPM Center Database DMS data model and PPM Center External Database DMS, see *Document Management Guide and Reference*.



## ***Conducting Tablespace Management***

Tablespace management is left to DBAs as it is considered a database administration task. DBAs are free to store PPM Center DMS data (documents contents, indexes, and metadata) on whichever tablespace they deem appropriate. Having dedicated tablespaces for the main elements of PPM Center Database DMS (content, TEXT indexes) has the following advantages:

- If intense attachments activity leads to using up all available space in a dedicated DMS tablespace, the rest of PPM Center application will not be impacted (unless it turns out to be a lack of space on the disk storage, and that PPM Center application tablespaces use the same disk storage).
- DBAs can choose to compress the tablespace storing DMS documents contents. This can result in significant space savings if most attachments are in a format that can be efficiently compressed (such as log files).
- If needed, DBAs can finely tune the performance of tablespaces according to their usage: tablespace storing documents contents should be optimized for heavy I/O operations (documents store/retrieve), while tablespace storing TEXT indexes should be optimized for fast records access.

## ***Default Tablespaces***

When using PPM Center Database DMS, by default, documents contents are stored in the default USER\_CLOB PPM Center tablespace, while the metadata and the TEXT indexes (when created) are stored in default USER\_DATA PPM Center tablespace. Indexes on the metadata tables are stored in the USER\_INDEXES PPM Center tablespace. DBAs can change the tablespaces used by PPM Center Database DMS, for example, to save DB disk space by compressing documents contents, or by tuning tablespace-level settings that would provide better performance for their specific usage pattern.

When using PPM Center External Database DMS, there is no specific tablespaces instruction when the tables are created in the external schema. Tables are automatically created if not existing at the beginning of the migration process, when testing connection to the new DMS system.

Tablespaces customizations are supported for both PPM Center Database DMS and PPM Center External Database DMS, but HP advises that you do such customizations before the migration is started, so that all data is stored in the intended tablespace as migration proceeds.

## ***Changing the Tablespaces of the Documents Contents***

Most of the space consumed by PPM Center (External) Database DMS in the database is used to store the documents contents (the actual attachment files). These contents are stored under their binary form in two BLOB columns:

- `KNTA_DOCUMENT_TIP_CONTENTS.DOC_CONTENT`, to store the latest version (i.e. tip version) of each file.
- `KNTA_DOCUMENT_HISTORY_CONTENTS.DOC_CONTENT`, to store all non-tip versions of each file.

If you want to change the tablespace where these contents are stored, move the `DOC_CONTENT` LOB columns to another tablespace (replace “X” below with either “TIP” or “HISTORY”):

```
ALTER TABLE KNTA_DOCUMENT_X_CONTENTS MOVE LOB(DOC_CONTENT) STORE AS (TABLESPACE  
NEW_TABLESPACE_NAME);
```

When a new version is added to a document, the contents of the old tip version will first be copied to the HISTORY table before the new tip contents are inserted in the TIP table. As a result, for better performance, HP advises that you store both TIP and HISTORY contents in the same tablespace.

It is considered a good practice to have a dedicated tablespace to store documents contents, especially if the size of attachments in PPM Center is very large (more than 50GB of attachments).

## ***Changing the Tablespace of TEXT Indexes***

Managing domain indexes (like the Oracle TEXT CONTEXT indexes) is quite different from managing “standard” Oracle indexes. After all, DOMAIN indexes are just a series of Oracle tables put together, and as such, the standard Oracle INDEX management does not apply to them.

Depending on the type of your attachments, the size of the TEXT index can represent a significant part of the size of the file attachments. The measurements on HP R&D Sample Dataset show numbers ranging from 15% to 30% of the size of the attachments contents. However, if you have documents that are mostly in raw text formats (log, txt, etc.), then the size of your TEXT index can in theory exceed 100% of the size of the attachments contents. For this reason, it is a good practice to have a dedicated tablespace to store the TEXT index when using PPM Center (External) Database DMS.

The tablespace to be used for storing a TEXT index must be specified upon TEXT index creation. Here is an example on how to store an Oracle TEXT index in the XYZ tablespace. Before creating the TEXT index, you have to define a STORAGE parameter, and set the tablespace of all domain tables of the domain index to use the XYZ tablespace:

```
begin  
  ctx_ddl.create_preference('MY_XYZ_TEXT_STORE', 'BASIC_STORAGE');
```

```

ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'I_TABLE_CLAUSE', 'tablespace XYZ');
ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'K_TABLE_CLAUSE', 'tablespace XYZ');
ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'R_TABLE_CLAUSE', 'tablespace XYZ');
ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'N_TABLE_CLAUSE', 'tablespace XYZ');
ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'I_INDEX_CLAUSE', 'tablespace XYZ COMPRESS 2');
ctx_ddl.set_attribute('MY_XYZ_TEXT_STORE', 'P_TABLE_CLAUSE', 'tablespace XYZ');
end;
/

```

**Note:** The COMPRESS 2 parameter is here only for the sake of the example, it is not mandatory and can be adjusted depending on your preferences.

You can then create the TEXT index and specify the storage to use as part of the parameters of the index creation:

```

EXECUTE IMMEDIATE 'CREATE INDEX DMS_TIP_META_IDX
ON KNTA_DOCUMENT_TIP_CONTENTS(FULL_TEXT_META)
INDEXTYPE IS CTXSYS.CONTEXT
parameters (''LEXER PPM_DMS_LEXER DATASTORE PPM_DMS_TIP_DS STORAGE MY_XYZ_TE
XT_STORE SYNC (every sysdate+1/144)'')';

```

For more information about available parameters (including tablespace management) when creating an Oracle TEXT index, see [http://docs.oracle.com/cd/E11882\\_01/text.112/e24436/cdatadic.htm](http://docs.oracle.com/cd/E11882_01/text.112/e24436/cdatadic.htm).

## PPM Center Database DMS Environments Examples

This section presents the database high-level configuration of two different sample environments, and explains the rationale behind these choices. These configurations are only provided for didactical purposes and should not be considered as an official HP recommendation. Your actual configuration should be adapted according to your environments specificities and Database & System administration policies.

### Example 1: Small Size Deployment

- Documents overview:
  - ~ 12K documents
  - Total documents size: ~ 2.5 GB
  - TEXT index size: ~ 410 MB
  - Mostly office documents
- Limited volume increase (~ 15% per year)

- DMS choice: PPM Center Database DMS
  - Limited size of documents and DMS DB overhead do not justify a dedicated DB schema.
  - Simple backup procedure: weekly PPM Center DB Dump (PPM Center business data and attachments).
- Tablespace configuration:
  - Using a dedicated PPM\_DMS tablespace for DMS documents contents and TEXT indexes, with default tablespace configuration and a limited maximum size to 40 GB. This was decided in order to prevent impact on PPM Center business data tablespaces in case of sudden and massive increase of the documents size. (security concern to prevent a Denial of Service attack by attaching many large documents to PPM Center).
  - Using default tablespace for everything else.
- DMS configuration parameters in PPM Center:
  - MAX\_WEB\_ATTACHMENT\_SIZE\_IN\_MB: Default value (2048, i.e. 2GB)
  - DMS\_INSECURE\_FILE\_EXTENSION\_CHECK: Default value (false, all extensions are allowed)



### ***Example 2: Large Size Deployment***

- Documents overview:
  - ~ 1.1M documents
  - Total documents size: ~ 395 GB
  - TEXT index size: ~ 127 GB
  - Mostly office documents and log files
  - Frequent documents updates and read operations
- Moderate volume increase (~ 35% per year)
- DMS choice: PPM Center External Database DMS, different DB physical server


- The large number of I/O operations requires dedicated hardware as the PPM Center Database is already under heavy load due.
- Dedicated DMS schema allows for differentiated backup strategies:
  - Daily backup for PPM Center Business DB
  - Weekly backup (Week-end) for PPM Center DMS DB
- Tablespace configuration:
  - One compressed tablespace to store documents contents (log files are rarely compressed when attached, and compressing the tablespace allows saving up to 30% disk space). Tablespace is optimized for I/O intensive read/write operations.
  - One tablespace for TEXT indexes, optimized for transactional operations.
  - One tablespace for everything else (DMS tables and indexes), optimized for transactional operations.
- DMS configuration parameters in PPM Center:
  - MAX\_WEB\_ATTACHMENT\_SIZE\_IN\_MB: 250. (Max allowed file size is 250 MB)
  - DMS\_INSECURE\_FILE\_EXTENSION\_CHECK: true. Preventing executable file extensions (Values of the DMS\_INSECURE\_FILE\_EXTENSIONS parameter include exe, com, bat, reg, jar, cmd, and lnk).

## Added Buttons in the List Validation Window

Previously it is time-consuming to change the sequence of validation codes in the Validation window, especially when the validation contains a long list of codes. Starting from PPM Center version 9.22, for all validations validated by "List", two new buttons were added to the Validation window in the PPM Workbench which allows you to reorder validation codes more conveniently.

Button	Description
	Allows you to sort entries in the <b>Validation Values</b> field alphabetically.
	Allows you to specify the sequence of a specific entry in the <b>Validation Values</b> field.

### *Sorting Validation Codes Alphabetically*

To sort entries in the **Validation Values** field alphabetically according to the Code column, click the  button, then click **OK/Save** to save the change.

**Note:** This alphabetical sorting is case-insensitive.

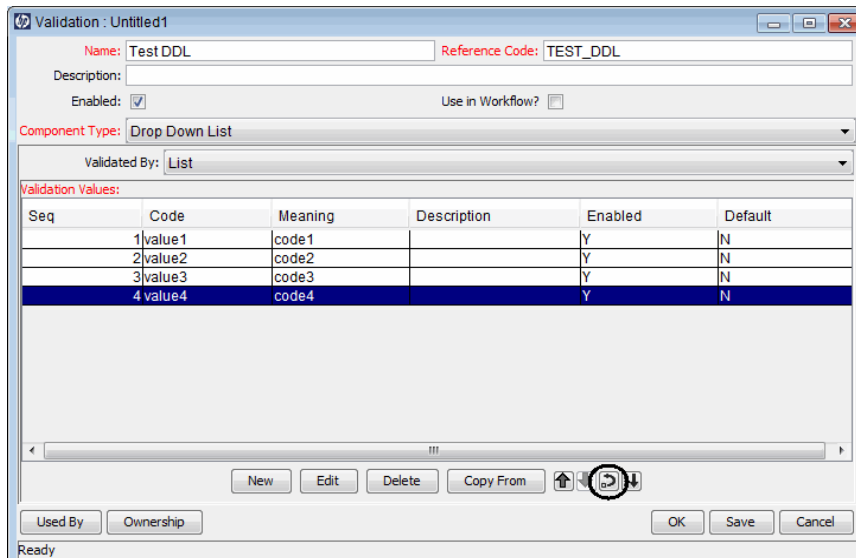
All validation codes are sorted by letter, so "value3" is listed after "value12". To avoid this, HP recommends that you prefix numbers with some zeros. For example, use "value003" and "value012" instead.

### *Specifying the Sequence of a Specific Entry in the Validation Values Field*

To specify the sequence of a specific entry in the **Validation Values** field,

1. In the PPM Workbench, open the list validation you want to edit.
2. In the **Validation Values** field, select the entry whose sequence you want to change.


3. The  button is enabled.

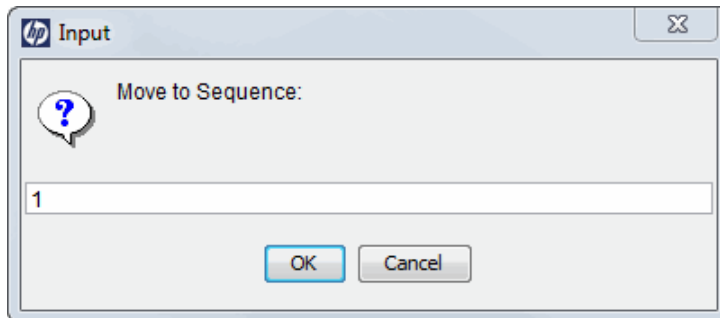


The 'Validation : Untitled1' dialog box is shown. It contains fields for Name (Test DDL), Reference Code (TEST\_DDL), Description, Enabled (checked), and Use in Workflow? (unchecked). The Component Type is set to 'Drop Down List' and Validated By is 'List'. Below these is a table of Validation Values:

Seq	Code	Meaning	Description	Enabled	Default
1	value1	code1		Y	N
2	value2	code2		Y	N
3	value3	code3		Y	N
4	value4	code4		Y	N

At the bottom, there are buttons for New, Edit, Delete, Copy From, and a Move button (circled in red). Other buttons include Used By, Ownership, OK, Save, and Cancel.

4. Click the  button, the input box appears.
5. In the input box, enter the sequence number of the row that you want to move the selected entry to. In this example, enter 1.



The 'Input' dialog box is shown. It has a title bar with the HP logo and a close button. The main area contains a question mark icon and the text 'Move to Sequence:'. Below this is a text input field containing the number '1'. At the bottom are OK and Cancel buttons.

The selected entry is moved from the fourth row to the first.

Validation : Untitled1

Name: Test DDL Reference Code: TEST\_DDL

Description:

Enabled: ☒ Use in Workflow? ☐

Component Type: Drop Down List

Validated By: List

Validation Values:

Seq	Code	Meaning	Description	Enabled	Default
1	value4	code4		Y	N
2	value1	code1		Y	N
3	value2	code2		Y	N
4	value3	code3		Y	N

New Edit Delete Copy From ↑ ↓ ↺ ↻

Used By Ownership OK Save Cancel

Ready



## Improved Behavior of SQL Drop-Down/Auto-Complete Fields in MLU

Starting from PPM Center version 9.22, custom drop-down fields and auto-complete fields validated by "List" and "SQL - Custom" behave the same in the MLU, as follows:

If a custom drop-down/auto-complete list has multiple values, then a drop-down/auto-complete field with an existing value is shown in your current session language, even if your session language is different than the language in which the value was originally selected from the drop-down/auto-complete list.

**Example.** A custom drop-down/auto-complete list with multiple values has been created for requests. A user logged on to PPM Center in a German language session creates a request, and in doing so, selects a value for the custom drop-down/auto-complete list. A different user logs on to PPM Center in a Korean language session and opens the new request, which was defined in German. The value in the drop-down/auto-complete field is shown in Korean.

**Note:** PPM Center does not support auto-complete fields validated by "SQL - User" in the MLU.

To ensure a SQL drop-down/auto-complete field behaves correctly,

1. In the PPM Workbench, open the request type which contains the drop-down/auto-complete field.
2. On the **Fields** tab, select the drop-down/auto-complete field and click **Edit**.

The Field: <Field Name> window opens to the **Attributes** tab.

**Note:** If the drop-down/auto-complete field is a column of a table component, select and edit the table component.

3. In the **Search Validation** field, specify a list validation which contains:
  - All the values potentially returned by the drop-down/auto-complete field
  - Potential translations of the returned values. If translations are not provided, the returned values will be used.

**Note:** If a table component contains several SQL drop-down/auto-complete columns, the list validation should include values potentially returned by all the columns together with translations of the returned values.

4. Click **OK**.

## Enhancements to the HP Resource Management Module

The following new features and improved user experiences are provided for the HP Resource Management module:

- ["Enhancements to Staffing Profile" below](#)
- ["Special Command for Baseline Staffing Profile" on page 143](#)
- ["Adding Security Groups to Staffing Profile/Resource Pool ACL" on page 144](#)
- ["Viewing a Position from the Resource Request Portlet" on page 145](#)
- ["Searching Resource Pools without View Access Grant" on page 146](#)

## Enhancements to Staffing Profile

The following new features and improved user experiences are provided for Staffing Profile:

- ["Position Filters" below](#)
- ["Total Summary" on page 136](#)
- ["Expand/Collapse All Positions" on page 138](#)
- ["Resizable Columns and Staffing Profile Table" on page 138](#)
- ["Partial Refresh" on page 139](#)
- ["Paging Display" on page 140](#)
- ["Highlighting and Centering Current Period" on page 141](#)
- ["Period Filtering" on page 142](#)

## Position Filters

In the staffing profile table of the staffing profile page, positions can be filtered by one or more of the following entities:

- Position/Resource
- Status

- Resource pool

### ***Filter Positions by Position/Resource***

You can filter positions in the staffing profile table by some basic attributes of the positions, which means filtering positions by position here.

To filter positions by position (some attributes of position),

1. Move the mouse over Position.

The ▼ icon displays after Position.

Allocation Detail for Aug 1, 2008 to Sep 30, 2008			
<a href="#">+ Add A Position</a> <a href="#">Send Resource Requests</a> <a href="#">Import Positions</a> <a href="#">Expand All</a> <a href="#">Collapse All</a>			
Position ▼	Status	Resource Pool	Total Hours
▶ QA Engineer	Soft Booked	uva	100.0
Unmet Demand			59.7
Forecast Total (1 positions)			100.0

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the

2. Click the ▼ icon.

A dialog box displays.

Position   Resource

Filter by Position Label:

Filter by Unmet Demand and Over Allocation:

☐ Unmet Demand no less than  FTE

☐ Over Allocation no less than  FTE

From:

To:

3. Click the **Position** or the **Resource** tab.




**Note:** By default, the **Position** tab is selected. You can click the **Resource** tab to filter by Resource.

4. Provide information for one or more fields on which you want to filter as listed in the Position (Position) or the Position (Resource) section of Table 1-1.

**Table 4-10. Position Filter Fields**

Field Name	Description
<b>Field Name Description Position (Position)</b>	
Filter by Position Label:	Specify a text string.  This filter displays data for staffing profile positions that contain the specified text in the position label.
Unmet Demand no less than _ FTE	The number of FTEs the unmet demand is equal to or greater than.  This filter displays the data for staffing profile positions whose unmet demand is equal to or greater than the value you specify in the period (between <a href="#">"From" on the next page</a> and <a href="#">"To" on the next page</a> ).
Over Allocation no less than _ FTE	The number of FTEs the position's overallocation is equal to or greater than.  This filter displays the data for staffing profile positions whose over-allocation is equal to or greater than the value you specify in the period (between <a href="#">"From" on the next page</a> and <a href="#">"To" on the next page</a> ).

**Table 4-10. Position Filter Fields, continued**

Field Name	Description
From	<p>The start period that the staffing profile position's unmet demand or over allocation is from or after.</p> <p>This filter displays data for staffing profile positions whose unmet demand or over allocation is from or after the period you specify.</p> <p>You can type a value in the box directly, or set the value by the following method:</p> <ol style="list-style-type: none"> <li>Click the  icon. The Click a value to select window opens.</li> <li>Search and select a period from the list.</li> </ol>
To	<p>The finish period that the staffing profile position's unmet demand or over allocation is before or to.</p> <p>This filter displays data for staffing profile positions whose unmet demand or over allocation is before or to the period you specify.</p> <p>You can type a value in the box directly, or set the value by the following method:</p> <ol style="list-style-type: none"> <li>Click the  icon. The Click a value to select window opens.</li> <li>Search and select a period from the list.</li> </ol>
<b>Position (Resource)</b>	
Resource Name	<p>The name of the resource.</p> <p>This filter displays data for staffing profile positions that contain the selected resource(s).</p> <p>You can type a value in the box directly, or search and select a value by clicking the  icon.</p>

**Table 4-10. Position Filter Fields, continued**

Field Name	Description
Promise	<p>Promised resources or allocations.</p> <p>This filter displays data for staffing profile positions that contain promised resources or allocations.</p> <p>This filter is visible only when the <code>ENABLE_ PROMISE_RESOURCE_ ALLOCATION</code> parameter in the <code>server.conf</code> file is set to <code>true</code>. For more information about editing the <code>server.conf</code> file, see the <i>Installation and Administration Guide</i>.</p>
<b>Status</b>	
(Select All)	<p>Select all of the below statuses.</p> <p>This filter displays the positions without the Status filter criteria.</p>
New	<p>The status of the staffing profile position is “New”.</p> <p>This filter displays all staffing profile positions whose status is “New”.</p>
Requested	<p>The status of the staffing profile position is “Requested”.</p> <p>This filter displays all staffing profile positions whose status is “Requested”.</p>
Partially Assigned	<p>The status of the staffing profile position is “Partially Assigned”.</p> <p>This filter displays all staffing profile positions whose status is “Partially Assigned”.</p>
Soft Booked	<p>The status of the staffing profile position is “Soft Booked”.</p> <p>This filter displays all staffing profile positions whose status is “Soft Booked”.</p>
Fulfilled	<p>The status of the staffing profile position is “Fulfilled”.</p> <p>This filter displays all staffing profile positions whose status is “Fulfilled”.</p>

**Table 4-10. Position Filter Fields, continued**

Field Name	Description
Rejected	The status of the staffing profile position is "Rejected".  This filter displays all staffing profile positions whose status is "Rejected".
<b>Resource Pool</b>	
(Select All)	This filter displays the positions without the Resource Pool filter criteria.
<Resource Pool>	Name of the resource pool. This filter display the positions which belong to this resource pool.
(Blank)	This filter display the positions which do not belong to any resource pool.

- Click **Apply**.

The data in the staffing profile table is updated, and the positions which meet your filter criteria are displayed.

### ***Filter Positions by Status or Resource Pool***

If you want to filter the staffing profile positions by status or resource pool, do similar steps as those when filtering positions by position/resource. For details, see ["Filter Positions by Position/Resource" on page 132](#). You must provide information for one or more fields on which you want to

You must provide information for one or more fields on which you want to filter as listed in the ["Status" on the previous page](#) or the ["Resource Pool" above](#) section of ["Table 4-10. Position Filter Fields" on page 133](#).

### ***Total Summary***

The Total Summary section displays the total values for Average FTE and each period's allocations (at the right section of the staffing profile table). See ["Total Summary Section" on the next page](#)

This section includes the following three rows (see ["Rows in Total Summary" on the next page](#) for details about the three rows):



- Forecast Total
- Assignment Total
- Unmet Total

## Total Summary Section

Staffing Profile:202184

This is freestanding staffing profile

Done

Change Header

More

Statistics

Status:

Created On:

Created By:

Work Load Category:

Region:

Profile Start:

Profile Finish:

Default Resource Pool:

Description:

User Data

Business Sub-Unit

Allocation Detail for Aug 1, 2008 to Sep 30, 2008

+ Add A Position

Send Resource Requests

Import Positions

Enter Allocation in:

Weeks

Hours

25 Per Page

K

Page 1 of 1

M

Expand All

Collapse All

Position	Status	Resource Pool	Total Hours	Aug 08		Sep 08								Oct 08
				07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15	09/22	09/29	
GA Engineer	Soft Booked	usa	100.0	2.4	11.9	11.9	11.9	11.9	9.5	11.9	11.9	11.9	4.8	
Unmet Demand			88.7	1.4	7.1	7.1	7.1	7.1	5.7	7.1	7.1	7.1	3.9	
Forecast Total (1 positions)			100.0	2.4	11.9	11.9	11.9	11.9	9.5	11.9	11.9	11.9	4.8	
Assignments Total			40.3	1.0	4.8	4.8	4.8	4.8	3.8	4.8	4.8	4.8	1.9	
Unmet Demand Total			88.7	1.4	7.1	7.1	7.1	7.1	5.7	7.1	7.1	7.1	3.9	

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the position data in your Staffing Profile page. Click "Refresh" to get up-to-date data.

Notes

Add Notes

## Total Summary Section

### Rows in Total Summary

Row	Description
Forecast Total	The total value of the forecast
Assignment Total	The total value of the assignments in the specific period
Unmet Demand Total	The total value of the unmet demands (over-allocations) in the specific period

The total values in this sections are calculated based on the following criteria:

- All the positions and assignments belong to the current staffing profile, and they are displayed on the current staffing profile page. The values are recalculated when you switch to another page or filter the positions by other criteria.
- The total forecast is re-calculated when any forecast change to positions are made.

## Expand/Collapse All Positions

On the staffing profile page, the positions and their assignments are displayed hierarchically (in a tree table). By default, when you open a staffing profile page, only the positions are displayed, all the assignments are hidden. You can click the arrow button before each position to view or hide its assignments.

To view the detailed assignments of the all the positions, click **Expand All** to expand all positions. To hide all the assignments of the positions, click **Collapse All**.

Staffing Profile:202184  
This is freestanding staffing profile

Statistics  
Status: In Planning Created On: Aug 15, 2008 Created By: uva alex Work Load Category: Strategic Projects Region: AU Panama Profile Start: Aug 1, 2008 Profile Finish: Sep 30, 2008 Default Resource Pool:

User Data  
Business Sub-Unit

Allocation Detail for Aug 1, 2008 to Sep 30, 2008

+ Add A Position Send Resource Requests Import Positions

Enter Allocation In: Weeks Hours

25 Per Page

Expand All Collapse All

Position	Status	Resource Pool	Total Hours	Aug 08		Sep 08					Oct 08		
				07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15	09/22	09/29
GA Engineer	Soft Booked	uva	100.0	2.4	11.9	11.9	11.9	11.9	9.5	11.9	11.9	11.9	4.8
Unmet Demand			99.7	1.4	7.1	7.1	7.1	7.1	5.7	7.1	7.1	7.1	2.9
Forecast Total (1 positions)			100.0	2.4	11.9	11.9	11.9	11.9	9.5	11.9	11.9	11.9	4.8
Assignments Total			40.3	1.0	4.8	4.8	4.8	4.8	3.8	4.8	4.8	4.8	1.9
Unmet Demand Total			99.7	1.4	7.1	7.1	7.1	7.1	5.7	7.1	7.1	7.1	2.9

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the position data in your Staffing Profile page. Click "Refresh" to get up-to-date data.

Notes

Add Notes

## Resizable Columns and Staffing Profile Table

Some data might be hidden if their columns are too narrow. On the Staffing Profile page, each column at left side of the staffing profile table is resizable. So, you can view the full data by dragging the columns to resize the columns.

These columns include:

- Position
- Status
- Resource Pool
- Average FTE

Besides, the staffing profile table in the Allocation Details section is resizable. You can drag the vertical bar in the middle of the staffing profile table to view the data you want.

**Staffing Profile:30723**  
This staffing profile is for Proposal - priya1

[Done](#) [Change Header](#) [More](#)

**Statistics**

Status:	Created On:	Created By:	Work Load Category:	Region:	Profile Start:	Profile Finish:	Default Resource Pool:
In Planning	Dec 8, 2006	Admin User		IL - Region Israel	Jan 1, 2003	Mar 31, 2003	

Description:

**User Data**

Business Sub-Unit

**Allocation Detail for Jan 1, 2003 to Mar 31, 2003**

+ Add A Position   Send Resource Requests   Import Positions

Expand All   Collapse All

Enter Allocation in: Weeks FTE

25 Per Page   Page 1 of 1

Position	Status	Resource Pool	Average FTE	Jan 03		Feb 03				Mar 03				0
				12/30	01/06	01/13	01/20	01/27	02/03	02/10	02/17	02/24	03/03	
AU_MAT_2 CEO	New	Q&Z	0.00	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Unmet Demand			0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Forecast Total (1 positions)			0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Check all   Unmet Demand: [Assign](#) [Resource Finder](#) [Reject](#) [Forward](#)

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the position data in your Staffing Profile page. Click "Refresh" to get up-to-date data. Because assigned resources may belong to a different region than the position's associated resource pool, unmet demand may be non-zero even if assigned FTEs match requested FTEs

**Notes**

[Add Notes](#)

vertical bar

## Partial Refresh

If there is a large number of data on the staffing profile page, updating the data on the whole page may take long time and cause performance issue. The partial refresh feature enables you to asynchronously load staffing profile page and update only part of the data on the staffing profile page. This improves the system performance.

You can use this feature in the following scenarios:

- Click Refresh at the bottom of the Staffing Profile page.

Only the data in the staffing profile table is updated. The data in the header section remains unchanged.

- Add a new position or edit an existing position.

Only the position you add or edit is updated.





- Assign resources to a position.

Only the relevant attributes of the position are updated.

## Paging Display

You can display staffing profile positions by page. The following table describes the configuration options and fields on the pagination bar (on the right top of the staffing profile table) for you to display staffing profile positions by page.

**Table 1-1. Staffing profile configuration options and fields in the Allocation Detail section**

Item Name	Description
5 Per Page/10 Per page/25 Per Page/50 Per page/100 Per page/Show All	Allows you to choose to display 5, 10, 25, 50 or 100 positions per page, or to display all positions on the current page.
	Allows you to go to the first page.
	Allows you to go to the previous page.
Page <Number1> of <Number2>	<p>&lt;Number1&gt; represents the current page number.</p> <p>&lt;Number2&gt; represents the total page number.</p> <p>Allows you to provide a valid page number in &lt;Number1&gt; to go to that specific page.</p>
	Allows you to go to the next page.
	Allows you to go to the last page.

pagination bar

**Staffing Profile:30723**  
This staffing profile is for Proposal - priya1

**Statistics**  
Status: In Planning Created On: Dec 8, 2006 Created By: Admin User Work Load Category: Region: IL - Region Israel Profile Start: Jan 1, 2003 Profile Finish: Mar 31, 2003 Default Resource Pool:

**User Data**  
Business Sub-Unit

**Allocation Detail for Jan 1, 2003 to Mar 31, 2003**  
+ Add A Position Send Resource Requests Import Positions Enter Allocation In: Weeks PTE  
25 Per Page Page 1 of 1

Position	Status	Resource Pool	Average FTE	Jan 03			Feb 03			Mar 03			0	
				12/30	01/06	01/13	01/20	01/27	02/03	02/10	02/17	02/24		03/03
AIU_NAT_2 CEO	New	cas	0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Unmet Demand			0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Forecast Total (1 positions)			0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Check all Unmet Demand: Assign Resource Finder Reject Forward

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the position data in your Staffing Profile page. Click "Refresh" to get up-to-date data.  
Because assigned resources may belong to a different region than the position's associated resource pool, unmet demand may be non-zero even if assigned FTEs match requested FTEs

Notes  
Add Notes

## Highlighting and Centering Current Period

If there is a large number of allocation data, you must drag the scroll bars to view data. Whatever period type (years, quarters, months, or weeks) the staffing profile uses, the current period of the allocation data is highlighted and centered. To view data in other periods, drag the horizontal scroll bar. This makes it easier for you to find the current allocation data.

By default, on the Staffing Profile page, the following allocation data are displayed from left to right on the right side of the staffing profile table:

- The allocations in the previous three periods (years/quarters/months/ weeks)
- The allocations in the current period (year/quarter/month/week)
- The allocations in the future periods (years/quarters/months/weeks)

For example, there is a staffing profile lasting for 3 years, from January 2012 (start period) to December 2014 (end period). Now it is October 2013. You can see the following on the staffing profile page when opening this staffing profile:

The allocation data in the current month (October 2013) and in future months are shown in the grid table. Besides, the column for the current month is highlighted. See the below figure.



Staffing Profile:30723  
This staffing profile is for Proposal - priya1

Done Change Header More

**Statistics**

Status: In Planning Created On: Dec 8, 2006 Created By: Admin User Work Load Category: Region: IL - Region Israel Profile Start: Jan 1, 2003 Profile Finish: Mar 31, 2003 Default Resource Pool:

Description:

**User Data**

Business Sub-Unit

**Allocation Detail for Jan 1, 2003 to Mar 31, 2003**

+ Add A Position Send Resource Requests Import Positions

Enter Allocation In: Weeks FTE

Expand All Collapse All 25 Per Page Page 1 of 1

Position	Status	Resource Pool	Average FTE	Jan 03		Feb 03				Mar 03				0
				12/30	01/06	01/13	01/20	01/27	02/03	02/10	02/17	02/24	03/03	
AU_MAT_2_CEO	New	qaz	0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Unmet Demand			0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Forecast Total (1 positions)			0.91	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Check all Unmet Demand: Assign Resource Finder Reject Forward

Note: The position data might also be modified by others, so the values for "Forecast Total" might be inconsistent with the position data in your Staffing Profile page. Click "Refresh" to get up-to-date data. Because assigned resources may belong to a different region than the position's associated resource pool, unmet demand may be non-zero even if assigned FTEs match requested FTEs

Notes

Add Notes

horizontal scroll bar

## Special Command for Baseline Staffing Profile

A system special command `ksc_create_baseline_staffing_profile` is introduced for staffing profiles associated with projects.

Below are the default parameters of this special command:

- STAFFING\_PROFILE\_ID
- SP\_BASELINE\_NAME

## Using This Special Command

You can configure this special command in the following entities:

- Object types
- Request types
- Report types
- Validations
- Workflow step sources

To use this special command, you must have the edit special command access grant.

For details about how to use special commands, see *Commands, Tokens, and Validations Guide and Reference*.

## **Exceptions**

In the following scenarios, functions may fail and error logs will return if you run this special command:

- You do not have permission to create baseline in the project.
- You create a baseline for a staffing profile which is not associated with any project.

## **Adding Security Groups to Staffing Profile/Resource Pool ACL**

In previous versions, you were allowed to add a single user to the staffing profile/resource pool access control list (ACL). Now you can add a security group to the staffing profile/resource pool ACL:

- ["Adding a Security Group to a Staffing Profile ACL" below](#)
- ["Adding a Security Group to a Resource Pool ACL" on the next page](#)

### **Adding a Security Group to a Staffing Profile ACL**

If you have Edit Security access grant for the Staffing Profile Configure Access page, you can add security groups to the staffing profile access control list (ACL). All members in the security groups that are listed on the Configure Access page minimally have viewing access.

To add a security group to a staffing profile ACL,

1. Open a Staffing Profile page.

If you have permission to modify the staffing profile, the **Configure Access** button will be enabled.

2. Click **More > Configure Access**.

The Configure Access for Staffing Profile page opens.

3. Add a security group to the list by clicking **Add Security Group** and selecting the desired



security group from the list.

You cannot add a duplicate security group.

4. Configure the security group's access by selecting the checkboxes under each category.

The View access is automatically granted to the security group.

5. Click **Done**.

For more information about staffing profile security, see *HP Resource Management User's Guide*.

## ***Adding a Security Group to a Resource Pool ACL***

If you have Edit Security access grant for the Resource Pool Configure Access page, you can add a security group to or remove one from the resource pool ACL. All members in the security groups that are listed on the Configure Access page minimally have viewing access.

To add a security group to a staffing profile ACL,

1. Open a Resource Pool page.

If you have permission to modify the resource pool, the **Configure Access** button will be enabled.

2. Click **More > Configure Access**.

The Configure Access for Resource Pool page opens.

3. Add a security group to the list by clicking **Add Security Group** and selecting the desired security group from the list.

4. Configure the security group's access by selecting the checkboxes under each category.

The View access is automatically granted to the security group.

5. Click **Done**.

For more information about resource pool security, see *HP Resource Management User's Guide*.

## ***Viewing a Position from the Resource Request Portlet***

In this version, you can open and view a specific position from the Resource Request portlet, rather than all the positions that belong to the staffing profile.

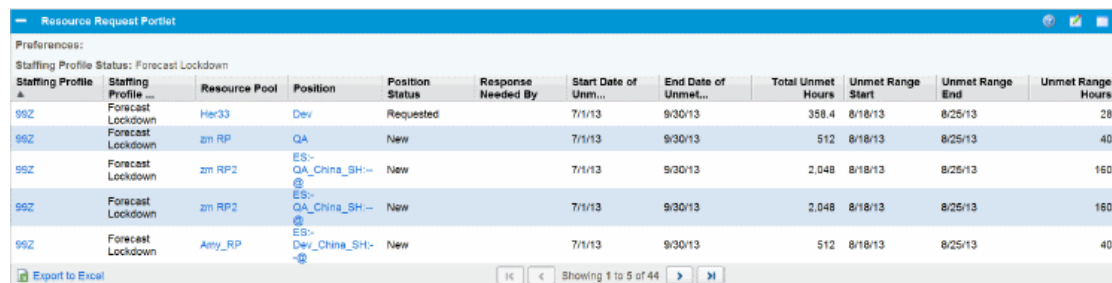
In the Resource Request portlet:

- To view a specific staffing profile, click a staffing profile link from the Staffing Profile column.

The Staffing Profile page with all of its positions opens.

- To view a specific position, click a position link from the Position column.

The Staffing Profile page with the specific position opens.



The screenshot shows the 'Resource Request Portlet' interface. It includes a 'Preferences' section with 'Staffing Profile Status: Forecast Lockdown'. Below this is a table with the following columns: Staffing Profile, Staffing Profile, Resource Pool, Position, Position Status, Response Needed By, Start Date of Unmet..., End Date of Unmet..., Total Unmet Hours, Unmet Range Start, Unmet Range End, and Unmet Range Hours. The table contains five rows of data, each representing a staffing profile with its associated resource pool, position, status, and unmet hours.

Staffing Profile	Staffing Profile	Resource Pool	Position	Position Status	Response Needed By	Start Date of Unmet...	End Date of Unmet...	Total Unmet Hours	Unmet Range Start	Unmet Range End	Unmet Range Hours
99Z	Forecast Lockdown	Her33	Dev	Requested		7/1/13	9/30/13	358.4	8/18/13	8/25/13	28
99Z	Forecast Lockdown	zm RP	QA	New		7/1/13	9/30/13	512	8/18/13	8/25/13	40
99Z	Forecast Lockdown	zm RP2	ES:- QA_China_SH:-@	New		7/1/13	9/30/13	2,048	8/18/13	8/25/13	160
99Z	Forecast Lockdown	zm RP2	ES:- QA_China_SH:-@	New		7/1/13	9/30/13	2,048	8/18/13	8/25/13	160
99Z	Forecast Lockdown	Amy_RP	ES:- Dev_China_SH:-@	New		7/1/13	9/30/13	512	8/18/13	8/25/13	40

At the bottom of the table, there is an 'Export to Excel' button and a pagination control showing 'Showing 1 to 5 of 44'.

## Searching Resource Pools without View Access Grant

In previous versions, you can click **Search** to search resource pools for the **Resource Pool** field in a position dialog box. However, the search result only lists resource pools that you have the access grant to view.

In this version, all the resource pools in the system can be listed in the search result even you do not have view access grant to all of them.

To search resource pools with search criteria in a position dialog box,

1. Add a new position or open an existing position.
2. Click **Search** on the right of the **Resource Pool** field.

The Search Resource Pools dialog box opens.

**Search Resource Pools**

**Search Resource Pools**

**Pool Name contains:**

**Pool Manager:**

**Region:**

**Primary Organization Unit:**

**Contains Role:**

**Contains Skills:**

**Contains Resources:**

**Search**

3. Provide search criteria in the appropriate fields.
4. Click **Search**.

All the resource pools that fit the search criteria are shown in the research results list.

## Usability Enhancements

Version 9.22 implemented the following usability enhancements:

- "Request Creation Confirmed Page Skippable" below
- "Enhancements to the Project Details Page" on the next page
- "Prompt Added on the Project Overview and Time Sheet Pages" on page 150
- "Enhanced Data Entry Error Message" on page 150
- "Enhanced Export to Excel Functionality" on page 150

### ***Request Creation Confirmed Page Skippable***

In previous versions, the Request Creation Confirmed page opens after you click **Submit** on the Create New <Request Type> page.

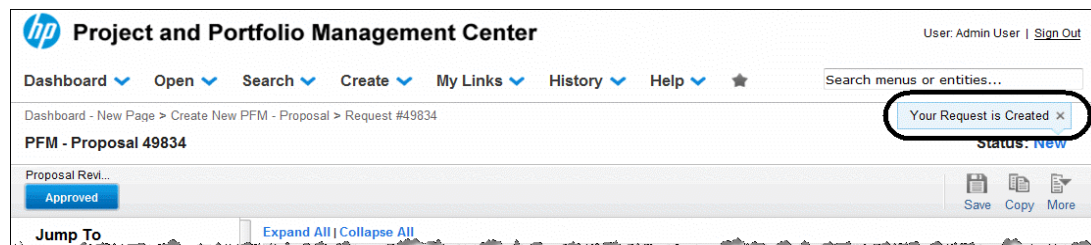
On version 9.22, you can skip this page by manually adding the following line into the server.conf file:

```
com.kintana.core.server.SKIP_REQUEST_CREATE_CONFIRMATION_PAGE=true
```

Then, you are brought to the Request Details page for a submitted request after clicking **Submit**.

### ***Information Box Added on Request Details page***

When you come to the Request Details page after clicking **Submit** on the Create New <Request Type> page, you would find an information box is added above the Status section on the Request Details page, informing you that your request is created.



Clicking the Delete icon closes the box.

## Enhancements to the Project Details Page

In version 9.22, the following enhancements are implemented to the Project Details page:

- ["Toolbar Pinned to the Top of the Page" below](#)
- [""Jump To" Navigation Panel Added to the Page" below](#)

### Toolbar Pinned to the Top of the Page

In previous versions, the toolbar that collects all action buttons and displays available workflow step actions is not pinned to the top of the Project Details page, so you may have to scroll up to the top when you want to use it.

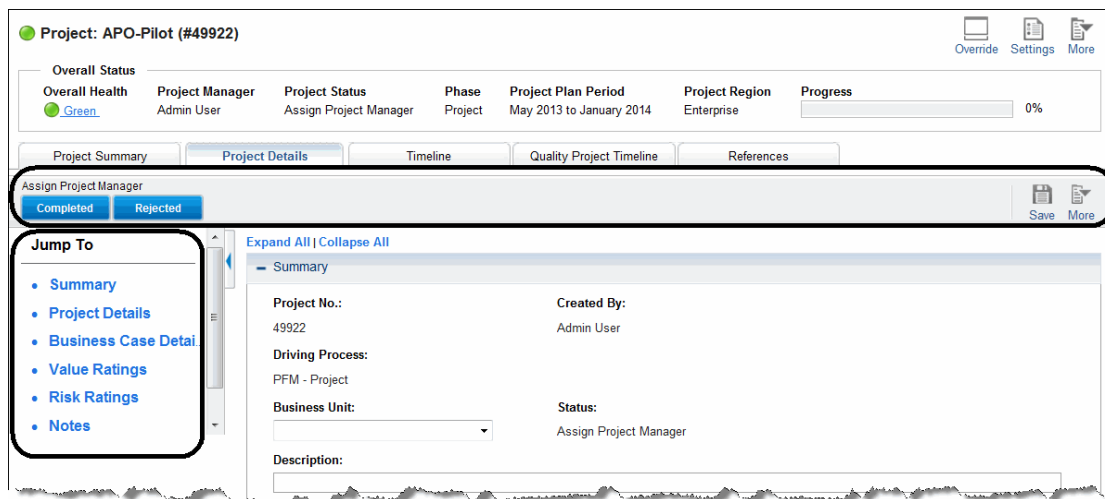
In version 9.22, the toolbar is pinned to the top of the page regardless of you scrolling up and down it. This saves your efforts especially when the project details pages are long.

### "Jump To" Navigation Panel Added to the Page

In previous versions, you have to scroll up or down the Project Details page to locate a specific section that you want to work on.

In version 9.22, the **Jump To** navigation panel is introduced to the page. To jump to a particular section of this page, click the section name from the **Jump To** navigation panel.

By default, the navigation panel is expanded. To collapse it, click the arrow button in the upper-right corner of the panel.



## ***Prompt Added on the Project Overview and Time Sheet Pages***

PPM Center version 9.22 introduces a prompt on the Project Overview and Time Sheet pages. It pops up if you edit some fields under one tab of the pages and go to another tab without saving the changes.

Clicking **OK** in the prompt brings you to the desired tab with the changes unsaved. Clicking **Cancel**, you stay on the current page.

## ***Enhanced Data Entry Error Message***

Previously, when you enable Portfolio Management for a program with multiple proposals/projects/assets on the Program Settings page, you may receive the following error message "Portfolio Management cannot be enabled for this program because some of its content is already included in a portfolio or in another program that has Portfolio Management enabled". The message is not specific, it can be time-consuming for users to identify what content is causing the error.

Starting from PPM Center version 9.22, the data entry error message lists all the conflicting entities, together with the name of the program/portfolio they belong to, in the following format:

Asset/Project/Proposal "X" is included in the portfolio/portfolio-enabled program "Y".

## ***Enhanced Export to Excel Functionality***

The "Export to Excel" functionality is enhanced on the following pages:

- Staffing Profile page
- Search Resource page

This enhanced functionality is also available on the following pages:

- Resource Finder page
- Search Resource Availability page
- Resource Allocation Management page
- Forecast Planning page

With this enhanced functionality, you can:

- Export data to a Microsoft Excel file, not HTML page. In this way, you can process your data by using more Excel functions, such as format and calculation.
- Export more data attributes to the Excel file.

**Caution:** HP recommends that you use Microsoft Excel 2007 or higher for this functionality.

## Enhanced Encryption Algorithm for PPM Center

To conform to FIPS 140-2 (Federal Information Processing Standards 140-2), PPM Center enhanced the encryption algorithm in some cases in version 9.22. Not all cases that use encryption algorithm are FIPS 140-2 compliant in this version.

The cases that apply the encryption algorithm compliant with FIPS 140-2 include:

- Logging on to PPM Center with Oracle database authentication
- Creating user
- Editing user profile
- Configuring PPM Center database
- Logging on to PPM Center with LDAP authentication
- Importing LDAP users

To apply the enhanced encryption algorithm,

1. Stop the PPM Server.
2. Unzip the `fs_home.jar` file located in the `<PPM_Home>/deploy/922/SP2` directory.
3. Copy the following three `.jar` files from the `<fs_home>/utilities/fips` directory to the `<JAVA_Home>/jre/lib/ext` directory:
  - `cryptojce.jar`
  - `cryptojcommon.jar`
  - `jcmFIPS.jar`
4. Edit the `java.security` file located in the `<JAVA_Home>/jre/lib/security` directory:
  - a. Add the following before the existing security providers:

```
security.provider.1=com.rsa.jsafe.provider.JsafeJCE
```
  - b. Change the sequence numbers of the providers to make sure that the numbers start with 1, followed by 2, 3, 4, and so on.



- c. Add the following two lines after the security provider list:
    - `com.rsa.cryptoj.fips140initialmode=FIPS140_MODE`
    - `com.rsa.crypto.default.random=ECDRBG`
  - d. Comment out the line `securerandom.source=file:/dev:/urandom` by adding a number sign # before it.
5. Run the `ppm_fips_security_extension.sql` script located in the `PPM_Home/bin/db` directory.

**Note:** Back up the following DB tables before running this script:

- `KNTA_USERS`
- `KNTA_PASSWORD_CHANGES`
- `KNTA_USERS_INT`

6. Run the `sh ./kFIPSMigrate.sh` script located in the `PPM_Home/bin` directory.

**Note:**

- As an administrator, you should have the execution privilege to run this script.
- When running this script, you are required to enter the start user id and the end user id to decide how much data would be processed in a batch. You can get the user ids from the `KNTA_USERS` table.

7. Run the `sh ./kFIPSEncrypt.sh` script located in the `PPM_Home/bin` directory to get the encrypted values for the passwords you set for DB and LDAP.

**Note:**

- As an administrator, you should have the execution privilege to run this script.
- If your system is not integrated with LDAP, you do not need to run the script for the encrypted value of the LDAP password.

8. Configure the following three parameters in the `server.conf` file from the `PPM_Home` directory.

- Set the `com.kintana.core.server.FIPS_ENABLE` parameter to `true` to enable the new encryption algorithm
- Set the `com.kintana.core.server.DB_PASSWORD` parameter to the encrypted value you get in [Step 7](#) to reset the DB password
- Set the `com.kintana.core.server.LDAP_PASSWORD` parameter to the encrypted value you get in [Step 7](#) to reset the LDAP password

**Note:**

- You may have to modify these parameter values directly in the `server.conf` file. HP recommends that you do not run `ppm_config.exe` (on Windows) or `kConfig.sh` (on Unix) to modify these parameters.
- If your system is not integrated with LDAP, you do not need to reset the LDAP password.

9. Run `sh ./kUpdateHtml.sh` script located in the `PPM_Home/bin` directory to apply your changes on the three parameters.

10. Start the PPM Server.

11. (Optional) If your system is integrated with LDAP, and you want to import data from LDAP and set default password for the Import Users report or the Run PPM Organization Unit Interface report, you need to add an additional command for either of the reports.

To do so,

- a. Log on to PPM Center.
- b. From the menu bar, select **Open > Administration > Open Workbench**.

The PPM Workbench opens.

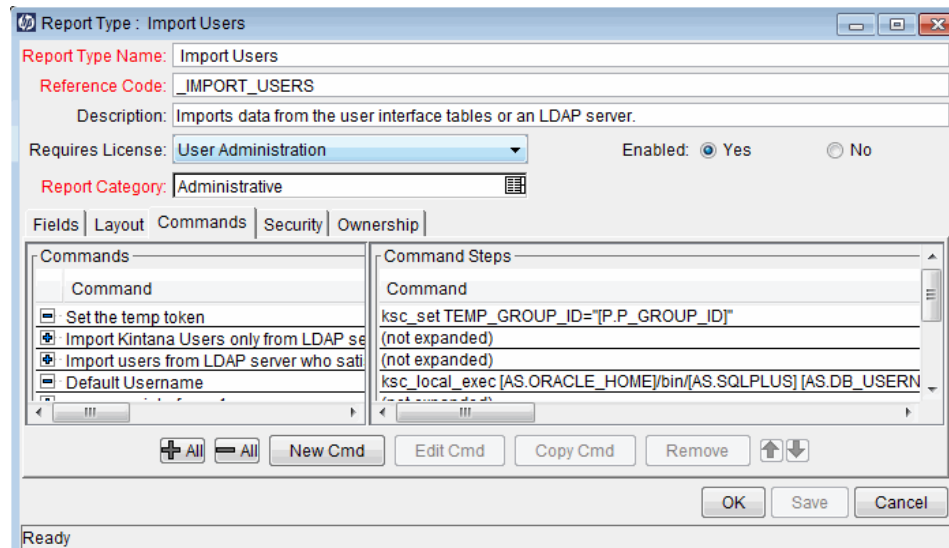
- c. From the shortcut bar, select **Configuration > Report Types**.

The Report Type Workbench opens.

- d. Click **List**, and then select the desired report type.

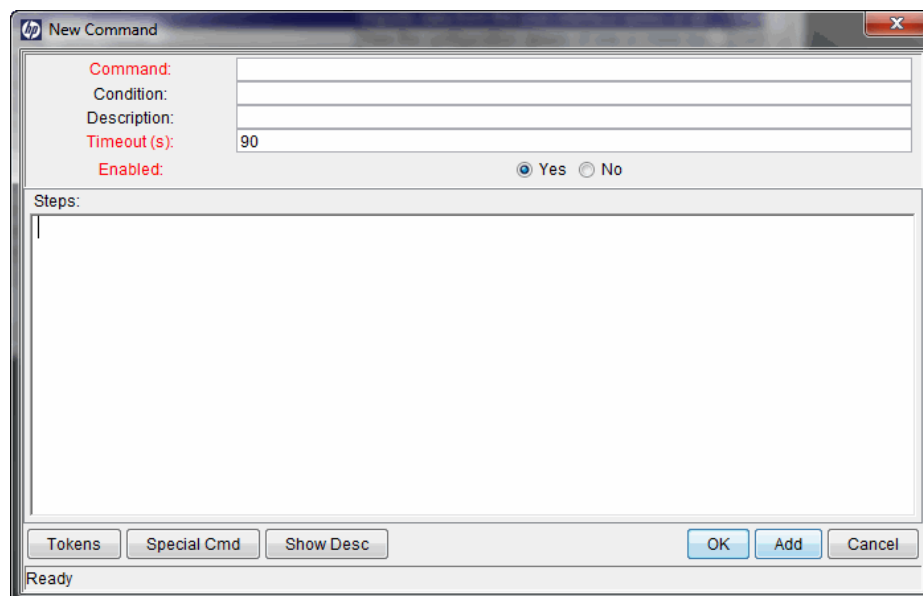
- e. Open the report type either by double-clicking it or clicking Open.

The Report Type: <Report> window opens.



- f. Click **New Cmd** under the **Commands** tab.

The New Command window opens.



- g. Name the new command as you want.
- h. Type the following in the Steps field:

```
ksc_run_java com.kintana.core.server.tools.FIPSPasswordInterfaceTable "[TEMP_GROUP_ID]"
```

**Note:** TEMP\_GROUP\_ID is the name for the temp token by default. If you have changed the token name, replace TEMP\_GROUP\_ID with the name you used for the token.

- i. Click **Add**.

You are back to the Report Type: *<Report>* window.

- j. Adjust the sequence of the added command by using the up or down button, making sure that the added command is under the Encrypt Password command.
- k. Click **OK**.

## Integrations

The following integrations are included in PPM Center version 9.22:

- ["Enhancements to the Integration of PPM Center Tasks with HP ALM Releases" below](#)
- ["Disabling Status Synchronization and Enabling Status Field Mapping for the Integration between PPM Center and ALM \(Using ALM\)" on page 170](#)

## Enhancements to the Integration of PPM Center Tasks with HP ALM Releases

This section includes the following:

- ["Enhancements Implemented to the Integration of PPM Center Tasks with HP ALM Releases" below](#)
- ["Configuring the Integration of PPM Center Tasks with HP ALM Releases" on page 165](#)

### ***Enhancements Implemented to the Integration of PPM Center Tasks with HP ALM Releases***

Version 9.22 implemented the following enhancements to the integration between PPM Center tasks and HP ALM releases:

- ["Options for Specifying Advanced Mapping Criteria" below](#), allowing you to filter and control what specific data to retrieve from HP ALM for a mapped HP ALM release.
- ["A Centralized Preferences Editor" on page 161](#), gathering all editable preferences options for the quality charts into one place, including newly introduced preferences options.
- ["Switching Views to Display Data in Days, Weeks, Months, or Quarters" on page 164](#)

### ***Options for Specifying Advanced Mapping Criteria***

In some cases, an ALM release would cover the quality information for multiple sub projects in PPM Center. For example, there might be several teams focusing on different tracks of a release. The project manager would need to see the quality KPIs for each of these teams.

In version 9.22, when mapping a task to an HP ALM release on the **Quality** tab of the Task Details page, project managers can see the advanced mapping criteria section in step 3 as illustrated in the screenshot below .

These advanced mapping criteria allow project managers to specify some filters or conditions to map the task to a sub set of the ALM release. This enhancement enables project managers to monitor the quality KPIs of part of the linked ALM release.

This advanced mapping criteria section contains the following two options:

- **Add criteria to filter the defect data from ALM**
- **Add Criteria to filter the requirement data from ALM**

When adding a filter for defect or requirement, the following HP ALM REST API is called to retrieve available values for a specified ALM Criteria value:

```
http://{ALM_URL}/qcbn/rest/domains/{domain}/projects/{project}/customization/used-lists
```

To add a new entry of mapping criteria,

1. Click a desired option.

For example, click **Add criteria to filter the defect data from ALM**.

The **Set Defect Filter** section appears on top of the **Add criteria to filter the defect data from ALM** link.

- From the **ALM Criteria** drop-down list, select a desired value from the available values, and then click the selector icon for the **Criteria Value**.

A window pops up and displays available values retrieved by the HP ALM REST API from defect fields of Lookup List field type in HP ALM.

**Note:** If you are setting a requirement filter, clicking the selector icon for the **Criteria Value** calls the HP ALM REST API to retrieve available values from the requirement fields of Lookup List field type in HP ALM.

- Select values as needed.
- Click **OK**.
- Repeat [step 1](#) through [step 4](#) to add as many advanced mapping criteria entries as you need.

For example, the following screenshot shows that three entries of mapping criteria are added.

Project Path: 30963 > test mile

Schedule Resources Cost Notifications Notes References User Data Hybrid Project **Quality**

Link to an HP ALM Release

General Authentication Project Server Confirmation

1 2 3 4

Specify an quality development project that you want to link to.

Domain: AUTOMATION

Project: PROJECT01

Release: Release01

You can choose to filter the ALM projects data ⓘ

Set Defect Filter:

ALM Criteria Criteria Value

Priority = 3-High, 4-Very High, 5-Urgent ⓘ X

and

Status = New, Open, Reopen ⓘ X

+ Add Criteria to filter the defect data from ALM

Set Requirement Filter:

ALM Criteria Criteria Value

Direct Cover Status = Blocked, Failed, No Run, Not C ⓘ X

+ Add Criteria to filter the requirements data from ALM

Cancel Back Confirm

6. To remove a mapping criteria, simply click the Delete icon for the mapping criteria.

7. Click **Confirmed**.

The Confirmation page displays all mapping criteria you have specified so far.

Project Path: 30963 > test mile

Schedule Resources Cost Notifications Notes References User Data Hybrid Project **Quality**

Link to an HP ALM Release

General Authentication Project Server Confirmation

1 2 3 4

Server: VPO11.0

Domain: AUTOMATION

Project: PROJECT01

Release: Release01

Defect Filter:

ALM Criteria Criteria Value

Priority = 3-High, 4-Very High, 5-Urgent

and

Status = New, Open, Reopen

Requirement Filter:

ALM Criteria Criteria Value

Direct Cover Status = Blocked, Failed, No Run, Not Completed, Not Covered

Save Mapping Criteria as: PROJECT01 Release01

Cancel Back Done

8. In the **Save Mapping Criteria as** field, type a name for your mapping criteria.

This allows you to provide a customized name for the mapping criteria you just specified.



If you leave the field as is, the mapping criteria name is saved in the format of `<Project_Name>+<Release_Name>` by default . In this example, the mapping criteria is to be saved as **PROJECT01 Release01**.

9. Click **Done**.

The mapping configuration is completed. The integration service runs and the **Quality** tab page displays quality charts.



## A Centralized Preferences Editor

The centralized preferences editor is accessible by clicking the **Edit Preferences** link in the top right corner of the **Quality** tab page (as illustrated in the screenshot above). The **Edit Preferences** link is available on the page after you have linked the task to an ALM release.

The Preferences Editor allows project managers to set general settings and preferences options for each quality chart easily and centrally from one place, enabling them to further fine tune the display of data retrieved from HP ALM.

This enhancement offers additional flexibility for project managers in monitoring quality data while ensuring quality compliance. Each organization may have their own quality terms and standards, and these terms may have been customized in their ALM. Project managers can use the Preferences Editor to specify their own quality settings based on the quality terms synchronized from ALM to comply with the company standards.

After changing the chart preferences, the changes take effect starting from the current day. That is to say, starting from the current day, the new quality data imported from ALM is customized and displayed based on the new chart preferences. For the data before the current day but within the display time frame, it is still displayed using the original settings.

The preferences options you set in the Preferences Editor take precedence over the default settings included in the <PPM\_Home>\conf\hpALMKPI.conf file. For more information about the hpALMKPI.conf file, see ["Changes Made to the hpALMKPI.conf File" on page 168](#)

There are four tabs in the Preferences Editor:

- **General Settings**

**General Settings**

**Open Defects Trend**

**Priority Defects Trend**

**Requirements Trend**

Data Range and Display:

Last 9 Days

Scorecard Link:

To get the Scorecard URL for the Scorecard Report,  
 1. Log on to the target ALM server and click **Dashboard > Analysis View**.  
 2. Right click on the desired scorecard analysis item and select **Share Analysis Item**.  
 3. Select **Copy Analysis Item Public URL** from the popup dialog and click **OK**.  
 4. Paste the URL to the field and click **Save**.

Save Cancel

On the **General Settings** tab, you can,

- Specify data display range in days, weeks, months, or quarters.
- Configure scorecard link by following the on-screen instructions.

**Note:** In version 9.21, you configure scorecard link on the Quality tab of the Task Details page for a task.

- **Open Defects Trend**

The screenshot shows a dialog box titled 'Open Defects Trend' with a blue header bar. On the left is a sidebar with four tabs: 'General Settings', 'Open Defects Trend' (which is selected and highlighted in grey), 'Priority Defects Trend', and 'Requirements Trend'. The main area on the right contains the text 'Select values you want to display as part of the Open Defects bar in the Open Defects Trend Chart' followed by a list of checkboxes: 'Closed', 'Fixed', 'New' (checked), 'Open' (checked), 'Rejected', and 'Reopen'. At the bottom right are 'Save' and 'Cancel' buttons.

On the **Open Defects Trend** tab, you can select values you want to display as part of the **Open Defects** bar in the **Open Defects Trend** chart.

The values that are not selected will be displayed as a part of the **Closed Defects** bar.

- **Priority Defects Trend**

The screenshot shows a dialog box titled 'Priority Defects Trend' with a blue header bar. On the left is a sidebar with four tabs: 'General Settings', 'Open Defects Trend', 'Priority Defects Trend' (which is selected and highlighted in grey), and 'Requirements Trend'. The main area on the right contains the text 'Select severity values you want to display as part of the High Priority Defects bar in the Priority Defects Trend Chart' followed by a list of checkboxes: '1-Low', '2-Medium', '3-High', '4-Very High' (checked), and '5-Urgent' (checked). At the bottom right are 'Save' and 'Cancel' buttons.

On the **Priority Defects Trend** tab, you can select severity values you want to display as part of the **High Priority Defects** bar in the **Priority Defects Trend** chart.

The severity values that are not selected will be displayed as a part of the **Low Priority Defects** bar in the **Priority Defects Trend** chart.

- **Requirements Trend**

The screenshot shows a configuration window titled "Requirements Trend" with a sidebar on the left containing four tabs: "General Settings", "Open Defects Trend", "Priority Defects Trend", and "Requirements Trend" (which is selected and highlighted). The main area of the window is divided into three sections for configuring requirements:

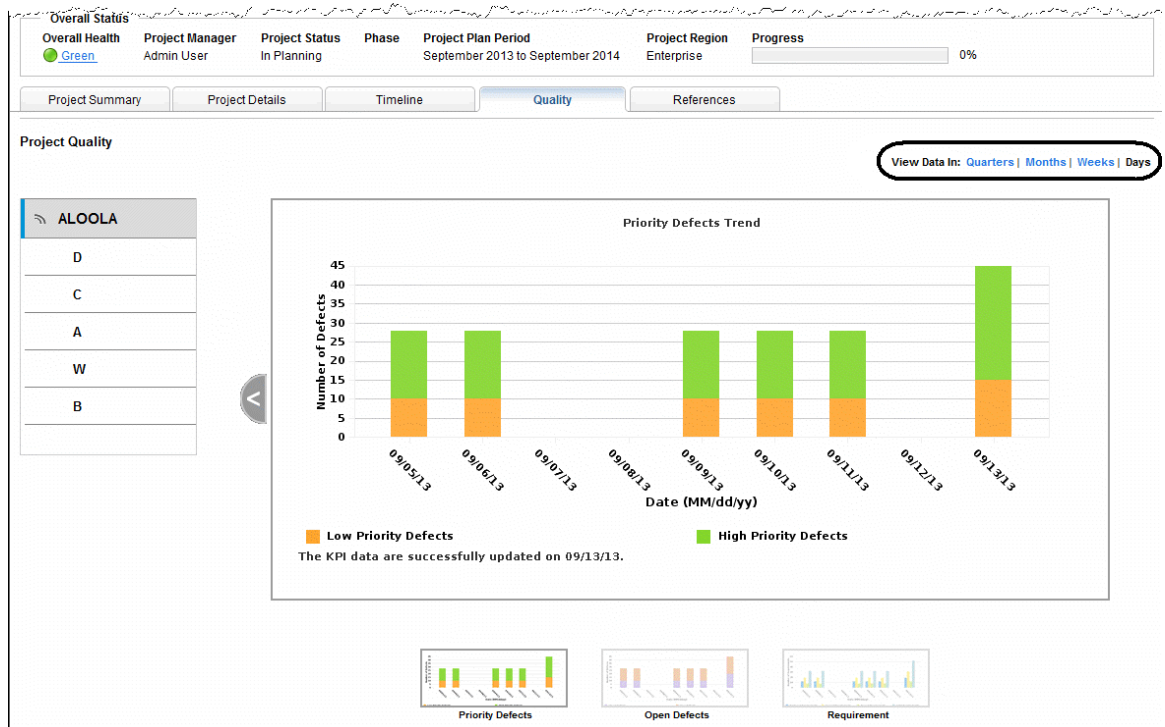
- Set Covered Requirements:** A list box on the left contains "Blocked", "N/A", "No Run", and "Failed". To its right are two arrow buttons, ">>" and "<<". Further right is an "Available Values" list box containing "Not Completed", "Not Covered", and "Passed".
- Set Passed Requirements:** A list box on the left contains "N/A" and "Passed". To its right are two arrow buttons, ">>" and "<<". Further right is an "Available Values" list box containing "Blocked", "Failed", "No Run", and "Not Completed". This list box has a scroll bar on its right side.
- Set Reviewed Requirements:** A list box on the left contains "Not Reviewed" and "Reviewed". To its right are two arrow buttons, ">>" and "<<". Further right is an empty "Available Values" list box.

At the bottom right of the window are two buttons: "Save" and "Cancel".

On the **Requirements Trend** tab, you can set values for covered requirements, passed requirements, and reviewed requirements.

## ***Switching Views to Display Data in Days, Weeks, Months, or Quarters***

Starting from version 9.22, you can switch views to display data in days, weeks, months, and quarters by clicking the corresponding option available in the top right corner of the **Quality** tab of the Project Overview page (as illustrated below).



## Configuring the Integration of PPM Center Tasks with HP ALM Releases

This section includes the following:

- ["Overview of the HP ALM Integration Plug-in for PPM Version 1.1" below](#)
- ["Support Matrix" on the next page](#)
- ["Supported Upgrade Paths" on the next page](#)
- ["Downloading and Installing the HP ALM Integration Plug-in for PPM Version 1.1" on page 167](#)
- ["Changes Made to the hpALMKPI.conf File" on page 168](#)

### Overview of the HP ALM Integration Plug-in for PPM Version 1.1

The HP ALM Integration Plug-in for PPM version 1.1 is required before you start to use the enhanced integration solution.

For existing users of the integration solution who are on PPM Center version 9.21, after upgrading PPM Center to version, 9.22, they can download and install HP PPM Plug-in for ALM Integration version 1.1 directly.

Version 1.1 of the plug-in contains all content of version 1.0, therefore, for fresh users of the integration solution who performed fresh installation of PPM Center version 9.22 or upgraded from PPM Center version 9.20 or 9.21, they can download and install the HP ALM Integration Plug-in for PPM version 1.1 directly to have all the features available. There is no need to install version 1.0 plug-in.

For more information about the supported upgrade paths, see ["Supported Upgrade Paths" below](#).

## Support Matrix

The following table describes support matrix of the HP ALM Integration Plug-in for PPM:

HP ALM Integration Plug-in for PPM version	PPM Center version
1.0	9.21
1.1	9.21, 9.22

## Supported Upgrade Paths

The following upgrade paths are supported for the HP ALM Integration Plug-in for PPM:

- For fresh users of the plug-in,
  - If you are on PPM Center version 9.22, simply download and install version 1.1 plug-in directly.

For detailed instructions, see ["Downloading and Installing the HP ALM Integration Plug-in for PPM Version 1.1" on the next page](#).

- If you are on PPM Center version 9.20 or 9.21, and you wish to use this integration solution,
  - i. Upgrade PPM Center from version 9.20 or 9.21 to version 9.22 directly.

For detailed instructions, see ["Installation Notes" on page 3](#).

- ii. Download and install the HP ALM Integration Plug-in for PPM version 1.1.

For detailed instructions, see ["Downloading and Installing the HP ALM Integration Plug-in for PPM Version 1.1" below](#).

- For existing users who are on PPM Center version 9.21 with version 1.0 of the plug-in, follow one of the following upgrade paths:
  - If you wish to upgrade the plug-in only, you can just upgrade it from version 1.0 to version 1.1.

For detailed instructions, see ["Downloading and Installing the HP ALM Integration Plug-in for PPM Version 1.1" below](#).

- If you plan to upgrade both PPM Center and the plug-in, you can follow either of the following,
  - Upgrade the plug-in to version 1.1, then upgrade PPM Center to version 9.22.

**Caution:** Make sure you clear the following folders before you start the upgraded PPM Center instance:

- <PPM\_Home>/tmp
- <PPM\_Home>/work

- Upgrade PPM Center to version 9.22, then upgrade the plug-in to version 1.1.

If deploy VPQ1.1 bundle before deploy ppm SP2 bundle, it shall be clean tmp/ & work/ before start instance.

## ***Downloading and Installing the HP ALM Integration Plug-in for PPM Version 1.1***

To download and install the HP ALM Integration Plug-in for PPM version 1.1:

1. Obtain the plug-in bundles from the HP Live Network.
  - a. Go to the [PPM Community on HP Live Network](#).
  - b. On the PPM Community home page, click **Content Catalog**.
  - c. Click **HP ALM Integration Plug-in for PPM** (where HP is the provider).
  - d. Click **Downloads**.

The HP ALM Integration Plug-in for PPM - Downloads page opens.

- e. Click the **ALM Integration Plug-in for PPM 1.1** folder.
- f. Click **ppm-921-ALMPlugin.zip** to download the package.

This package contains the following two bundles:

Bundle name	Description
ppm-921-PluginQuality.jar	Contains the plug-in basic structure for integrating PPM Center with ALM release management tools.
ppm-921-PluginQualityVPQ.jar	Contains the plug-in files specifically for integrating PPM tasks with the ALM Releases module.

2. Stop PPM Server.
3. Unzip the package and copy the two bundles to the `<PPM_Home>` directory.
4. Deploy the bundles by running the following commands from the `<PPM_Home>/bin` directory.

```
sh ./kDeploy.sh -i PluginQuality
sh ./kDeploy.sh -i PluginQualityVPQ
```

5. Repeat step 3 and step 4 for each of the server nodes in your cluster.
6. Restart PPM Server.

**Note:** HP recommends you restart the PPM Server to make sure that the integration bundles are properly deployed before you continue to deploy bundles for another integration solution.

### ***Changes Made to the hpALMKPI.conf File***

When you deploy the HP ALM Integration Plug-in for PPM version 1.1 as a fresh user of the integration solution, the new `hpALMKPI.conf` file replaces the existing one on your instance.

When you upgrade the HP ALM Integration Plug-in for PPM to version 1.1,



- If the existing `hpALMKPI.conf` on your instance has been changed, no changes will be made and the file will be left untouched.
- If existing `hpALMKPI.conf` has not been changed by users, it will be upgraded to the latest version.

The upgrade process will update the `project_json` field of the `PPM_INT_QUALITY_TASK_MAPPING`, to append the default chart preference set.

In version 9.22, the following change is made to the `hpALMKPI.conf` file:

The line `"requirement.notCovered=Not Covered"` is changed to `"requirement.Covered=XXX"`

This means that in the old `hpALMKPI.conf`, "Not Covered" is defined, and in the new `hpALMKPI.conf`, "Covered" is defined.

If the total statuses of the old "Not Covered" and the new "Covered" are less than the available statuses in HP ALM, it might result in wrong data display in charts.

**Tip:** You can log in to HP ALM and find valid values for [Status] of requirement, then configure them in `requirement.Covered=XXX`.

If there are more than 5 default statuses (Blocked, Failed, No Run, Not Completed, Passed) in your ALM, make sure you back up the existing version of the `hpALMKPI.conf` file and update the definition of "Covered" in the file manually by replacing XXX with your values, with comma (,) as the delimiter.

For example, if the covered statuses of requirement include Not Completed and Passed, then,

`requirement.Covered=Not Completed,Passed`

## Enhancements to the Integration between PPM Center and ALM (Using ALM)

The following enhancements are implemented to the integration between PPM Center and ALM (using ALM):

- ["Disabling Status Synchronization and Enabling Status Field Mapping for the Integration between PPM Center and ALM \(Using ALM\)" on the next page](#)
- ["Synchronizing Memo Fields from HP ALM Defects or Requirements as HTML Reference Attachments to PPM Requests" on page 172](#)

## ***Disabling Status Synchronization and Enabling Status Field Mapping for the Integration between PPM Center and ALM (Using ALM)***

Starting from version 9.22, you can disable the PPM Center defect workflow driven synchronization between PPM request status and ALM entity status by setting the new server configuration parameter `REQUEST_LINK_ALM_ENTITY_STATUS` to `false` from the Administration Console. As a result, the **Status** field is available in the **QC/ALM Entity Fields** list in PPM Center for defect status mapping purpose, allowing you to view the real time status of an ALM entity in PPM Center.

This enhancement applies to PPM Center integration with HP ALM version 11.00 or later.

However, note that disabling the PPM Center defect workflow driven status synchronization means that PPM defect request status is no longer synchronized to ALM. Therefore, the status field mapping is controlled by **PPM** by default.

### **Newly introduced server configuration parameter**

Parameter Name	Description, Usage	Default and Valid Values
REQUEST_LINK_ALM_ENTITY_STATUS	Setting the parameter value to <code>false</code> disables the PPM Center defect workflow driven synchronization between PPM Center request status and ALM entity status. The default value is <code>true</code> .	Default value: <code>true</code>  Valid values: <code>true</code> , <code>false</code>

To disable status synchronization and configure the **Status** field mapping for a selected integration configuration,

1. Set the `REQUEST_LINK_ALM_ENTITY_STATUS` to `false` from the Administration Console.
  - a. Log on to PPM Center.
  - b. From the **Open** menu, click **Administration > Open Administration Console**.
  - c. In the navigation pane, expand **Administration Task > Application Configuration**.
  - d. In the Edit PPM Application Parameters pane, search for the `REQUEST_LINK_ALM_ENTITY_STATUS` parameter.
  - e. Edit the **Value** for the parameter to `false` and click **Save**.

2. Configure the **Status** field mapping for a selected integration configuration.
  - a. From the **Open** menu, click **Administration > Integrations**.
  - b. On the Manage Application Change page, from the **Integration Configurations** list, select an entry that you want to configure the **Status** field mapping for which.
  - c. In the Server Configuration Details section, move to **Step 2: Map PPM-QC/ALM Fields** tab page.

The **Status** field is now available in the drop-down list of **QC/ALM Entity Fields** in the Field Mapping section.

Server Configuration Details: Configure for Request Type: ALM-D2

ALM-D1 [+ Add Integration Configuration](#)

Step 1: Configure Server Details **Step 2: Map PPM-QC/ALM Fields** Step 3: Complete Configuration

QC/ALM Synchronization Control Field:

Field Mapping:

QC/ALM Entity Fields	PPM Request Fields	Control	
Status(status)	Request Status: (REQ.STATUS_ID)		<a href="#">Map Fields</a>
Assigned To(owner)	Creation Date: (REQ.CREATION_DATE)	PPM	
Closed in Version(closing-version)	Description: (REQ.DESRIPTION)	Bidirectional	
Closing Date(closing-date)	Severity: (REQ.SEVERITY)	Bidirectional	<a href="#">Map Values</a>
Comments(dev-comments)	Created By: (REQ.CREATED_BY)	QC/ALM	
Cycle ID(cycle-id)	Priority: (REQ.DEFECT_PRIORITY)	PPM	<a href="#">Map Values</a>
Defect ID(id)	Time (days): (REQD.ACTUAL_FIX_TIME)	Bidirectional	
Description(description)	Fix Time (days): (REQD.ESTIMATED_FIX_TIME)	Bidirectional	
Detected in Cycle(detected-in-rcyc)	Reproducible: (REQ.REPRODUCIBLE)	QC/ALM	<a href="#">Map Values</a>
Detected in Release(detected-in-rel)	Version: (REQ.DETECTION_VERSION)	QC/ALM	
Detected in Version(detection-version)	Version: (REQD.CLOSING_VERSION)	QC/ALM	
Estimated Fix Time(estimated-fix-time)	Description: (REQD.DEFECT_DESCRIPTION)	Bidirectional	
Extended Reference(extended-reference)	Assigned To User: (REQ.KNTA_QC_DEFECT_ASSIGNED_TO)	QC/ALM	
Has Change(has-change)	Closing Date: (REQD.CLOSING_DATE)	QC/ALM	
Has linkage(has-linkage)	Comments: (REQD.DEV_COMMENTS)	Bidirectional	
Has linkage to others(has-others-linkage)			
Modified(last-modified)			
Planned Closing Version(planned-closing-ver)			
Priority(priority)			
Project(project)			
Reproducible(reproducible)			
Run Reference(run-reference)			
Status(status)	Request Status: (REQ.STATUS_ID)	PPM	
Step Reference(step-reference)			
Subject(subject)			
Target Cycle(target-rcyc)			
Target Release(target-rel)			
Test Reference(test-reference)			
TestSet Reference(cycle-reference)			
To Mail(to-mail)			
Version Stamp(bug-ver-stamp)			

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- d. Select **Status** from the **QC/ALM Entity Fields**, and then select **Request Status** from the **PPM Request Fields** list, and then click **Map Fields**.

The field mapping is added to the Current Field Mappings table.

Server Configuration Details: Configure for Request Type: ALM-D2

ALM-D1 [+ Add Integration Configuration](#)

Step 1: Configure Server Details    Step 2: Map PPM–QC/ALM Fields    Step 3: Complete Configuration

QC/ALM Synchronization Control Field:

Field Mapping:

QC/ALM Entity Fields    PPM Request Fields

Status(status)    Request Status: (REQ.STATUS\_ID)    [Map Fields](#)

Current Field Mappings:

QC/ALM Field	PPM Field	Control	
✗ Detected on Date (creation-time)	Created On: (REQ.CREATION_DATE)	PPM	
✗ Summary (name)	Summary: (REQ.DESRIPTION)	Bidirectional	
✗ Severity (severity)	Severity: (REQ.SEVERITY)	Bidirectional	<a href="#">Map Values</a>
✗ Detected By (detected-by)	Created By: (REQ.CREATED_BY)	QC/ALM	
✗ Priority (priority)	Defect Priority: (REQ.DEFECT_PRIORITY)	PPM	<a href="#">Map Values</a>
✗ Actual Fix Time (actual-fix-time)	Actual Fix Time (days): (REQD.ACTUAL_FIX_TIME)	Bidirectional	
✗ Estimated Fix Time (estimated-fix-time)	Estimated Fix Time (days): (REQD.ESTIMATED_FIX_TIME)	Bidirectional	
✗ Reproducible (reproducible)	Reproducible: (REQ.REPRODUCIBLE)	QC/ALM	<a href="#">Map Values</a>
✗ Detected in Version (detection-version)	Detected in Version: (REQ.DETECTION_VERSION)	QC/ALM	
✗ Closed in Version (closing-version)	Closed in Version: (REQD.CLOSING_VERSION)	QC/ALM	
✗ Description (description)	Detailed Description: (REQD.DEFECT_DESCRIPTION)	Bidirectional	
✗ Assigned To (owner)	QC/ALM Assigned To User (REQ.KNTA_QC_DEFECT_ASSIGNED_TO)	QC/ALM	
✗ Closing Date (closing-date)	Closed on: (REQD.CLOSING_DATE)	QC/ALM	
✗ Comments (dev-comments)	Developer Comments: (REQD.DEV_COMMENTS)	Bidirectional	
✗ Status(status)	Request Status: (REQ.STATUS_ID)	PPM	

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- e. Save the change to this integration configuration.

## Synchronizing Memo Fields from HP ALM Defects or Requirements as HTML Reference Attachments to PPM Requests

Starting from version 9.22, for any new defect or requirement that is created in HP ALM version 11.00 (or later), each of the memo fields (that are mapped to PPM request text fields on the Manage Application Change integration landing page in PPM Center) in the defect or requirement will be saved as an html reference attachment to the PPM request after you perform ALM to PPM synchronization. You can find all html attachments in the References section of a PPM request.

The HTML file name follows this format: <ALM\_Entity\_Field\_Name>.html, and in the description of the html file, a label in the format of "The content of memo field '<Label Name>' in ALM/QC entity". For example, description.html.

- Attached Documents					
	Name	Size	Author	Added By	Date
<a href="#">Details</a>	<a href="#">description.html</a> The content of memo field "Description" in ALM/QC entity	118 B	-	Admin User	10/22/13
<a href="#">Details</a>	<a href="#">user-25.html</a> The content of memo field "NOTE1" in ALM/QC entity	2 KB	-	Admin User	10/22/13

If a memo field is changed or updated in HP ALM, the html attachment file to PPM request is updated after next synchronization.

This enhancement ensures that a full version of the content from each of the ALM defect or requirement memo fields is available for users to view when the corresponding PPM request text fields contain confusing html tags after synchronization. This is especially helpful when ALM defect or requirement memo fields contain 4000+ bytes, because no text will be truncated in the html attachment files after synchronization. All content of memo fields will be synchronized as HTML attachments, and any update from ALM entities will also update the PPM request attachment files after next synchronization.

For existing PPM requests that contain 4000+ bytes in any of the mapped text fields, after you upgrade PPM Center to version 9.22, when you perform ALM to PPM synchronization, the system compares the content contained in the PPM request text field against the first 4000 bytes of the content in the ALM memo field (stored in ALM database) to see if any update has been made. If yes, an html reference attachment file will be generated for each of the ALM defect or requirement memo fields and synchronized to the PPM request; otherwise no html attachment file will be generated.

Note that the content in mapped PPM request text fields remain the same after you upgrade PPM Center to version 9.22.

# Certifications

The following certifications are included in PPM Center version 9.22:

- Support for CA SiteMinder 12

For instructions about integrating PPM Center with CA SiteMinder, see the *Installation and Administration Guide*. However, note the following differences for CA SiteMinder 12:

- In the "*Requirements for Integrating with SiteMinder*" section (page 243),
  - CA SiteMinder version 6.0 or 12.0 (for both SSO and mixed modes) is installed and functioning correctly
- In the "*Configuring PPM Center for Integration with SiteMinder*" section,
  - Step b of Step 2, add "(Mixed mode only)" as well as the following note (page 244):

**Note:** SiteMinder native dll files are available in both 32-bit and 64-bit versions. PPM Center requires that the version of SiteMinder native dll files be consistent with the version of JDK software installed on PPM Center, otherwise PPM Center may fail loading these local native code. For example, if you use 32-bit JDK software, make sure you use 32-bit version of SiteMinder native dll files as well.

- PPM Center version 9.22 is certified on HP Cloud Services for the CentOS 6 Server (64-bit) operating system.

This is the only operating system PPM Center version 9.22 is certified for when running a PPM server in the HP Cloud Services environment.

- Support for Microsoft® Windows® 8 Enterprise Edition (both 32- and 64-bit) as PPM Center client platform
- Support for Internet Explorer 10 (compatible mode ONLY) on the following PPM Center client platforms:
  - Microsoft® Windows® 7 Enterprise Edition (both 32-bit and 64-bit)
  - Microsoft® Windows® 8 Enterprise Edition (both 32-bit and 64-bit)
- Support for HP ElitePad as PPM Center client device

- Service Manager version 9.32 support for PPM Center integrations with Service Manager
- Universal CMDB version 10.x support for PPM Center integrations with Universal CMDB
- HP Application Lifecycle Management version 11.52 support for PPM Center integrations with HP Application Lifecycle Management
- Included Swedish in MLU support

For details about deploying the Swedish language pack, see the updated *Language Pack Release Notes* for PPM Center 9.22 (dated January 2014).

For details, see the *System Requirements and Compatibility Matrix*.

## Fixes

The following fixes are included in PPM Center version 9.22:

## Accelerators

Tracking Number	Problem Description
4644124871	Error when trying to open the Oracle Apps Environments in PPM Workbench after upgrading PPM Center to version 9.14.0005. (QCCR1L51214)

## Costing

Tracking Number	Problem Description
4639559022	In Financial Summary one of the user data fields is configured to be a drop-down list and some of the values contain an "&" sign. When creating a new line and selecting such a value, it shows "&," instead of "&" . (QCCR1L46819)
4644806198	Unable to execute JDBC batch update when running kGenFiscalPeriods.sh. (QCCR1L 51307)
4644893295	Error when using Web Services to update benefit line user data field that has a multi-select validation. (QCCR1L51612)

## Dashboard

Tracking Number	Problem Description
4642117882	Some elements in the header are still displayed in French after the French language pack is disabled. (QCCR1L51236)
4645629745 4645284386	Unknown error when trying to export a portlet to Excel. (QCCR1L51919)
4645396654	Error when opening the dashboard with many modules present. (QCCR1L52457)



## Documentation

Tracking Number	Problem Description
4644297403	<p>The parameter WEB_CACHE_DIR was not documented. (QCCR1L50667)</p> <p><b>Solution:</b> Add the description of the parameter WEB_CACHE_DIR in <i>Installation and Administration Guide</i>.</p> <p>For detailed information of this parameter, see <a href="#">"The WEB_CACHE_DIR parameter was not documented"</a> on page 272.</p>
4644430992	<p>Performance issue when Oracle DB parameter optimizer_mode is not set to ALL_ROWS. (QCCR1L50935)</p> <p><b>Solution:</b> Add the description of the Oracle database parameter optimizer_mode in <i>Installation and Administration Guide</i>.</p> <p>For detailed description of this parameter, see <a href="#">"Oracle database parameter optimizer_mode not documented"</a> on page 274.</p>
4644611067	<p>Question on cost rule precedence for "task planned cost". (QCCR1L51266)</p> <p><b>Solution:</b> Add the description about the cost factor "role" that applies to the entity "task planned cost" in <i>HP Financial Management User's Guide</i>.</p> <p>For detailed information, see <a href="#">"Insufficient description about the cost factor "role" that applies to the entity "task planned cost" on page 269.</a></p>
4645226336	<p>Issue with the token REQUEST_SUB_TYPE_ID. (QCCR1L51901)</p> <p><b>Solution:</b> Correct the name of the token REQUEST_SUB_TYPE_ID into REQUEST_SUBTYPE_ID in <i>Commands, Tokens, and Validations Guide and Reference</i>.</p> <p>For more information, see <a href="#">"Incorrect name of the REQUEST_SUB_TYPE_ID token"</a> on page 267.</p>

Tracking Number	Problem Description
N/A	<p>Password issue when using Private Key Authentication with Secure Shell with RSA keys. (QCCR1L52093)</p> <p><b>Solution:</b> Clarify the confusing requirement about password when using Private Key Authentication with Secure Shell with RSA key in <i>Installation and Administration Guide</i>.</p> <p>For detailed explanation of password requirement, see <a href="#">"Confusing requirement about password when using Private Key Authentication with Secure Shell with RSA keys"</a> on page 272.</p>
4645635516	<p>Legend of work plan Gantt view is not documented. (QCCR1L52266)</p> <p><b>Solution:</b> Add the description about the Gantt legend of a work plan in <i>HP Project Management User's Guide</i>.</p> <p>For detailed information, see <a href="#">"Legend of work plan Gantt view not documented"</a> on page 279.</p>
N/A	<p>Improper Oracle database settings are recommended. (QCCR1L52311)</p> <p><b>Solution:</b> Correct the improper settings for Oracle database properties in <i>Language Pack Release Notes</i>.</p> <p>For information about the proper settings, see <a href="#">"Improper Oracle database settings recommended"</a> on page 276.</p>
4645866300	<p>The description for the parameter WF_DISABLE_DELEGATE_DECISION_STEP is not documented. (QCCR1L52549)</p> <p><b>Solution:</b> Add the description for the parameter WF_DISABLE_DELEGATE_DECISION_STEP in <i>Installation and Administration Guide</i>.</p> <p>For detailed information of this parameter, see <a href="#">"Missing description for the WF_DISABLE_DELEGATE_DECISION_STEP parameter"</a> on page 275.</p>

Tracking Number	Problem Description
N/A	<p>"Task 17: Prepare a Back Out Plan" should be a mandatory task. (QCCR1L52588)</p> <p><b>Solution:</b> Modify the content for this task in <i>Upgrade Guide</i>.</p> <p>For the modified content of this task, see <a href="#">"Task 17 (Prepare a Back Out Plan) shall be a mandatory task" on page 283</a>.</p>
N/A	<p>Insufficient information about &lt;Op_Reports_Home&gt; folder. (QCCR1L52739)</p> <p><b>Solution:</b> Add the description of this folder in <i>Operational Reporting Administrator's Guide</i>.</p> <p>For detailed description, see <a href="#">"Insufficient information about &lt;Op_Reports_Home&gt; folder" on page 278</a>.</p>
4646255335	<p>The parameter MAX_STATEMENT_CACHE_SIZE is out of date. (QCCR1L52900).</p> <p><b>Solution:</b> Remove the description about this parameter from the <i>Installation and Administration Guide</i>, because this parameter is not used any more since PPM Center version 6.0.</p>
N/A	<p>The value suggested for the parameter SS_INDEX_LOCATION is incorrect.</p> <p><b>Solution:</b> Correct the suggested value for the parameter in <i>Operational Reporting Administrator's Guide</i>.</p> <p>For the correct value, see <a href="#">"Incorrect Value Suggested for SS_INDEX_LOCATION" on page 278</a></p>
4646005111	<p>OOTB workflow ALM - Request For Change (RFC) cannot be integrated with ALM 11.x directly, it should be changed before integration. (QCCR1L52883)</p> <p><b>Solution:</b> Create a documentation to describe detailed steps for integrating this workflow with ALM 11.x. For detailed documentation, see <a href="#">"Setting Up Integration Between PPM Center 9.2x and HP ALM 11.52 from Scratch" on page 291</a>.</p>

Tracking Number	Problem Description
4645413698	<p>Users request to add documentation on ksc_get commands related to QC/ALM. (QCCR1L52112)</p> <p><b>Solution:</b> Add documentation on ksc_get special commands. See <a href="#">"Missing documentation on ksc_get commands related to QC/ALM" on page 283</a>.</p>

## HP Demand Management

Tracking Number	Problem Description
4642926781	Table Component issue after upgrading PPM Center to 9.14.0003. (QCCR1L49389)
4644575713	Unable to create a project from a proposal that has multiple project managers in the Project Manager field. (QCCR1L51323)
4644421341	Error on the details page of a request type that is in a particular request status. (QCCR1L51406)
4645179718	Request Type rules do not work if a non-editable drop-down field is set to blank. (QCCR1L51759)
4645148015	Security Groups that do not have Submit Reports access are still displayed in Allowed Security Groups when the option "Always restrict new Security Groups" is checked. (QCCR1L51986)
4645534132	Issue with Export to Excel of a Text Area field when exporting results of Request Advanced Search. (QCCR1L52155)
4645885318	Error when using a drop-down list validation for a customized field on Project Details page. (QCCR1L52576)
4645660755	Web Services error when an On Page Load is used. (QCCR1L52658)
4645549751	Sorting issue with Sub-workflows in Workflow Step Sources menu in PPM Workbench. (QCCR1L52676)

## HP Deployment Management

Tracking Number	Problem Description
4639164795	Error sometimes appears in the logs when migrating request types. (QCCR1L46572)

## Integrations

Tracking Number	Problem Description
N/A	String format error during MSP upload. (QCCR1L51603)
4645684084	Recompiling JSP files fails with an error. (QCCR1L52396)

## Platform

Tracking Number	Problem Description
4638721774 4643892194	Accessing users or security groups in PPM Workbench is slow in PPM Workbench. (QCCR1L50227)
4643508536	User data are displayed differently depending on user location. (QCCR1L50700)
4643941091	Issue with clustered environment after upgrading PPM Center to version 9.14. (QCCR1L50809)
4644570538	PPM Center outages several times a day with error after migration to version 9.20. (QCCR1L51097)
4644648592	Decimal values are not allowed when setting cookies expiration date. (QCCR1L51392)
4644249880	Error when creating requests from Web Services. (QCCR1L51489)
4645010165	Password is displayed in the URL when login fails after upgrading PPM Center to version 9.14. (QCCR1L51505)
4644881633	Issue with cross-site scripting. (QCCR1L51605)

Tracking Number	Problem Description
4644875112	After upgrading PPM Center from version 9.14 to version 9.20, the environment check for Telnet fails when connecting to a Microsoft telnet server. (QCCR1L51668)
4644495796	Scheduled Start Date and Scheduled Finish Date are not displayed as per locale setting in Project Cost Details report. (QCCR1L51810)
4644953804	Heap dumps caused by Out of Memory. (QCCR1L51863)
4644249880	Error when trying to create requests via Web Services. (QCCR1L52429)
4644986531	Performance issue with the Project Overview page and the dashboard. (QCCR1L52637)
4645829888	Changes in the KNTA_I18N_Resources table and the resources files are not reflected on User Interface. (QCCR1L52660)

## HP Program Management

Tracking Number	Problem Description
4644592933	When you export the Program Overview page to Excel, the Excel files do not display the Approved Budget field. (QCCR1L51007)

## HP Project Management

Tracking Number	Problem Description
4638771066	My Task portlet is not sorting tasks by start or finish date correctly. (QCCR1L46151)
4643110419	Error when clicking <b>Approve</b> on a Project Details page. (QCCR1L49612)
3605375245	The message "Percent Complete Cannot be 0 when actual Effort>0" is displayed when actual effort or scheduled effort is less than 1%. (QCCR1L50257)
4644220980	The Search Projects page is blank after closing the project search warning message. (QCCR1L50828)

Tracking Number	Problem Description
4644926509	Task user data is not populated with default value in version 9.14.0006. (QCCR1L51446)
4645101749	Project Details page does not fit to the window and does not show horizontal scroll bar on IE browser. (QCCR1L51682)
4644977648	Inconsistent behavior of the project progress bar in PPM Center version 9.20. (QCCR1L51723)
4644900789	Error when clicking workflow action buttons on Project Details page. (QCCR1L51817)
4645118049	Creating projects from proposals by using special command ksc_create_project fails. (QCCR1L51833)
4643764019	When a task in workplan is updated by clicking <b>Edit &gt; Set Status</b> , it is impossible to perform any action on workplan unless the status update is completed. (QCCR1L51969)
4645646064	The <b>Save</b> or <b>Done</b> button do not work when a Summary Task owner saves an edited task. (QCCR1L52501)

## HP Resource Management

Tracking Number	Problem Description
4643228970	Actual Effort and Scheduled Effort are displayed in Analyze Assignment Load portlet after you customize the portlet preference to show Actual Effort only. (QCCR1L49484)
4643663763	Total assignments is calculated incorrectly when project's work load is set to be calculated from workplan. (QCCR1L50193)
4644076391	Notification Cleanup Service does not cover the ppm_notification_details table (QCCR1L51407)
4645130272	When a project is set to calculate workload from work plan tasks, the allocation load of the project's staffing profile is incorrectly calculated. (QCCR1L51777)
4644448634	When clicking <b>Save</b> after changing the region for an Org Unit, the change is not saved. (QCCR1L52038)

Tracking Number	Problem Description
4644592768	Analyze Assignment Load portlet is not working correctly. (QCCR1L52065)
4645549893	Unable to cancel a staffing profile when it is linked to a proposal that is in "Cancelled" status. (QCCR1L52233)
4644823293	The value of the user data field that uses "Date" validation is displayed incorrectly when the value is input manually instead of using the date selector. (QCCR1L52301)

## HP Time Management

Tracking Number	Problem Description
4643624774	Blocking message pops up when exporting time sheets to Excel via HTTPS after upgrading PPM Center to version 9.14.0002. (QCCR1L50117)
4645017651	Delegate's delegate could see the time sheets to approve, however, error occurs when trying to approve the time sheets. (QCCR1L51550)
4644769490	Unable to enter 95% in the %Complete field of a time sheet. (QCCR1L52097)



# Chapter 6: Enhancement, Integrations, Certifications, and Fixes in PPM Center 9.21

- ["Enhancements"](#)
- ["Integrations"](#)
- ["Certifications"](#)
- ["Fixes"](#)

## Enhancements

The following enhancements are included in PPM Center version 9.21:

### HP Project Management

- ["Two New Checkboxes Added on the Project Settings Page" on the next page](#)

### Dashboard

- ["Expand and Collapse Buttons Added back to Portlets on Private Dashboard Pages" on page 189](#)

### MLU Support

- ["Improved Behavior of List Auto-Complete Fields in MLU" on page 190](#)

### HP Time Management

- ["New Option for Copying Time Sheet: Include Charge Codes" on page 190](#)
- ["RESTful Web Services Available with the HP Time Management Module" on page 192](#)

### Integrations

- ["Enhanced Agile Manager Integration Plug-in for PPM" on page 235](#)

## Two New Checkboxes Added on the Project Settings Page

The following checkboxes are added to the **Financial Management** section under the Cost and Effort tab on the Project Settings page:

- The **Allow manual adjustment on the actual labor cost** checkbox is added under the **Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)** checkbox.
- The **Allow manual adjustment on the actual non-labor cost** checkbox is added under the **Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)** checkbox.

**Financial Management**

☒ Enable Financial Management for work plan

**Planned labor costs on the work plan will be:**

☒ Automatically calculated based on scheduled effort and rates

☐ Manually entered on tasks and rolled up to summary tasks

**Actual labor costs on the work plan will be:**

☒ Automatically calculated based on actual effort and rates

☐ Manually entered on tasks and rolled up to summary tasks

**Costs on the Financial Summary**

☐ Calculate the forecasted labor costs from the staffing profile.

☐ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)

☐ Allow manual adjustment on the actual labor cost

☐ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)

☐ Allow manual adjustment on actual non-labor cost

Selecting the **Enable Financial Management for work plan** checkbox enables the two newly added checkboxes and their parent ones.

Selecting the parent checkboxes of the two newly added ones enables the child checkboxes.

If you create new projects after upgraded to PPM Center version 9.21, refer to the following scenarios to decide when you need to select these checkboxes:

- If you have the following checkboxes unselected,

☐ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)

☐ Allow manual adjustment on the actual labor cost

Actual labor cost cannot be calculated from the work plan and time sheets, but you can edit the actual labor cost in the cost lines you have added.

- If you have the following checkbox selected,

- ☒ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☐ Allow manual adjustment on the actual labor cost

Actual labor cost can be calculated from the work plan and time sheets, but you cannot edit the actual labor cost in the cost lines you have added.

- If you have the following checkboxes selected,

- ☒ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☒ Allow manual adjustment on the actual labor cost

Actual labor cost can be calculated from the work plan and time sheets, and you can edit the actual labor cost in the cost lines you have added.

- If you have the following checkboxes unselected,

- ☐ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)
- ☐ Allow manual adjustment on actual non-labor cost

Actual non-labor cost cannot be calculated from the work plan, but you can edit the actual non-labor cost in the cost lines you have added.

- If you have the following checkboxes selected,

- ☒ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☐ Allow manual adjustment on the actual labor cost
- ☒ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)
- ☐ Allow manual adjustment on actual non-labor cost

Actual non-labor cost can be calculated from the work plan, but you cannot edit the actual non-labor cost in the cost lines you have added.

In this case, neither actual labor cost nor actual non-labor cost in the cost lines you have added can be edited.

**Note:** Error message window would pop up if you select the checkbox **Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)** without selecting the checkbox **Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)**.

- If you have the following checkboxes selected,

- ☒ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☐ Allow manual adjustment on the actual labor cost
- ☒ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)
- ☒ Allow manual adjustment on actual non-labor cost

Actual non-labor cost can be calculated from the work plan, and you can edit the actual non-labor cost in the cost lines you have added.

In this case, you cannot edit the actual labor cost in the cost lines you have added.

- If you have the following checkboxes selected,

- ☒ Calculate the actual labor costs from the work plan and time sheets. (Note: Financial Management for the work plan must be enabled.)
- ☒ Allow manual adjustment on the actual labor cost
- ☒ Calculate the actual non-labor costs from the work plan. (Note: Financial Management for the work plan must be enabled.)
- ☒ Allow manual adjustment on actual non-labor cost

Actual labor cost can be calculated from the work plan and time sheets, actual non-labor cost can be calculated from the work plan, and you can edit both actual labor cost and actual non-labor cost in the cost lines you have added.

By default, the two new checkboxes and their parent checkboxes are not enabled. In this case, actual labor cost and actual non-labor cost can only be manually entered.

If you upgrade PPM Center to version 9.21 from versions earlier than 9.14.0005 (including 9.14.0005), you should run an additional upgrade script `batch_update_cost_edit.sql` located in the `<PPM_Home>/bin` directory, so that you can have the same behavior in project financial summaries as you had before the upgrade. After running the script, the settings of these checkboxes would be changed automatically as follows:

- If the parent checkboxes of the added checkboxes were not selected before the upgrade, the two added checkboxes would not be selected neither after the upgrade.
- If the parent checkboxes of the added checkboxes were selected before the upgrade, the two added checkboxes would also be selected after the upgrade.
- If only one of the parent checkboxes was selected before the upgrade, only its corresponding child checkbox would be selected after the upgrade.

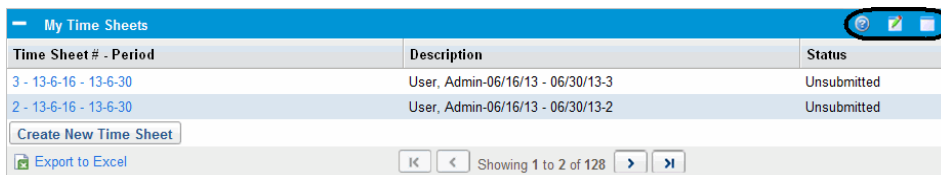
If you upgrade PPM Center to version 9.21 from versions later than 9.14.0005, to avoid overriding your previous settings, DO NOT run the additional script `batch_update_cost_edit.sql`.

## Expand and Collapse Buttons Added back to Portlets on Private Dashboard Pages

The expand and collapse buttons (+ and -) were removed from portlets by design in version 9.20. To improve usability and user experience, the expand and collapse buttons are added back to portlets on private Dashboard pages.

Note the following differences:

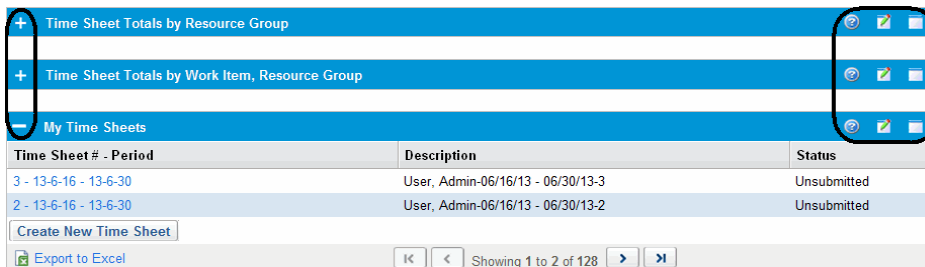
- When loading a private Dashboard page asynchronously, the portlet buttons (**Help**, **Edit**, and **Maximize**) are displayed when the portlet is expanded:



They are not displayed when a portlet is collapsed:



- When loading a private Dashboard page synchronously, the portlet buttons are always displayed, regardless of a portlet being expanded or collapsed.



**Note:** Starting from PPM Center version 9.20, by default, dashboard pages are loaded asynchronously. To change the loading mode of dashboard pages, go to the Administration Console and set the `dashboard.Asynchronous-Loading-Enabled` parameter value to `false`. For details, see the *Installation and Administration Guide* for PPM Center version 9.20.

## Improved Behavior of List Auto-Complete Fields in MLU

Starting from PPM Center version 9.21, custom drop-down fields and list auto-complete fields behave the same in the MLU, as follows:

If a custom drop-down/auto-complete list has multiple values, then a drop-down/list auto-complete field with an existing value is shown in your current session language, even if your session language is different than the language in which the value was originally selected from the drop-down/auto-complete list.

**Example.** A custom drop-down/auto-complete list with multiple values has been created for requests. A user logged on to PPM Center in a German language session creates a request, and in doing so, selects a value for the custom drop-down/auto-complete list. A different user logs on to PPM Center in a Korean language session and opens the new request, which was defined in German. The value in the drop-down/list auto-complete field is shown in Korean.

## New Option for Copying Time Sheet: Include Charge Codes

A new option **Include Charge Codes** is available on the Copying Time Sheet page.

### Copy Time Sheet

•Time Period: 7/1/13 - 7/15/13  
•Resource: Admin User  
•Description: Admin User - 7/1/13 - 7/15/13

### Include in Copy

Please note that current business rules may not allow some of the existing items on the new time sheet. These items will not be copied to the new time sheet.

### Include the following data on the new time sheet:

- ☐ Include Closed Items
- ☐ Include Notes
- ☒ Include Disabled Activities
- ☐ Include Charge Codes

Copy

Cancel

**Note:** By default, this option is not selected.

In previous versions, when you create a time sheet by copying an existing time sheet, the charge codes of the existing time sheet are not copied. In version 9.21, selecting this option enables you to copy the charge codes of an existing time sheet into a new time sheet.

If you check this option to copy charge codes from an existing time sheet, they take precedence over charge codes that are set in work allocations, time sheet policies, and override rules.

If the charge codes of the existing time sheet are disabled, they are still copied into the new time sheet.

The names of the charge codes in the newly copied time sheet will be automatically updated when the names are changed.

## ***Limitation***

There are no validations required when charge codes are copied from existing time sheets. If, as an administrator, you want to change access grants on the charge codes that have been used in the existing time sheets, you may have to inform users that they should not check this option when they copy those time sheets.

## RESTful Web Services Available with the HP Time Management Module

The following enhancements are included in HP Time Management RESTful Web services in version 9.21:

- ["Enhanced TimePeriod Data Type" below](#)
- ["Enhanced TimeSheetLine Data Type" on the next page](#)

### ***Enhanced TimePeriod Data Type***

The `TimePeriod` data type is enhanced in version 9.21 by adding the following properties:

- `perId`
- `nextId`

The `TimePeriod` data type is enhanced as follows:

Property	Type	Description	Required?	Default Value
<code>id</code>	Long	Time period ID (system-generated unique identifier)	Yes	N/A
<code>preId</code>	Long	Previous time period ID	Yes	N/A
<code>nextId</code>	Long	Next time period ID	Yes	N/A
<code>type</code>	Int	ID of the time period type: 1: Weekly 2: Bi-Weekly 3: Semi-Monthly 4: Monthly	Yes	N/A
<code>startDate</code>	XML Gregorian Calendar	Start date of the time period	Yes	N/A
<code>endDate</code>	XML Gregorian Calendar	End date of the time period	Yes	N/A



## Updated XML Messages

As the TimePeriod data type is updated, the followings are updated accordingly:

- ["Response body of the operation to get a time period" below](#)
- ["Response body of the operation to get time periods" below](#)

### ***Response body of the operation to get a time period***

```
<ns2:period xmlns:ns2="http://www.hp.com/ppm/tm/">
  <id>100096</id>
  <preId>100095</preId>
  <nexId>100097</nexId>
  <sequence>16</sequence>
  <type>3</type>
  <startDate>2013-03-16T00:00:00.000-07:00</startDate>
  <endDate>2013-03-31T23:59:59.000-07:00</endDate>
</ns2:period>
```

### ***Response body of the operation to get time periods***

```
<ns2:periods xmlns:ns2="http://www.hp.com/ppm/tm/">
  <period>
    <id>100096</id>
    <preId>100095</preId>
    <nexId>100097</nexId>
    <sequence>16</sequence>
    <type>3</type>
    <startDate>2013-03-16T00:00:00.000-07:00</startDate>
    <endDate>2013-03-31T23:59:59.000-07:00</endDate>
  </period>
</ns2:periods>
```

## Enhanced TimeSheetLine Data Type

The TimeSheetLine data type is enhanced by introducing the following two data types into the Time Management module in version 9.21:

- **"ChargeCodes "**: This data type represents the detailed information about all the charge codes of a time sheet line.
- **"tslChargeCodes "**: This data type represents the detailed information about a charge code of a time sheet line.

## ChargeCodes

Property	Type	Description	Required?	Default Value
updateChargeCodeFlag	Boolean	Indicate whether or not charge codes of a time sheet need to be updated.	No	false
requireChargeCodeFlag	Boolean	Indicate whether or not charge codes of a time sheet are required.	No	false
tslChargeCodes	TSLChargeCode	Charge code information of a time sheet line	No	N/A

## tslChargeCodes

Property	Type	Description	Required?	Default Value
chargePercent	float	The charge code value	Yes	0
id	String	The charge code ID	Yes	N/A
name	String	The charge code name	No	N/A
description	String	The charge code description	No	N/A
enabled	Boolean	Indicate whether or not the charge code is enabled.	No	N/A
chargeCodeCategory	String	The charge code category	No	N/A
departmentCode	String	The charge code department	No	N/A

clientCode	String	The client code of the charge code	No	N/A
------------	--------	------------------------------------	----	-----

As a result, the TimeSheetLine data type is enhanced as follows:

Property	Type	Description	Required?	Default Value
id	Long	ID of the time sheet line	Yes	N/A
workItemId	String	ID of the work item	Yes	N/A
workItemType	String	Type of the work item	Yes	N/A
workItemName	String	Name of the work item	No	N/A
workItemDescription	String	Description of the work item	No	N/A
status	Int	Status of the time sheet line	No	N/A
approver	List<Approver>	Approvers of the time sheet line	No	N/A
actuals	List<Actual>	Actuals of time sheet lines	No	N/A
workUnit	WorkUnit	Work unit of the time sheet	No	N/A
chargeCodes	ChargeCodes	Charge codes of the time sheet line	No	N/A
workItemSetId	String	SetId of the work item	Yes	N/A
notes	List<Note>	Notes of time sheet lines	No	N/A

## Updated XML Messages

The followings are updated accordingly by the enhanced TimeSheetLine data type:

- ["Request body of the operation to create a time sheet " below](#)
- ["Request body of the operation to update a time sheet " on page 200](#)
- ["Response body of the operation to get a time sheet line " on page 203](#)
- ["Response body of the operation to get time sheet lines " on page 206](#)

### ***Request body of the operation to create a time sheet***

```
<TimeSheet>
  <periodId>100099</periodId>
  <resourceId>1</resourceId>
  <sequence>1</sequence>
  <status>1</status>
  <description>User, Admin - 13-5-1 - 13-5-15 - sample for document
</description>
  <policies>
    <policy>
      <name>AllowMultipleTimeSheets</name>
      <value>true</value>
    </policy>
    <policy>
      <name>MaximumHoursPerDay</name>
      <value />
    </policy>
    <policy>
      <name>BucketShowLevel</name>
      <value>DAY</value>
    </policy>
    <policy>
      <name>BucketReportMethod</name>
      <value>HOURS</value>
    </policy>
    <policy>
      <name>HoursInPeriodType</name>
      <value>WORKDAY</value>
    </policy>
    <policy>
      <name>HoursInPeriod</name>
      <value>0.0</value>
    </policy>
    <policy>
      <name>NotifyDelinquentTimeSheet</name>
      <value>false</value>
    </policy>
  </policies>
</TimeSheet>
```

```
</policy>
<policy>
  <name>MaximumHoursPerDay</name>
  <value />
</policy>
<policy>
  <name>MaximumHoursPerTimeSheet</name>
  <value />
</policy>
<policy>
  <name>MinimumHoursPerTimeSheet</name>
  <value />
</policy>
<policy>
  <name>MaximumPercentPerTimeSheet</name>
  <value />
</policy>
<policy>
  <name>MinimumPercentPerTimeSheet</name>
  <value />
</policy>
<policy>
  <name>EnforcementLevelError</name>
  <value>false</value>
</policy>
<policy>
  <name>PeriodHoursCalcTypeCode</name>
  <value />
</policy>
<policy>
  <name>WorkdayHours</name>
  <value />
</policy>
<policy>
  <name>ReqActivitiesRequiredFlag</name>
  <value>false</value>
</policy>
<policy>
  <name>TskActivitiesRequiredFlag</name>
  <value>false</value>
</policy>
<policy>
  <name>PrjActivitiesRequiredFlag</name>
  <value>false</value>
</policy>
<policy>
  <name>PkgActivitiesRequiredFlag</name>
  <value>false</value>
</policy>
<policy>
  <name>MiscActivitiesRequiredFlag</name>
  <value>false</value>
```

```

</policy>
<policy>
  <name>ReqWorkItemEnabledFlag</name>
  <value>true</value>
</policy>
<policy>
  <name>TskWorkItemEnabledFlag</name>
  <value>true</value>
</policy>
<policy>
  <name>PrjWorkItemEnabledFlag</name>
  <value>true</value>
</policy>
<policy>
  <name>PkgWorkItemEnabledFlag</name>
  <value>true</value>
</policy>
<policy>
  <name>MscWorkItemEnabledFlag</name>
  <value>true</value>
</policy>
<policy>
  <name>AllowEmptyLineFlag</name>
  <value>1</value>
</policy>
</policies>
<notes>
  <note>
    <id>159842</id>
    <description>document sample - time sheet notes sample for the document
    </description>
    <type>TS</type>
  </note>
</notes>
<timeSheetLines>
  <workItemId>3282935</workItemId>
  <workItemType>PROJECT</workItemType>
  <actuals>
    <actual>
      <activityId>30067</activityId>
      <efforts>
        <dayNum>10</dayNum>
        <effort>4.0</effort>
      </efforts>
      <efforts>
        <dayNum>15</dayNum>
        <effort>6.0</effort>
      </efforts>
      <activityType>added</activityType>
    </actual>
    <actual>
      <activityId>30076</activityId>

```

```

    <efforts>
      <dayNum>7</dayNum>
      <effort>10.0</effort>
    </efforts>
    <activityType>added</activityType>
  </actual>
  <actual>
    <activityId>30131</activityId>
    <activityType>added</activityType>
  </actual>
  <actualsType>activity</actualsType>
</actuals>
<chargeCodes>
  <updateChargeCodeFlag>true</updateChargeCodeFlag>
  <requireChargeCodeFlag>false</requireChargeCodeFlag>
  <tslChargeCodes>
    <chargePercent>0.0</chargePercent>
    <chargeCode>
      <id>100002</id>
    </chargeCode>
  </tslChargeCodes>
  <tslChargeCodes>
    <chargePercent>10.0</chargePercent>
    <chargeCode>
      <id>100003</id>
    </chargeCode>
  </tslChargeCodes>
  <tslChargeCodes>
    <chargePercent>90.0</chargePercent>
    <chargeCode>
      <id>100001</id>
    </chargeCode>
  </tslChargeCodes>
</chargeCodes>
<workItemSetId>60000</workItemSetId>
<notes>
  <note>
    <id>159841</id>
    <description>time sheet restful notes sample. it is used for sample only
- update12334</description>
    <type>TSL</type>
  </note>
</notes>
</timeSheetLines>
<timeSheetLines>
  <workItemId>217037</workItemId>
  <workItemType>TASK</workItemType>
  <status>1</status>
  <actuals>
    <actual>
      <efforts>
        <dayNum>7</dayNum>

```

```

        <effort>9.0</effort>
      </efforts>
      <efforts>
        <dayNum>10</dayNum>
        <effort>7.0</effort>
      </efforts>
      <efforts>
        <dayNum>15</dayNum>
        <effort>8.0</effort>
      </efforts>
    </actual>
    <actualsType>common</actualsType>
  </actuals>
</workUnit>
  <percentComplete>80</percentComplete>
</workUnit>
<chargeCodes>
  <updateChargeCodeFlag>true</updateChargeCodeFlag>
  <requireChargeCodeFlag>false</requireChargeCodeFlag>
  <tslChargeCodes>
    <chargePercent>0.0</chargePercent>
    <chargeCode>
      <id>100002</id>
    </chargeCode>
  </tslChargeCodes>
  <tslChargeCodes>
    <chargePercent>0.0</chargePercent>
    <chargeCode>
      <id>100003</id>
    </chargeCode>
  </tslChargeCodes>
  <tslChargeCodes>
    <chargePercent>100.0</chargePercent>
    <chargeCode>
      <id>100001</id>
    </chargeCode>
  </tslChargeCodes>
</chargeCodes>
<workItemSetId>31600</workItemSetId>
<notes />
</timeSheetLines>
</TimeSheet>

```

### ***Request body of the operation to update a time sheet***

```

<TimeSheet>
  <id>447943</id>
  <periodId>100099</periodId>
  <resourceId>1</resourceId>
  <sequence>1</sequence>
  <status>1</status>

```



```
<description>User, Admin - 13-5-1 - 13-5-15</description>
<notes>
  <note>
    <id>159842</id>
    <description>updated time sheet note</description>
    <type>TS</type>
  </note>
  <note>
    <id>159842</id>
    <description>add time sheet note</description>
    <type>TS</type>
  </note>
</notes>
<timeSheetLines>
  <id>1467788</id>
  <workItemId>3282935</workItemId>
  <workItemType>PROJECT</workItemType>
  <actuals>
    <actual>
      <activityId>30067</activityId>
      <efforts>
        <dayNum>10</dayNum>
        <effort>20.0</effort>
      </efforts>
      <efforts>
        <dayNum>15</dayNum>
        <effort>6.0</effort>
      </efforts>
      <activityType>added</activityType>
    </actual>
    <actual>
      <activityId>30076</activityId>
      <efforts>
        <dayNum>7</dayNum>
        <effort>10.0</effort>
      </efforts>
      <activityType>added</activityType>
    </actual>
    <actual>
      <activityId>30131</activityId>
      <activityType>added</activityType>
    </actual>
    <actualsType>activity</actualsType>
  </actuals>
  <workUnit>
    <id>171904</id>
    <percentComplete>50.0</percentComplete>
  </workUnit>
  <chargeCodes>
```

```
<updateChargeCodeFlag>true</updateChargeCodeFlag>
<requireChargeCodeFlag>false</requireChargeCodeFlag>
<tslChargeCodes>
  <chargePercent>0.0</chargePercent>
  <chargeCode>
    <id>100002</id>
  </chargeCode>
</tslChargeCodes>
<tslChargeCodes>
  <chargePercent>90.0</chargePercent>
  <chargeCode>
    <id>100003</id>
  </chargeCode>
</tslChargeCodes>
</chargeCodes>
<workItemSetId>60000</workItemSetId>
<notes>
  <note>
    <id>159841</id>
    <description>updated tsl notes</description>
    <type>TSL</type>
  </note>
  <note>
    <id>159841</id>
    <description>add tsl notes</description>
    <type>TSL</type>
  </note>
</notes>
</timeSheetLines>
<timeSheetLines>
  <id>1467791</id>
  <workItemId>217037</workItemId>
  <workItemType>TASK</workItemType>
  <status>1</status>
  <actuals>
    <actual>
      <efforts>
        <dayNum>7</dayNum>
        <effort>9.0</effort>
      </efforts>
      <efforts>
        <dayNum>10</dayNum>
        <effort>7.0</effort>
      </efforts>
      <efforts>
        <dayNum>15</dayNum>
        <effort>8.0</effort>
      </efforts>
    </actual>
  </actuals>
</timeSheetLines>
```

```

        <actualsType>common</actualsType>
    </actuals>
    <workUnit>
        <percentComplete>60</percentComplete>
    </workUnit>
    <chargeCodes>
        <updateChargeCodeFlag>true</updateChargeCodeFlag>
        <requireChargeCodeFlag>false</requireChargeCodeFlag>
        <tslChargeCodes>
            <chargePercent>80.0</chargePercent>
            <chargeCode>
                <id>100002</id>
            </chargeCode>
        </tslChargeCodes>
        <tslChargeCodes>
            <chargePercent>20.0</chargePercent>
            <chargeCode>
                <id>100001</id>
            </chargeCode>
        </tslChargeCodes>
    </chargeCodes>
    <workItemSetId>31600</workItemSetId>
    <notes />
</timeSheetLines>
</TimeSheet>

```

**Note:** Updating a time sheet does not update its notes and the notes of the time sheet lines.

### ***Response body of the operation to get a time sheet line***

```

<ns2:timeSheetLine xmlns:ns2="http://www.hp.com/ppm/tm/">
    <id>1468301</id>
    <workItemId>3282935</workItemId>
    <workItemType>PROJECT</workItemType>
    <workItemName>MS Mail Strategy</workItemName>
    <workItemDescription>MS Mail Strategy</workItemDescription>
    <status>1</status>
    <approver>
        <id>33877</id>
        <type>UsersTimeApprover</type>
    </approver>
    <approver>
        <id>31448</id>
        <type>UsersTimeApprover</type>
    </approver>
    <approver>
        <id>31476</id>
    </approver>

```

```

    <type>UsersTimeApprover</type>
  </approver>
</approver>
  <id>31446</id>
  <type>UsersTimeApprover</type>
</approver>
</approver>
  <id>31702</id>
  <type>UsersTimeApprover</type>
</approver>
</approver>
  <id>103632</id>
  <type>UsersTimeApprover</type>
</approver>
</approver>
  <id>31777</id>
  <type>UsersTimeApprover</type>
</approver>
<actuals>
  <actual>
    <activityId>30067</activityId>
    <activityName>Execute - Benefits Realisation</activityName>
    <efforts>
      <dayNum>10</dayNum>
      <effort>4.0</effort>
    </efforts>
    <efforts>
      <dayNum>15</dayNum>
      <effort>6.0</effort>
    </efforts>
    <activityType>added</activityType>
  </actual>
  <actual>
    <activityId>30076</activityId>
    <activityName>Execute - Performance Management</activityName>
    <efforts>
      <dayNum>7</dayNum>
      <effort>10.0</effort>
    </efforts>
    <activityType>added</activityType>
  </actual>
  <actual>
    <activityId>30131</activityId>
    <activityName>914 upgrade act1</activityName>
    <activityType>added</activityType>
  </actual>
  <actualsType>activity</actualsType>
</actuals>
<workUnit>

```

```

    <id>171904</id>
    <actualStart>1368514800000</actualStart>
    <actualFinish>0</actualFinish>
    <actualEffort>2508.0</actualEffort>
    <percentComplete>50.0</percentComplete>
    <estimatedFinish>0</estimatedFinish>
    <effortModified>true</effortModified>
  </workUnit>
  <chargeCodes>
    <updateChargeCodeFlag>true</updateChargeCodeFlag>
    <requireChargeCodeFlag>false</requireChargeCodeFlag>
    <tslChargeCodes>
      <chargePercent>0.0</chargePercent>
      <chargeCode>
        <id>100002</id>
        <name>Fixed Price</name>
        <description>Time for activities billed at Fixed Rate</description>
        <enabled>true</enabled>
        <chargeCodeCategory>BILLABLE</chargeCodeCategory>
      </chargeCode>
    </tslChargeCodes>
    <tslChargeCodes>
      <chargePercent>10.0</chargePercent>
      <chargeCode>
        <id>100003</id>
        <name>Non Billable</name>
        <description>Non Billable Activity</description>
        <enabled>true</enabled>
        <chargeCodeCategory>NON_BILLABLE</chargeCodeCategory>
      </chargeCode>
    </tslChargeCodes>
    <tslChargeCodes>
      <chargePercent>90.0</chargePercent>
      <chargeCode>
        <id>100001</id>
        <name>Billable T&M</name>
        <description>Time billed at T&M daily rate</description>
        <enabled>true</enabled>
        <chargeCodeCategory>BILLABLE</chargeCodeCategory>
      </chargeCode>
    </tslChargeCodes>
  </chargeCodes>
  <workItemSetId>60000</workItemSetId>
  <notes>
    <note>
      <id>159986</id>
      <description>time sheet restful notes sample. it is used for sample only -
update12334</description>
      <type>TSL</type>
    </note>
  </notes>

```

```

    <createdBy>1</createdBy>
    <createdDate>2013-04-25T00:09:26.000-07:00</createdDate>
    <lastUpdatedBy>1</lastUpdatedBy>
    <lastUpdatedDate>2013-04-25T00:09:26.000-07:00</lastUpdatedDate>
  </note>
</notes>
</ns2:timeSheetLine>

```

### ***Response body of the operation to get time sheet lines***

```

<ns2:timeSheetLines xmlns:ns2="http://www.hp.com/ppm/tm/">
  <timeSheetLine>
    <id>1468301</id>
    <workItemId>3282935</workItemId>
    <workItemType>PROJECT</workItemType>
    <workItemName>MS Mail Strategy</workItemName>
    <workItemDescription>MS Mail Strategy</workItemDescription>
    <status>1</status>
    <approver>
      <id>33877</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31448</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31476</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31446</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31702</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>103632</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31777</id>
      <type>UsersTimeApprover</type>
    </approver>
    <actuals>
      <actual>
        <activityId>30067</activityId>

```

```

    <activityName>Execute - Benefits Realisation</activityName>
    <efforts>
      <dayNum>10</dayNum>
      <effort>4.0</effort>
    </efforts>
    <efforts>
      <dayNum>15</dayNum>
      <effort>6.0</effort>
    </efforts>
    <activityType>added</activityType>
  </actual>
<actual>
  <activityId>30076</activityId>
  <activityName>Execute - Performance Management</activityName>
  <efforts>
    <dayNum>7</dayNum>
    <effort>10.0</effort>
  </efforts>
  <activityType>added</activityType>
</actual>
<actual>
  <activityId>30131</activityId>
  <activityName>914 upgrade act1</activityName>
  <activityType>added</activityType>
</actual>
  <actualsType>activity</actualsType>
</actuals>
<workUnit>
  <id>171904</id>
  <actualStart>1368514800000</actualStart>
  <actualFinish>0</actualFinish>
  <actualEffort>2508.0</actualEffort>
  <percentComplete>50.0</percentComplete>
  <estimatedFinish>0</estimatedFinish>
  <effortModified>true</effortModified>
</workUnit>
<chargeCodes>
  <updateChargeCodeFlag>true</updateChargeCodeFlag>
  <requireChargeCodeFlag>false</requireChargeCodeFlag>
  <tslChargeCodes>
    <chargePercent>0.0</chargePercent>
    <chargeCode>
      <id>100002</id>
      <name>Fixed Price</name>
      <description>Time for activities billed at Fixed Rate</description>
      <enabled>true</enabled>
      <chargeCodeCategory>BILLABLE</chargeCodeCategory>
    </chargeCode>
  </tslChargeCodes>

```

```

<tslChargeCodes>
  <chargePercent>10.0</chargePercent>
  <chargeCode>
    <id>100003</id>
    <name>Non Billable</name>
    <description>Non Billable Activity</description>
    <enabled>true</enabled>
    <chargeCodeCategory>NON_BILLABLE</chargeCodeCategory>
  </chargeCode>
</tslChargeCodes>
<tslChargeCodes>
  <chargePercent>90.0</chargePercent>
  <chargeCode>
    <id>100001</id>
    <name>Billable T&M</name>
    <description>Time billed at T&M daily rate</description>
    <enabled>true</enabled>
    <chargeCodeCategory>BILLABLE</chargeCodeCategory>
  </chargeCode>
</tslChargeCodes>
</chargeCodes>
<workItemSetId>60000</workItemSetId>
<notes>
  <note>
    <id>159986</id>
    <description>time sheet restful notes sample. it is used for sample only -
update12334
    </description>
    <type>TSL</type>
    <createdBy>1</createdBy>
    <createdDate>2013-04-25T00:09:26.000-07:00</createdDate>
    <lastUpdatedBy>1</lastUpdatedBy>
    <lastUpdatedDate>2013-04-25T00:09:26.000-07:00</lastUpdatedDate>
  </note>
</notes>
</timeSheetLine>
<timeSheetLine>
  <id>1468302</id>
  <workItemId>217037</workItemId>
  <workItemType>TASK</workItemType>
  <workItemName>IPS - Interest Rate Risk Management Processing System (R20)(D791)
</workItemName>
  <workItemDescription>ESO PBS GMGI BB-Flexi Loan R20 > IPS - Interest Rate Risk Management P
rocessing System (R20) (D791)
  </workItemDescription>
  <status>1</status>
  <approver>
    <id>30772</id>
    <type>UsersTimeApprover</type>

```



```
</approver>
<approver>
  <id>30968</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31791</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31476</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
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  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>30897</id>
  <type>UsersTimeApprover</type>
</approver>
<actuals>
  <actual>
    <efforts>
      <dayNum>7</dayNum>
      <effort>9.0</effort>
    </efforts>
    <efforts>
      <dayNum>10</dayNum>
      <effort>7.0</effort>
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    <efforts>
      <dayNum>15</dayNum>
      <effort>8.0</effort>
    </efforts>
  </actual>
  <actualsType>common</actualsType>
</actuals>
<workUnit>
  <id>172244</id>
  <actualStart>1368514800000</actualStart>
  <actualFinish>0</actualFinish>
  <actualEffort>2482.8</actualEffort>
  <percentComplete>80.0</percentComplete>
  <estimatedFinish>0</estimatedFinish>
  <effortModified>true</effortModified>
</workUnit>
<chargeCodes>
  <updateChargeCodeFlag>true</updateChargeCodeFlag>
```

```
<requireChargeCodeFlag>false</requireChargeCodeFlag>
<tslChargeCodes>
  <chargePercent>0.0</chargePercent>
  <chargeCode>
    <id>100002</id>
    <name>Fixed Price</name>
    <description>Time for activities billed at Fixed Rate</description>
    <enabled>true</enabled>
    <chargeCodeCategory>BILLABLE</chargeCodeCategory>
  </chargeCode>
</tslChargeCodes>
<tslChargeCodes>
  <chargePercent>0.0</chargePercent>
  <chargeCode>
    <id>100003</id>
    <name>Non Billable</name>
    <description>Non Billable Activity</description>
    <enabled>true</enabled>
    <chargeCodeCategory>NON_BILLABLE</chargeCodeCategory>
  </chargeCode>
</tslChargeCodes>
<tslChargeCodes>
  <chargePercent>100.0</chargePercent>
  <chargeCode>
    <id>100001</id>
    <name>Billable T&M</name>
    <description>Time billed at T&M daily rate</description>
    <enabled>true</enabled>
    <chargeCodeCategory>BILLABLE</chargeCodeCategory>
  </chargeCode>
</tslChargeCodes>
</chargeCodes>
<workItemSetId>31600</workItemSetId>
<notes />
</timeSheetLine>
</ns2:timeSheetLines>
```

## Integrations

The following integration is included in PPM Center version 9.21:

- ["Integrating PPM Center Tasks with HP ALM Releases"](#)
- ["Enhanced Agile Manager Integration Plug-in for PPM" on page 235](#)

## Integrating PPM Center Tasks with HP ALM Releases

["Introduction to Integrating PPM Center Tasks with HP ALM Releases" below](#)

["Configuring the Integration of PPM Center Tasks with HP ALM Releases" on page 215](#)

["Using the Integration of PPM Center Tasks with HP ALM Releases" on page 224](#)

### ***Introduction to Integrating PPM Center Tasks with HP ALM Releases***

The integration between PPM Center tasks and HP ALM Releases implemented in version 9.21 is an extension of the capability of the View Project Quality integration solution (integration between PPM Center projects and HP ALM). The integration extension enables project managers to manage multiple HP ALM releases with one PPM Center project by integrating project tasks with HP ALM releases.

The integration of PPM Center tasks with the Releases module of the HP Application Lifecycle Management ( HP ALM) product allows project management officers, project managers, development managers, and QA managers to have visibility into quality KPIs and ALM scorecards of multiple ALM releases from PPM Center projects by integrating PPM Center tasks with HP ALM releases, and allows them to optimize the management of project quality by:

- Introducing and enforcing consistent workflows for all major application delivery processes.
- Initiating and managing both application and testing projects and ALM releases.

The integration allows project managers to link a task under a project to a specific release managed in HP ALM. Each PPM Center task is associated with a single release in HP ALM throughout the task life cycle. This is a one-way one-to-one mapping relationship. This association begins when a project manager maps one task to a specific ALM release.

After the mapping relationship is established, the project managers are able to view quality KPIs and ALM scorecard report for a release retrieved from HP ALM. In addition, project managers can

also view the overall release hierarchy information of a specific work package from within PPM Center.

The following table describes data tables used in this integration solution:

Data table	Description
PPM_INT_SOLUTIONS_NLS	Stores the integration solution information
PPM_INT_CONFIGURATIONS	Stores all ALM server information related to the integration configurations
PPM_INT_QUALITY_TASK_MAPPING	Stores mapping information about PPM Center tasks and ALM releases
PPM_INT_QUALITY_STATISTICS	Stores ALM quality statistics information
PPM_INT_EVENTS	Stores error logs

When configuring the integration solution, consider the following:

- The integration solution supports one-one mapping between a PPM task to an ALM release only.
- This integration supports OOTB quality metrics only. Customizable reports and metrics are not supported yet.
- There is no cleanup service to clean all the outdated data in the KPIs table.
- You can not delete any existing ALM server configuration entries.

The table below summarizes some of the similarities that this integration solution shares with the View Project Quality solution introduced in PPM Center version 9.20:

Similarities	Differences	
	View Project Quality solution (available with 9.20)	Integration of PPM Tasks with ALM Releases (available with 9.21)
Both integrate with HP ALM Releases module	Integrates at PPM Center project level	Integrates at PPM Center task level
Both support one-one mapping relationship	Between a PPM project and an HP ALM release	Between a PPM task and an HP ALM release

Similarities	Differences	
	View Project Quality solution (available with 9.20)	Integration of PPM Tasks with ALM Releases (available with 9.21)
<p>Both retrieve similar KPI data and scorecard information from ALM, including:</p> <ul style="list-style-type: none"> <li>• Priority Defects Trend</li> <li>• Open Defects Trend</li> <li>• Requirements Trend</li> <li>• Project Quality Scorecard</li> </ul>	<ul style="list-style-type: none"> <li>• Displays data retrieved from ALM in four portlets on the <b>Project Summary</b> tab of the Project Overview page</li> <li>• Stores data retrieved from ALM in the PPM_INT_QC_KPI table</li> </ul>	<ul style="list-style-type: none"> <li>• Displays data retrieved from ALM in graphs on: <ul style="list-style-type: none"> <li>▪ The <b>Quality</b> tab of Project Overview page;</li> <li>▪ The <b>Quality</b> tab of the Task Details page</li> </ul> </li> <li>• Stores data retrieved from ALM in the PPM_INT_QUALITY_STATISTICS table</li> </ul>
Both uses background synchronization services	Uses the QC Integration Sync KPI Service	Uses the Project Quality Sync Service
Both share the same View Project Quality integration configuration landing page		The <b>Enable User Access Control</b> option is removed after deploying the integration bundles.

These two integration solutions are independent of each other. You can still use the View Project Quality solution after upgrading PPM Center to version 9.21. However, HP recommends you use the integration of PPM tasks with ALM Releases.

For information about the HP ALM versions supported for integration, see the *System Requirements and Compatibility Matrix*.

**Note:** No software needs to be installed on the ALM server to integrate PPM Center and ALM. However, see the *System Requirements and Compatibility Matrix*.

For more information about ALM, see its product documentation at the following website:

[h20230.www2.hp.com/selfsolve/manuals](http://h20230.www2.hp.com/selfsolve/manuals)

## User Flow

The typical flow of this integration is as follows:

**Step 1: A PPM Center administrator configures the integration solution**

Before project managers can use the integration, PPM Center administrator needs to configure the integration solution, including:

- Identifying whether there is business needs for integrating PPM Center tasks with ALM releases
- Registering ALM instances
- Enabling and scheduling the Project Quality Sync Service

**Step 2: A project manager initiates a project in PPM Center, and provides deliverables to all the assigned teams.**

**Step 3:** Based on the deliverables, business analysts, development managers, and QA managers build milestones using Project Planning and Tracking (PPT) in ALM.

**Step 4:** A release manager creates a corresponding release in ALM and defines key performance indicators (KPIs) for milestones and releases.

**Step 5: The project manager updates the PPM Center project by linking its tasks to corresponding ALM releases from the Task Details page.**

For details about linking to an ALM release, see ["Linking a PPM Task to an ALM Release" on page 224](#).

**Step 6:** ALM tracks release progress against specific milestones, with KPI matrices retrieved and sent to PPM Center to be included in the overall project health status.

**Step 7: Project managers and project participants view and monitor quality matrices on the Quality tab of Project Overview page.**

For more information, see ["Using the Integration of PPM Center Tasks with HP ALM Releases" on page 224](#).

## ***Configuring the Integration of PPM Center Tasks with HP ALM Releases***

["Downloading and Installing the HP PPM Plug-in for ALM Integration" below](#)

["Adding an ALM Integration Configuration" on page 218](#)

["Enabling and Scheduling the Project Quality Sync Service" on page 220](#)

["Configuring PPM Server for MLU Support" on page 220](#)

["KPI Data Retrieved from ALM" on page 223](#)

### ***Downloading and Installing the HP PPM Plug-in for ALM Integration***

To integrate PPM Center tasks with HP ALM releases, administrators must download and install the free HP ALM Integration Plug-in for PPM. This is a one-time action.

#### ***Installation Instructions***

To download and install the HP ALM Integration Plug-in for PPM:

1. Obtain the plug-in bundles from the HP Live Network.
  - a. Go to the [PPM Community on HP Live Network](#).
  - b. On the PPM Community home page, click **Content Catalog**.
  - c. Click **HP ALM Integration Plug-in for PPM** (where HP is the provider).
  - d. Click **Downloads**.

The HP ALM Integration Plug-in for PPM - Downloads page opens.

- e. Click the **ALM Integration Plug-in for PPM 1.0** folder.

- f. Click **ppm-921-ALMPlugin.zip** to download the package.

This package contains the following two bundles:

Bundle name	Description
ppm-921-PluginQuality.jar	Contains the plug-in basic structure for integrating PPM Center with ALM release management tools.
ppm-921-PluginQualityALM.jar	Contains the plug-in files specifically for integrating PPM tasks with the ALM Releases module.

2. Stop PPM Server.
3. Unzip the package and copy the two bundles to the `<PPM_Home>` directory.
4. Deploy the bundles by running the following commands from the `<PPM_Home>/bin` directory.

```
sh ./kDeploy.sh -i PluginQuality
sh ./kDeploy.sh -i PluginQualityALM
```

5. Repeat step 3 and step 4 for each of the server nodes in your cluster.
6. Restart PPM Server.

**Note:** HP recommends you restart the PPM Server to make sure that the integration bundles are properly deployed before you continue to deploy bundles for another integration solution.

### ***Entities Installed by the HP PPM Plug-in for ALM Release Integration***

The following entities are installed:

- **Quality** tab added to the Task Details page

The Quality tab on the Task Details page allows project managers to link the task to a specific ALM release.

After the mapping relationship is established, the tab displays the following quality graphs and scorecard report retrieved from ALM for the linked release:



- **Priority Defects Trend:** Displays trend of defects of higher severity in the last 10 days. The higher severity defects include defects of priority S1 and S2.
- **Open Defects Trend:** Displays open defects trend in the last 10 days. The open defects include open defects number and total defects number.
- **Requirements Trend:** Displays requirement status trend in the last 10 days. The requirement status includes requirement coverage.
- **Scorecard Report:** Displays scorecard report for the linked ALM release.

**Note:** The scorecard report is displayed only when the ALM scorecard information is configured in the project request field of the Project Planning and Tracking (PPT) module in ALM.

- **Quality** tab added to the Project Overview page

The Quality tab on the Project Overview page offers a centralized view of the following quality graphs for each of the ALM releases linked to tasks of the current project:

- **Priority Defects Trend:** Displays trend of defects of higher severity in the last 10 days. The higher severity defects include defects of priority S1 and S2.
- **Open Defects Trend:** Displays open defects trend in the last 10 days. The open defects include open defects number and total defects number.
- **Requirements Trend:** Displays requirement status trend in the last 10 days. The requirement status includes requirement coverage.

Clicking a specific release in the navigation tree brings users to the Task Details page of the linked task.

- **Project Quality Sync Service**

The Project Quality Sync Service synchronizes quality KPI data from ALM to PPM Center. The default synchronization interval is 24 hours. You can set the synchronization interval on the Schedule Services page.

The Project Quality Sync Service gets all valid ALM server configurations and loops through all configurations to retrieve KPI information from ALM and stores the data in PPM Center database.

If the service found that the quality KPI for current day already exists, it skips the task and continues to process the next task.

Synchronization rules are as follows:

- When a project or task is deleted, the mapping and records are removed from the database. This means that users will lose all the data related to the corresponding mapping.
- When a task is canceled or completed, synchronization stops.
- When a project is canceled or closed, synchronization stops.
- If an ALM release is deleted on ALM end or cannot be found when the service tries to synchronize data, the status is logged in the PPM\_INT\_QUALITY\_TASK\_MAPPING table.
- If the end date of an ALM release is ahead of the user's current date, for example, ALM release R1 is scheduled to end on 11/11/2012 and today is 05/01/2013, then the service stops synchronization next time.

For details about KPI data to be retrieved from ALM, see ["KPI Data Retrieved from ALM" on page 223](#).

## ***Adding an ALM Integration Configuration***

Administrators need to add integration configurations with HP ALM server on the View Project Quality configuration page before project managers can link their project tasks to releases managed in the ALM Release module..

To add an integration configuration,

1. Log on to PPM Center.
2. From the menu bar, select **Open > Administration > Integrations**.

The integration configuration landing page opens.

3. Click **View Project Quality** in the navigation pane.

The View Project Quality integration configurations page opens.

**HP Project and Portfolio Management Center**

User: Admin User | [Sign Out](#)

Dashboard ▾ Open ▾ Search ▾ Create ▾ My Links ▾ History ▾ ★

Dashboard - Key Status Information > Integration Configurations

Manage Application Change

View Project Quality

Agile Integration Solution

**View Project Quality**

View Project Quality with QC/ALM is an enterprise solution that enables companies to harness the full potential of PPM and QC/ALM software by synchronizing the quality statistics between the two tools. It enables project managers a comprehensive view of the project progress, quality status and health.

**Integration Configurations**

Server Name	Server URL	User Name	Version	Actions
ALMServer1	http://155.155.155.155:8080/qcbin/	admin	ALM 11.5	
MyALMServer	http://<ALM_Server_IP>:<Port>/qcbin/	admin	ALM 11.2	
TestLocalALM	http://<ALM_Server_IP>:<Port>/qcbin/	admin	ALM 11.5	
VPQDemoServer	http://ALM115.company.net:8080/qcbin/	admin	ALM 11.5	

Server Configuration Details:

[+ Add Integration Configuration](#)

- In the Server Configuration Details section, click **Add Integration Configuration**.

The Server Configuration Details section displays.

Server Configuration Details: QC/ALM Server Details:

[+ Add Integration Configuration](#)

\*QC/ALM Server Name:

\*QC/ALM Version:

\*QC/ALM Server URL:

\*QC/ALM Username:

\*QC/ALM Password:

Description:

[Save](#) [Cancel](#)

- Complete the fields described in the following table.

Field (*Required)	Description
*QC/ALM Server Name	Specify a unique name for the target ALM server.  <b>Note:</b> The server name shall not contain pound sign (#) or space.
*QC/ALM Version	Select ALM server version from the dropdown list of supported versions. Valid values include ALM 11.00, ALM 11.20, and ALM 11.50.

Field (*Required)	Description
*QC/ALM Server URL	URL of the ALM server you want to integrate with. For example, http://ALM11.company.net:8080/qcbin/
*QC/ALM Username	ALM account username that you use to log on to the ALM server.
*QC/ALM Password	Password of your ALM account.
Description	Provide a description for the ALM server.

6. Click **Save**.

The ALM server you just configured is added to the Integration Configurations summary list.

## ***Enabling and Scheduling the Project Quality Sync Service***

To enable and schedule the Project Quality Sync Service:

1. From the PPM Center menu bar, select **Open >Administration > Schedule Services**.

The Schedule Services page opens.

2. Click the table row that displays the Project Quality Sync Service.

The editable fields for that service are enabled.

3. To enable the service, from the **Status** list, select **Enabled**.
4. Leave the type of expression in the **Schedule Type** list to **Simple**.
5. In the **Schedule** column, leave the default value (24 hours).
6. Click **Save**.

Your changes take effect immediately after you save them. There is no need to restart the PPM Server.

## ***Configuring PPM Server for MLU Support***

If both your PPM Server and ALM server use a language other than English, you need to perform some extra configuration tasks to enable proper display of project quality related information in PPM

Center.

To do so,

1. Make sure that the `IntegrationResources_<Language_Code>.properties` file is present in the `<PPM_Home>\WEB-INF\resources\web\` directory.

The `IntegrationResources_<Language_Code>.properties` file is a localized version of the `IntegrationResources.properties` file, for example, `IntegrationResources_fr.properties`. It is present in the `<PPM_Home>\WEB-INF\resources\web\` directory if you have applied the PPM Center language pack for the desired language.

For a list of supported languages and the corresponding language codes, see the *System Requirements and Compatibility Matrix*.

2. Modify the `<PPM_Home>\conf\hpALMKPI.conf` file. The `hpALMKPI.conf` file is added into the `<PPM_Home>\conf\` directory automatically after you deploy the `ppm-920-PluginQualityALM.jar` bundle.

To do so,

- a. Stop the PPM Server.
- b. Open the `<PPM_Home>\conf\hpALMKPI.conf` file in a text editor.
- c. Copy and paste the following content to the end of the file:

```
#Test
test.passed=Passed

#Requirement
requirement.notCovered=Not Covered
requirement.na=N/A
requirement.passed=Passed
requirement.reviewed=Reviewed

#Defect
defect.priority=4-Very High,5-Urgent
defect.new=New
defect.open=Open
defect.closed=Closed
```

- d. Modify the content you just pasted by doing the follows:
  - i. Add the ALM server name you specified in ["Adding an ALM Integration Configuration" on page 218](#) as prefix to each parameter, and

- ii. Change each parameter value to the target language, as follows:

```
#Test
QC/ALM Server Name>.test.passed=<Translation of "Passed">

#Requirement
<QC/ALM Server Name>.requirement.notCovered=<Translation of "Not Covered">
<QC/ALM Server Name>.requirement.na=N/A
<QC/ALM Server Name>.requirement.passed=<Translation of "Passed">
<QC/ALM Server Name>.requirement.reviewed=<Translation of "Reviewed">

#Defect
<QC/ALM Server Name>.defect.priority=<Translation of "4-Very High,5-Urgent">
<QC/ALM Server Name>.defect.new=<Translation of "New">
<QC/ALM Server Name>.defect.open=<Translation of "Open">
<QC/ALM Server Name>.defect.closed=<Translation of "Closed">
```

For example, if you want to configure Simplified Chinese language support, and the ALM server name you specified in ["Adding an ALM Integration Configuration" on page 218](#) is ALMServer4PPM, modify the newly pasted section to the following:

```
#Test
ALMServer4PPM.test.passed=通过

#Requirement
ALMServer4PPM.requirement.notCovered=未覆盖
ALMServer4PPM.requirement.na=N/A
ALMServer4PPM.requirement.passed=通过
ALMServer4PPM.requirement.reviewed=已审阅

#Defect
ALMServer4PPM.defect.priority=4-非常高,5-紧急
ALMServer4PPM.defect.new=新建
ALMServer4PPM.defect.open=打开
ALMServer4PPM.defect.closed=已关闭
```

- e. Save the file in Unicode format.

**Caution:** Make sure you save the file in Unicode format. Otherwise you may encounter errors.

- f. Restart the PPM Server.

## ***KPI Data Retrieved from ALM***

All KPI data retrieved from ALM are stored in the PPM\_INT\_QUALITY\_STATISTICS table.

The table below describes three types of KPI data that are retrieved from ALM as well as the REST APIs that are used to retrieve KPI data.

KPI Data	Description	REST APIs used to retrieve KPI data
Requirements		
# of Total Requirements	Total number of requirements within a specific release	http://<URL>:<Port>/qcbn/rest/domains/<Domain>/projects/<Project>/requirements?fields=status,req-reviewed& query={type- # of Covered id[<>1];release.id[<Release_ID>]}
# of Covered Requirements	Number of the requirements within a specific release, excluding status "Not Covered" or "N/A"	
# of Reviewed Requirements	Number of requirements with status “Reviewed” within a specific release	
# of Passed Requirements	Number of requirements with status of Passed	
Defects		
# of Total Defects	Total number of defects of release level	http://<URL>:<Port>/qcbn/rest/domains/<Domain>/projects/<Project>/defects/groups/severity,status?query={target-rel [ <Release_ID> ] }
# of Priority Defects	Number of defects with priority level at “4-Very High” or “5-Urgent”	
# of Closed Defects	Number of defects with status of Closed	

## ***Using the Integration of PPM Center Tasks with HP ALM Releases***

Project managers can start using the integration after PPM Center administrators have completed the configuration tasks described in ["Configuring the Integration of PPM Center Tasks with HP ALM Releases" on page 215](#).

After a project manager initiates a project in PPM Center, and adds tasks and assigns them to sub-project managers, with the ALM release information available, you can do the follows:

- As a sub-project manager, you can link your task to a corresponding ALM release on the Task Details page for your task. See ["Linking a PPM Task to an ALM Release" below](#).

**Note:** If a task is already mapped to an ALM release, you cannot map it to another ALM release; If a task has progress information that is synchronized from Agile Manager, you cannot map it to an ALM release as well.

Then, after one-one mapping relationship between a PPM task and an ALM release is established:

- As a sub-project manager, you can view and monitor the quality related KPI data retrieved from ALM for your task on the **Quality** tab of your Task Details page.
- As a project manager, you can view and monitor the project quality related KPI data retrieved from ALM for all releases that are linked to your project tasks on the **Quality** tab of the Project Overview page, and drill down to details for each task.

### ***Linking a PPM Task to an ALM Release***

To link a PPM task to an ALM release,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.

The Search Projects page opens.

3. Locate and open the desired project.
4. On the Project Summary tab of the Project Overview page, click **Edit Work Plan** in the Work



Plan portlet.

The Work Plan for <Project\_Name> page displays.

- Open the Task Details page for the desired task that you want to link to an HP ALM release, and go to the **Quality** tab.

**Task Details: 24 - UserStory-05**

Save Done More

**Statistics**

Name:	Status:	Sequence #:	% Complete:	Activity:	Priority:	Description:
UserStory-05	Pending Predecessor	24	0	Design	0	

☐ Mark task as milestone
 ☐ This is a major milestone
 ☐ Milestone automatically completes

Project Path: [Passenger System > II. Solution Design > Passenger System V2 > Passenger System V2 > Sprint-01 > UserStory-05](#)

[Schedule](#)
[Resources](#)
[Exceptions / Warnings](#)
[Cost](#)
[Notifications](#)
[Notes](#)
[References](#)
[Hybrid Project](#)
[Quality](#)

You can link an HP ALM release to this task so that you can:

- Have visibility into quality KPIs and ALM scorecard of an HP ALM release from PPM Center
- Optimize the management of project quality by taking appropriate actions

**Start Mapping**

- Click **Start Mapping**.

The **Link to an HP ALM release** section displays Step 1: General.

**Task Details: 24 - UserStory-05**

Save Done More

**Statistics**

Name:	Status:	Sequence #:	% Complete:	Activity:	Priority:	Description:
UserStory-05	Pending Predecessor	24	0	Design	0	

☐ Mark task as milestone
 ☐ This is a major milestone
 ☐ Milestone automatically completes

Project Path: [Passenger System > II. Solution Design > Passenger System V2 > Passenger System V2 > Sprint-01 > UserStory-05](#)

[Schedule](#)
[Resources](#)
[Exceptions / Warnings](#)
[Cost](#)
[Notifications](#)
[Notes](#)
[References](#)
[Hybrid Project](#)
[Quality](#)

**Link to an HP ALM Release**

General Authentication Project Server Confirmation

1 2 3

Choose a target server

Server:

Cancel Next

- From the **Server** drop-down list, select a target ALM server that you want to link to.
- Click **Next**.

The mapping process move to Step 2: Authentication.

**Task Details: 24 - UserStory-05**

Save Done More

Statistics						
Name: UserStory-05	Status: Pending Predecessor	Sequence #: 24	% Complete: 0	Activity: Design	Priority: 0	Description:

☐ Mark task as milestone
 ☐ This is a major milestone
 ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [II. Solution Design](#) > [Passenger System V2](#) > [Passenger System V2](#) > [Sprint-01](#) > UserStory-05

[Schedule](#)
[Resources](#)
[Exceptions / Warnings](#)
[Cost](#)
[Notifications](#)
[Notes](#)
[References](#)
[Hybrid Project](#)
[Quality](#)

**Link to an HP ALM Release**

General Authentication Project Server Confirmation

1 2 3

Enter the user name and password that you use to log on the target server.

Username:

Password:

Cancel Next

- In the **Username** and **Password** fields, enter the user name and password that you use to log on to the target server.

- Click **Next**.

The mapping process moves to Step 3: Project Server and loads domain, project, and release information based on the account information you provided.

- Select a value from the drop-down list for each of the **Domain**, **Project**, and **Release** fields.

**Task Details: 24 - UserStory-05**

Save Done More

Statistics						
Name: UserStory-05	Status: Pending Predecessor	Sequence #: 24	% Complete: 0	Activity: Design	Priority: 0	Description:

☐ Mark task as milestone
 ☐ This is a major milestone
 ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [II. Solution Design](#) > [Passenger System V2](#) > [Passenger System V2](#) > [Sprint-01](#) > UserStory-05

[Schedule](#)
[Resources](#)
[Exceptions / Warnings](#)
[Cost](#)
[Notifications](#)
[Notes](#)
[References](#)
[Hybrid Project](#)
[Quality](#)

**Link to an HP ALM Release**

General Authentication Project Server Confirmation

1 2 3

Specify an quality development project that you want to link to.

Domain:

Project:

Release:

Cancel Confirm

- Click **Confirm**.

The mapping process moves to Step 4: Confirmation.

- Verify the information and click **Done**.

**Task Details: 24 - UserStory-05** Save Done More

**Statistics**

Name: UserStory-05	Status: Pending Predecessor	Sequence #: 24	% Complete: 0	Activity: Design	Priority: 0	Description:
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☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

**Project Path:** [Passenger System](#) > [II. Solution Design](#) > [Passenger System V2](#) > [Passenger System V2 > Sprint-01](#) > UserStory-05

[Schedule](#) [Resources](#) [Exceptions / Warnings](#) [Cost](#) [Notifications](#) [Notes](#) [References](#) [Hybrid Project](#) [Quality](#)

**Link to an HP ALM Release**

**General** **Authentication** **Project Server** **Confirmation**

1 — 2 — 3 —

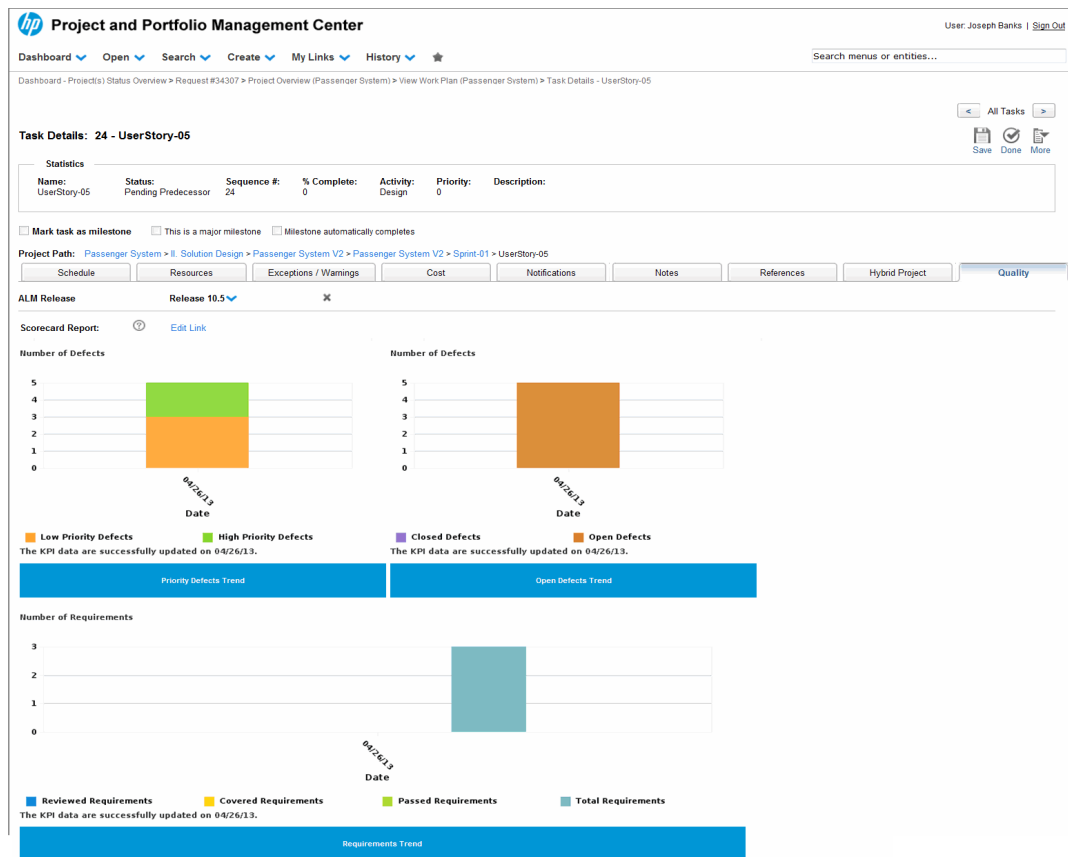
Server: VPQDemoServer  
Domain: DEFAULT  
Project: ALM\_Demo\_Project  
Release: Release 10.5

[Cancel](#) [Done](#)

14. The mapping is established and starts retrieving data from the linked ALM release.

When the synchronization completes, the following graphs display on the **Quality** tab:

- Priority Defects Trend
- Open Defects Trend
- Requirements Trend



**Note:** The Scorecard Report is not yet available. For instructions about configuring the Scorecard Report, see "[Configuring Scorecard Report](#)" below.

## Configuring Scorecard Report

To do so,

1. Get Scorecard URL for the Scorecard Report.
  - a. Log on to the target ALM server and click **Dashboard > Analysis View**.
  - b. Right click on the desired scorecard analysis item and select **Share Analysis Item**.
  - c. Select **Copy Analysis Item Public URL** from the popup dialog and click **OK**.

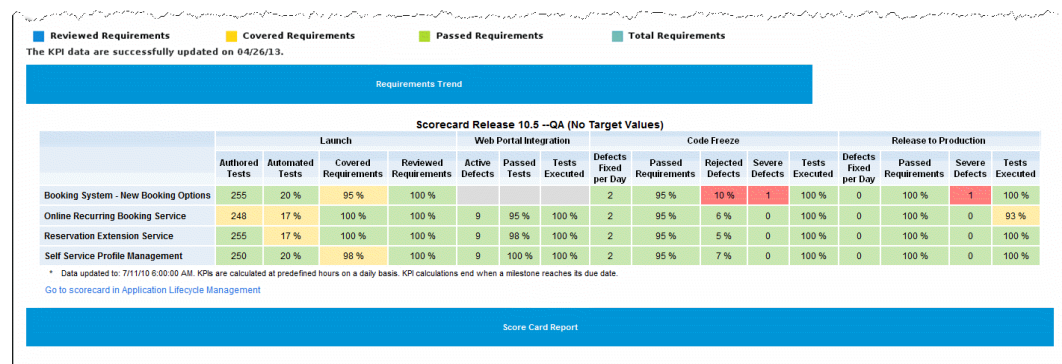
**Note:** Make sure that the scorecard analysis item you configured is related to the ALM release you linked, otherwise it may mess up the display of quality related data on the Quality tab.

- Click **Edit Link** on the **Quality** tab of the Task Details page.
- Paste the URL to the field and click **Save**.

The Quality tab page refreshes to retrieve scorecard information.

- Scroll down the view the scorecard report.

An example of the scorecard report:



## Deleting a Mapping from the Task Details Page

To delete a mapping from the Quality tab of the Task Details page,

- Log on to PPM Center.
- From the menu bar, select **Search > Projects**.  
  
The Search Projects page opens.
- Locate and open the desired project.
- Go to the Task Details page for the desired task that you want to remove the mapping you already established for it, and go to the **Quality** tab.

**Task Details: 24 - UserStory-05**

Save Done More

**Statistics**

Name:	Status:	Sequence #:	% Complete:	Activity:	Priority:	Description:
UserStory-05	Pending Predecessor	24	0	Design	0	

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [II. Solution Design](#) > [Passenger System V2](#) > [Passenger System V2 > Sprint-01](#) > UserStory-05

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project **Quality**

ALM Release: Release 10.5 **X**

Scorecard Report: [Edit Link](#)

Number of Defects

5. Click **X**.

A prompt dialog pops up.

6. Click **OK**.

The mapping is removed and the **Quality** tab page returns to its original state.

**Task Details: 24 - UserStory-05**

Save Done More

**Statistics**

Name:	Status:	Sequence #:	% Complete:	Activity:	Priority:	Description:
UserStory-05	Pending Predecessor	24	0	Design	0	

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [II. Solution Design](#) > [Passenger System V2](#) > [Passenger System V2 > Sprint-01](#) > UserStory-05

Schedule Resources Exceptions / Warnings Cost Notifications Notes References Hybrid Project **Quality**

You can link an HP ALM release to this task so that you can:

- Have visibility into quality KPIs and ALM scorecard of an HP ALM release from PPM Center
- Optimize the management of project quality by taking appropriate actions

**Start Mapping**

You can click **Start Mapping** to link the task to another ALM release as needed.

## Viewing and Monitoring Project Quality KPIs and Scorecard Report

Once the one-one mapping relationship between a PPM task and an ALM release is established, the Quality tab of the Task Details displays the following quality information retrieved from ALM:

- Priority Defects Trend
- Open Defects Trend
- Requirements Trend
- Scorecard Report (if you provided scorecard URL)

You can do the follows:

- As a sub-project manager, you can view and monitor the quality related KPI data retrieved from ALM for your task on the **Quality** tab of the Task Details page. See "[View Quality Data from the Task Details page](#) " below.
- As a project manager, you can view and monitor the project quality related KPI data retrieved from ALM for all releases linked to your project tasks on the **Quality** tab of the Project Overview page, and drill down to details for each task. See "[View Quality Data from the Project Overview Page](#) " on the next page.

### ***View Quality Data from the Task Details page***

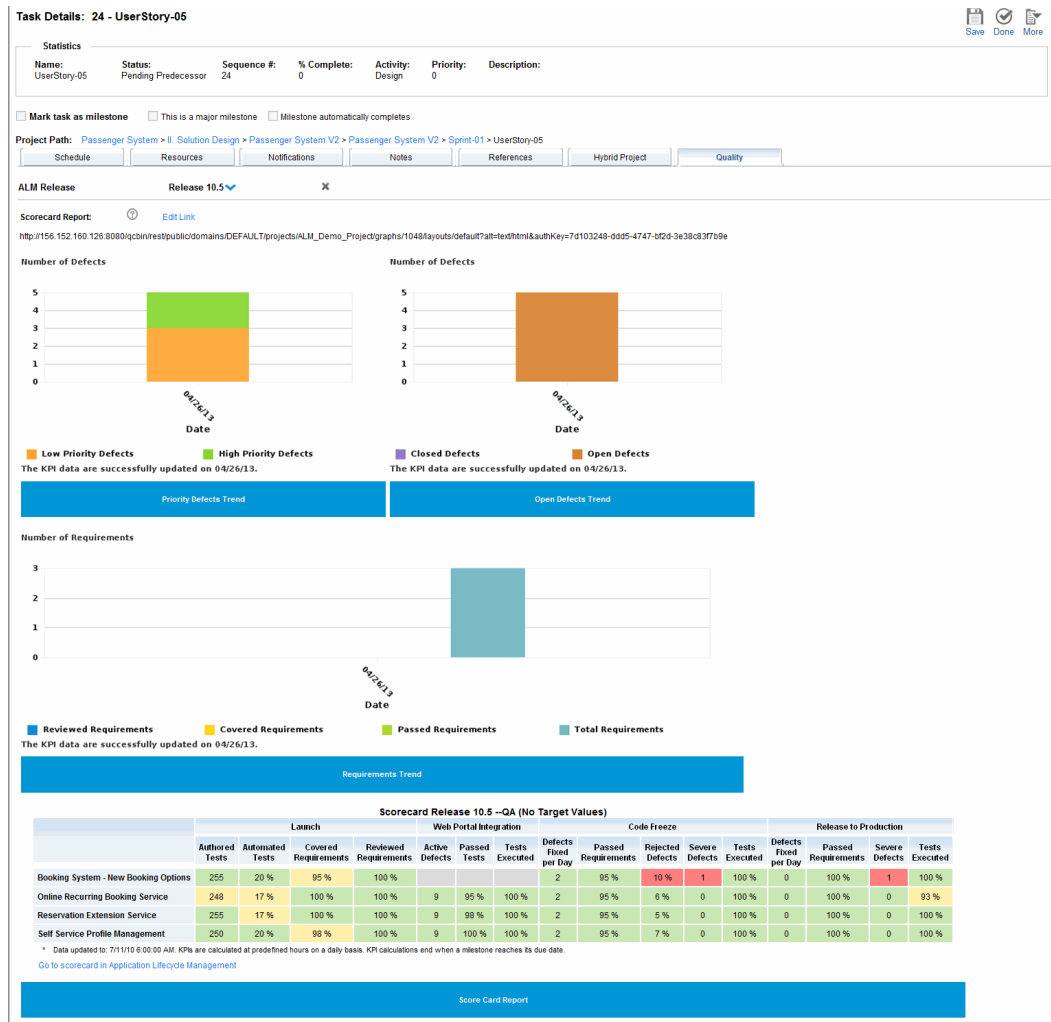
To do so,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.
3. Provide search criteria in desired fields and click **Search**.
4. Locate your project and open it.
5. On the Project Summary tab page, click **Edit Work Plan** in the Work Plan portlet.
6. Locate your task and open it.

The Task Details page displays.

7. Go to the **Quality** tab.

The Quality tab displays quality KPI data graphs as well as scorecard report.



**Note:** If the Scorecard Report is not available, you need to configure the Scorecard Report link first. For instructions, see "[Linking a PPM Task to an ALM Release](#)" on page 224.

## View Quality Data from the Project Overview Page

To view quality related KPI data from the Project Overview page,

1. Log on to PPM Center.
2. From the menu bar, select **Search > Projects**.
3. Provide search criteria in desired fields and click **Search**.



4. Locate your project and open it.

The Project Overview page displays.

5. Go to the **Quality** tab.

- If no tasks are linked to any ALM releases, a promotion picture displays.

**Project: 0YSbvProjectProposal (#32167)**

Overall Status: Overall Health ● Green Project Manager: Admin User Project Status: Detailed Project Definition Phase: Project Project Plan Period: November 2012 to November 2012 Project Region: Enterprise Progress: 0%

Project Summary | Project Details | Timeline | **Quality** | References

**Gain**  
Visibility into your project deliverables

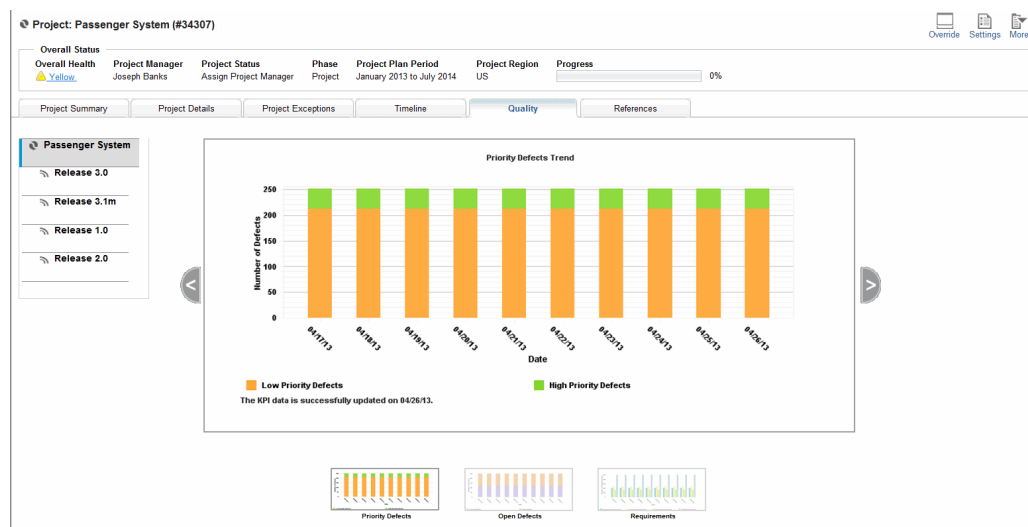
**Identify**  
Key issues by drilling down to specific quality releases



**ACT**  
Upon your decisions quickly and centrally from one system

**Take Your Action Now**  
Map a PPM task to an HP ALM release

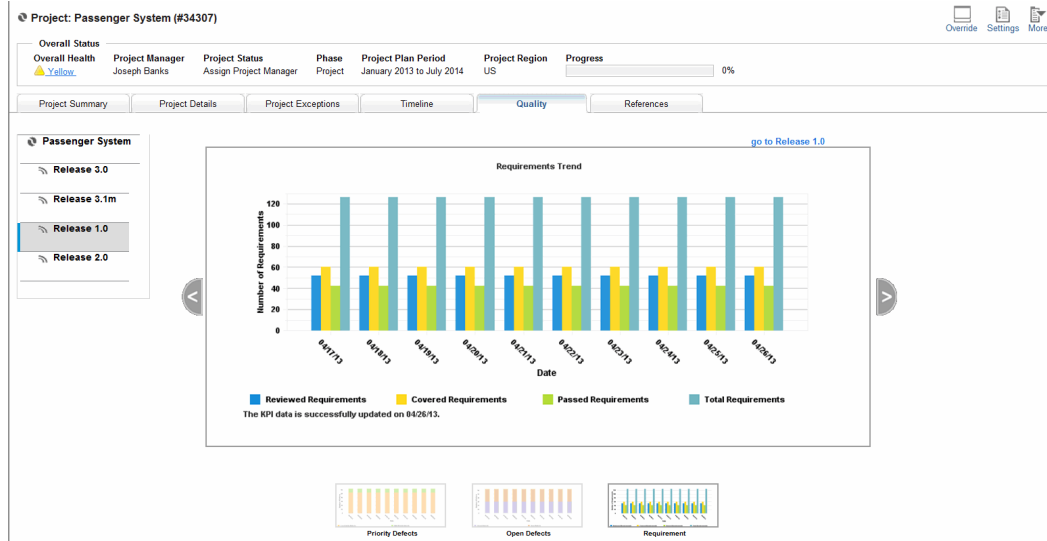
1. **MAP**  
Go to the Quality tab of the Task Details page. Follow the wizard to map a PPM task to an ALM release.
2. **View**  
Go to the Quality tab of the Task Details / Project Overview page, start browsing your project deliverables quality.

- If sub-project managers have linked their tasks to ALM releases, the **Quality** tab displays quality KPI data aggregated for the master project by default.



6. Click  or  to cycle the display of the quality graphs.

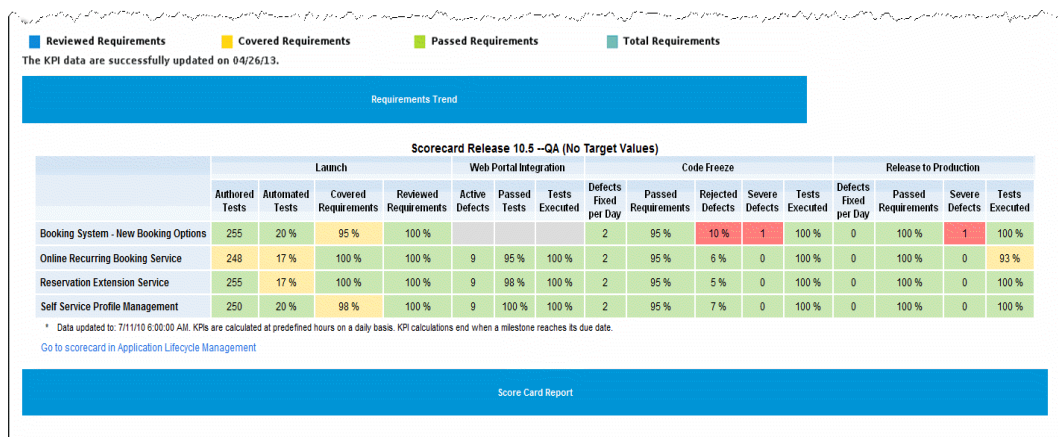
7. To browse quality KPI data for a linked ALM release, click the desired release in the left navigation tree.



8. To view scorecard report for the release, click the **Go to <Release\_Name>** link at the top right corner.

The Task Details page for the task lined to the release displays.

9. Go to the **Quality** tab and scroll down to view the scorecard report.



## Enhanced Agile Manager Integration Plug-in for PPM

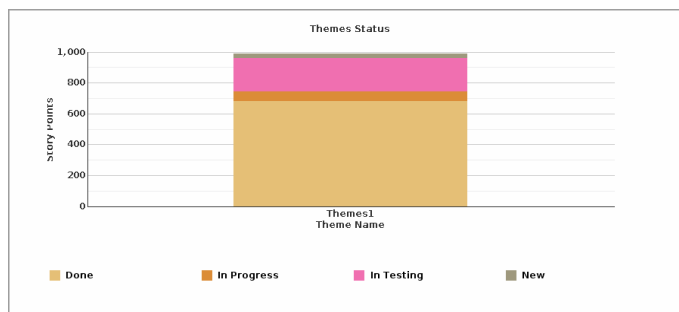
Enhancements are implemented to the Agile Manager Integration Plug-in for PPM for integrating PPM Center tasks with HP Agile Manager, including the following:

- The enhanced Agile Manager Integration Plug-in for PPM (version 1.1) is compatible with the hybrid project feature ("[Associating Waterfall Projects to PPM Center Tasks](#)" on page 85) implemented in PPM Center version 9.21.

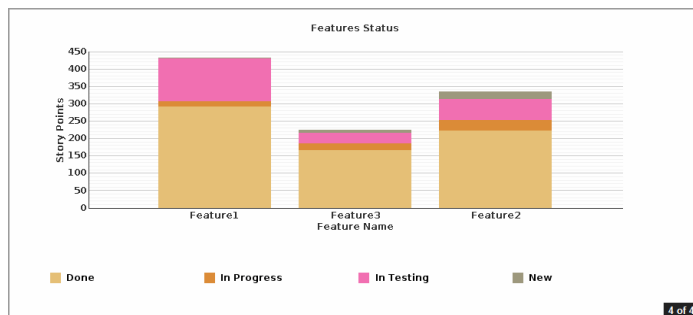
For new users of the integration between PPM Center tasks and HP Agile Manager, version 1.1 plug-in can be deployed on both versions 9.20 and 9.21 PPM Center instance. See "[Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1](#)" on page 240

For existing users of the integration between PPM Center tasks and HP Agile Manager, upgrading PPM Center to version 9.22 automatically upgrades the plug-in to version 1.1. See "[Upgrading Agile Manager Integration Plug-in for PPM to Version 1.1](#)" on page 242.

- On PPM Center version 9.21, two new charts are available for linked agile projects on the Timeline tab of the Project Overview page:
  - The Theme Status report



### ■ The Feature Status report



- Data security enhancement

The following sections describe the enhanced Agile Manager Integration Plug-in for PPM in more details:

- ["Agile Manager Integration Plug-in for PPM Compatibility" on the next page](#)
- ["System Behavioral Differences with the Enhanced Agile Manager Integration Plug-in for PPM " on page 238](#)
- ["Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1" on page 240](#)
- ["Upgrading Agile Manager Integration Plug-in for PPM to Version 1.1" on page 242](#)

## Agile Manager Integration Plug-in for PPM Compatibility

The table below describes compatibility of the Agile Manager Integration Plug-in for PPM with PPM Center.

Agile Manager Integration Plug-in for PPM version	PPM Center 9.20	PPM Center 9.21
1.0	Yes	No
1.1 <sup>a</sup>	Yes	Yes

a. Though version 1.1 plug-in can be deployed on both versions (9.20 and 9.21) of PPM Center, system behaves differently due to the new feature available with PPM Center 9.21 ("[Associating Waterfall Projects to PPM Center Tasks](#)" on page 85):

- When deployed on PPM Center version 9.20, users see the same **Agile Project** tab on the Task Details page and **Agile Project Timeline** tab on the Project Overview page; When deployed on PPM Center version 9.21, the Agile Project tab is merged into the new **Hybrid Project** tab on the Task Details page, and the Agile Project Timeline tab is merged into the **Timeline** tab on the Project Overview page. For more information, see "[System Behavioral Differences with the Enhanced Agile Manager Integration Plug-in for PPM](#)" on the next page
- On PPM Center version 9.21, two new charts are available for linked agile projects on the Timeline tab of the Project Overview page.

## System Behavioral Differences with the Enhanced Agile Manager Integration Plug-in for PPM

This section describes system behavioral differences of PPM Center versions 9.20 and 9.21 with Agile Manager Integration Plug-in for PPM versions 1.1 deployed.

Due to the new feature available with PPM Center 9.21 ("[Associating Waterfall Projects to PPM Center Tasks](#)" on page 85), the system behaves differently:

- When deployed on PPM Center version 9.20, users see the same **Agile Project** tab on the Task Details page and **Agile Project Timeline** tab on the Project Overview page. For more information, see *HP Solution Integrations Guide* for PPM Center version 9.20.
- When deployed on PPM Center version 9.21, the Agile Project tab is merged into the new **Hybrid Project** tab on the Task Details page, and the Agile Project Timeline tab is merged into the **Timeline** tab on the Project Overview page.
- Version 1.1 plug-in does not install the **Agile Project** tab anymore

Starting from version 9.21, a new tab **Hybrid Project** is available on the Task Details page by default. This tab is introduced to accommodate both the agile project integration capability and the new feature implemented to the HP Project Management module. It replaces the **Agile Project** tab that is available with the installation of the Agile Manager Integration Plug-in for PPM version 1.0.

The **Mapping Waterfall Project** button is available on the **Hybrid Project** tab by default after PPM administrators upgrade PPM Center to version 9.21.

**Task Details: 36 - Build Prototype**

Statistics

Name: Build Prototype Status: Pending Predecessor Sequence #: 36 % Complete: 0 Activity: Priority: 500 Description:

☐ Mark task as milestone ☐ This is a major milestone ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [III. Prototype](#) > Build Prototype

Schedule Resources Exceptions / Warnings Cost Notifications Notes References **Hybrid Project** Quality

You can associate either of the following as a subproject to this task:

- Another PPM project (also known as waterfall project), or,
- An agile application development project that is managed within an agile development management tool, if your administrator has deployed the Agile Integration Plugins. If you do not see the "Associate Agile Project to this Task" option, contact your administrator.

Associate Another PPM Project to this Task

[Mapping Waterfall Project](#)

OR

Associate Agile Project to this Task

[Mapping Agile Project](#)

For new users of the integration between PPM Center projects and ALM releases, the **Mapping Agile Project** button is not available until PPM Center administrators have

downloaded and installed the plug-in. For more information, see ["Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1"](#) on the next page.

**Task Details: 36 - Build Prototype** Save Done More

---

**Statistics**

Name: Build Prototype	Status: Pending Predecessor	Sequence #: 36	% Complete: 0	Activity: 	Priority: 500	Description:
--------------------------	--------------------------------	-------------------	------------------	---------------	------------------	--------------

☐ Mark task as milestone
 ☐ This is a major milestone
 ☐ Milestone automatically completes

Project Path: [Passenger System](#) > [III. Prototype](#) > Build Prototype

[Schedule](#)
[Resources](#)
[Exceptions / Warnings](#)
[Cost](#)
[Notifications](#)
[Notes](#)
[References](#)
[Hybrid Project](#)
[Quality](#)

You can associate either of the following as a subproject to this task:

- Another PPM project (also known as waterfall project), or,
- An agile application development project that is managed within an agile development management tool, if your administrator has deployed the Agile Integration Plugins. If you do not see the "Associate Agile Project to this Task" option, contact your administrator.

Associate Another PPM Project to this Task

[Mapping Waterfall Project](#)

For existing users of the integration between PPM Center projects and ALM releases, they can upgrade PPM Center to version 9.21 directly, or simply upgrade the plug-in to version 1.1. For more information, see ["Upgrading Agile Manager Integration Plug-in for PPM to Version 1.1"](#) on page 242.

**Note:** For information about registering an HP Agile Manager server and associating agile project to a PPM Center task, see the *HP Solution Integrations Guide* for PPM Center version 9.20.

- Version 1.1 plug-in does not install the **Agile Project Timeline** tab on the Project Overview page anymore

Starting from version 9.21, a new tab **Timeline** is available on the Project Overview page by default. This tab is introduced to display information of both agile subprojects and waterfall subprojects associated to tasks under the master PPM Center project. It replaces the **Agile Project Timeline** tab that is available only after installation of the Agile Manager Integration Plug-in for PPM version 1.0.

## ***Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1***

To integrate PPM Center with HP Agile Manager, administrators must download and install the free Agile Manager Integration Plug-in for PPM. This is a one-time action.

### ***Installation Instructions***

To download and install the Agile Manager Integration Plug-in for PPM:

1. Obtain the plug-in bundles from the HP Live Network.
  - a. Go to the [PPM Community on HP Live Network](#).
  - b. On the PPM Community home page, click **Content Catalog**.
  - c. Click **Agile Manager Integration Plug-in for PPM** (where HP is the provider).
  - d. Click **Downloads**.

The Agile Manager Integration Plug-In for PPM - Downloads page opens.

- e. Click the **Agile Manager Integration Plug-In for PPM 1.1** folder.
- f. Click **ppm-920-AgilePlugin.zip** to download the package.

This package contains the following two bundles:

Bundle name	Description
ppm-920-PluginAgile.jar	Contains basic structure of version 1.1 plug-in for integrating PPM Center with agile project management tools.
ppm-920-PluginAgileManagement.jar	Contains version 1.1 plug-in files specifically for integrating PPM tasks with HP Agile Manager product.

**Note:** Installation bundles for version 1.1 plug-in still use the same names as those for version 1.0 plug-in. Therefore, make sure you selected the **Agile Manager Integration Plug-In for PPM 1.1** folder in step e.



2. Stop PPM Server.
3. Unzip the package and copy the two bundles to the *<PPM\_Home>* directory.
4. Deploy the bundles by running the following commands from the *<PPM\_Home>/bin* directory:  
  

```
sh ./kDeploy.sh -i PluginAgile
```

```
sh ./kDeploy.sh -i PluginAgileManagement
```
5. Repeat step 3 and step 4 for each of the server nodes in a cluster.
6. Restart PPM Server.

## ***Entities Installed by the Agile Manager Integration Plug-in for PPM Version 1.1***

The following entities are installed:

- The Agile Integration Solution configuration page

The Agile Integration Solution option is now available on the integration configuration landing page. Administrators can register HP Agile Manager servers on the Agile Integration Solution configuration page.

- Agile Solution Sync Service

The Agile Solution Sync Service synchronizes status and progress charts of agile projects from HP Agile Manager to PPM Center. The default synchronization interval is 24 hours. You can set the synchronization interval on the Schedule Services page.

- The "Associate Agile Project to this Task" section and the **Mapping Agile Project** button on the **Hybrid Project** tab of the Task Details page
- Support for displaying Gantt charts of associated agile projects on the **Timeline** tab of the Project Overview page

## ***Upgrading Agile Manager Integration Plug-in for PPM to Version 1.1***

For existing users of the integration between PPM Center tasks and HP Agile Manager, you have the following upgrade options:

Scenario	Your Actions
You are on PPM Center 9.20 with version 1.0 plug-in. You want to upgrade the plug-in to version 1.1.	Follow the installation instructions to deploy the version 1.1 plug-in on your PPM Center 9.20 instance. See <a href="#">"Downloading and Installing the Agile Manager Integration Plug-in for PPM Version 1.1" on page 240</a> .
You are on PPM Center 9.20 with version 1.0 plug-in. You want to upgrade PPM Center to version 9.21.	Upgrade PPM Center to version 9.21.  Upgrading PPM Center to version 9.21 automatically upgrades the plug-in to version 1.1. You do not need to manually download and install the version 1.1 bundle.

## ***Viewing and Managing Hybrid Projects***

With the integration between PPM Center tasks and HP Agile Manager as well as the new waterfall subprojects management capability available with PPM Center version 9.21, project managers can view and manage hybrid IT projects comprised of both waterfall subprojects and agile subprojects centrally from a PPM Center project.

They can view and manage their projects from the following tabs:

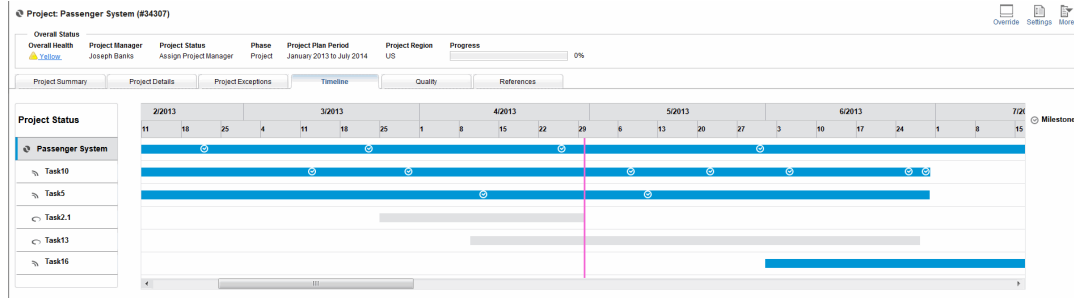
- The **Hybrid Project** tab on the Task Details page

This tab displays the following information of a mapped waterfall project:

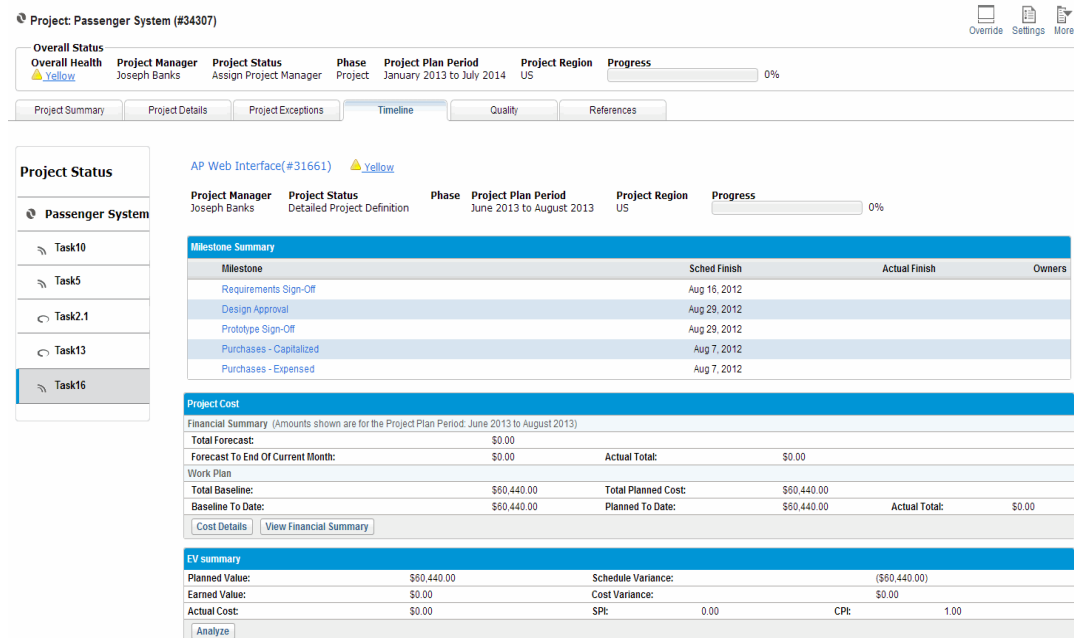
- Project summary
- The Milestone Summary portlet
- The Project Cost portlet
- The EV Summary portlet

- The **Timeline** tab on the Project Overview page

- This tab displays a consolidated timeline view of the master project and all waterfall and agile subprojects.



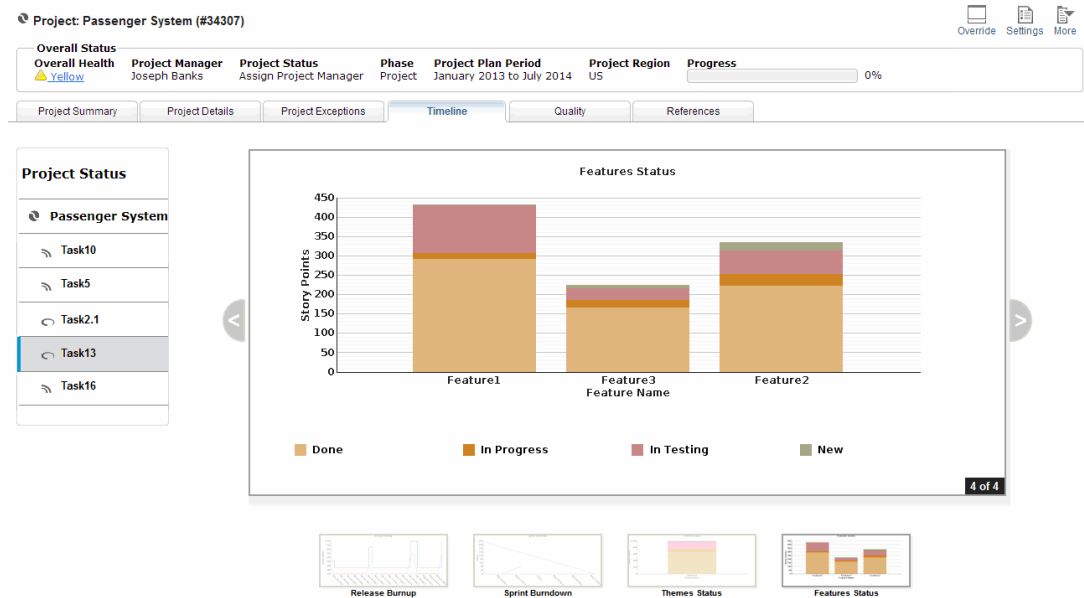
- For each of the mapped waterfall subprojects, you can see the following project details:
  - Project Summary
  - The Milestone Summary portlet
  - The Project Cost portlet
  - The EV Summary portlet



For more information, see ["Viewing Details of Waterfall Projects"](#) on page 92.

- For each of the mapped agile projects, you can see the following charts:

- The Release Burnup chart
- The Sprint Burndown chart
- The Theme Status report (new in 9.21)
- The Feature Status report (new in 9.21)






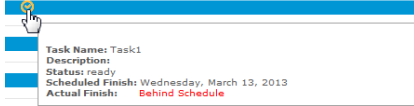
Click or , or the thumbnails at the bottom of the page to cycle the display of the charts.

For more details about viewing agile project information, see *HP Solution Integrations Guide* for PPM Center version 9.20.

## Project Indicators

Version 9.21 introduced the following icons and colors as project indicators to facilitate your project management work:

Project Indicator	Description
	A hybrid project, comprised of both waterfall subprojects and agile subprojects
	A waterfall project
	An agile project

Project Indicator	Description
	Timeline for an agile project
	Timeline for a waterfall project
	<p>A milestone of a waterfall project. Placing mouse over the milestone displays milestone details.</p> 

## Certifications

The following certifications are included in PPM Center version 9.21:

- Support for Microsoft Office Excel 2013
- Support for the following versions of iPad as PPM Center client:
  - iPad 2 with iOS 5 or later
  - iPad 3 with iOS 5.1 or later
  - iPad 4 with iOS 6 or later

**Note:** For information about limitations of iPad certification, see ["iPad Certification" on page 264](#)

For details, see the *System Requirements and Compatibility Matrix*.

## Fixes

The following fixes are included in PPM Center version 9.21:

## Costing

Tracking Number	Problem Description
4643787466	Slowness in opening Program, Budget, and Email Services. (QCCR1L50417)

## Dashboard

Tracking Number	Problem Description
4638724602, 4641677546	Error when migrating a new module. (QCCR1L48014)
4644220980	Regression: When logging in to PPM using logon_id, error appears: "Your session has timed out because of inactivity. Please login again (KNTA-10674)" (QCCR1L50632)
4642343476	Export to Excel on the Request List portlet loses formatting of Text Area fields. (QCCR1L48884)
4644220980	Portlet expand "+" and collapse "-" buttons missing in PPM Center Management for Quality Center 9.20. (QCCR1L50899)  The two buttons are added back in version 9.22. For details, see <a href="#">"Expand and Collapse Buttons Added back to Portlets on Private Dashboard Pages" on page 189.</a>

## Documentation

Tracking Number	Problem Description
4643924413	Need to emphasize that users' customized ldapAttribute.conf will be overwritten after upgrading to PPM Center version 9.14. (QCCR1L50349)
4644045844	Receive error message "You do not have access to this page..." (KNTA-11013)" after changing request type of requests. (QCCR1L50552)

## HP Demand Management

Tracking Number	Problem Description
4638342363	The Serverlog on certification is filled by the "Returning null for Date" error. (QCCR1L46386)
4643979114	After you apply the workaround for QCCR1L47225/QCCR1L49374 (use legacy table component instead), the page looks different because some sections disappear. (QCCR1L50439)
4644136701	Values of auto-complete fields are not translated into the session language of the current user.  For details of the solution, see <a href="#">"Improved Behavior of List Auto-Complete Fields in MLU" on page 190</a> . (QCCR1L50445)
4644220980	The setFieldVisible(false) rule causes the whole request page invisible if the request is opened in a pop-up window. (QCCR1L50949)
4644220980	Cannot save request if there is an UI rule setFieldRequired (false) in the request type. (QCCR1L50796)
4637790215	Timeout functionality does not work in workflows. (QCCR1L47224)
4643323344	If the field security of a Request Header Type field is set to non-editable for the current user, value dropped after the user clicks the <b>Save</b> button or a workflow step. (QCCR1L50343)
4643153337	ksc_copy_request spawns wrong 'created by'. (QCCR1L50386)
4644422321	After upgrading to version 9.20, any change to a request type or request header type (copied from seed request header type) causes the trigger error. (QCCR1L50754)

## Installer

Tracking Number	Problem Description
4643321131	Upgrade to PPM 9.10 fails due to MLU issue. (QCCR1L50101)



## Integrations

Tracking Number	Problem Description
4644054593	NTLM SSO issue with PPM. (QCCR1L50402)
4643918188	Error when updating a work plan in a project that is in PPM-MSP shared mode. (QCCR1L50608)
4643901788	java.sql.SQLException: ORA-12899: value too large for column "PPM"."KNTA_DOCUMENT_HISTORY_CONTENTS"."EXTENSION". (QCCR1L50502)
4644140745	(Regression) Unable to add a second version to an attachment when selecting a French language session (QCCR1L50542)

## Platform

Tracking Number	Problem Description
4642586659	The Server Logon Report does not remove the session information created by special command. (QCCR1L49711)
4643101640	Error with ksc_copy_request when there are apostrophes in project titles. (QCCR1L49735)
4643454560	The Import Users Report fails with "Numeric or value error: character string buffer too small" error. (QCCR1L49798)
4644220980	Performance with rsc_position_forecast_914_1.sql. (QCCR1L50646)
4644103257	After upgrading to version 9.14, even if WORKBENCH_PLUGIN_VERSION is specified, the Server Configuration Report shows the JAVA_PLUGIN_XPI_PATH parameter as [blank] but the Administration Console shows the default value for version 9.14. (QCCR1L50665)
4644291541	PPM upgrades to 9.20 fails with error. (QCCR1L50735)

## HP Project Management

Tracking Number	Problem Description
4643176824	Problem with Program Management Web services after users enable mandatory user data. (QCCR1L49536)
4640959544	The Project Timelines portlet shows a date exception, which is not true and the work plan does not show any exception. (QCCR1L49615)
4639871764	Work plan summary task scheduler not honoring Actual dates. (QCCR1L50994)

## HP Resource Management

Tracking Number	Problem Description
4644069657	Holidays missing from Calendars after upgrading PPM Center from version 8.04 to 9.14.0004. (QCCR1L50348)
4644272489	SQL grammar exception thrown on the Manage Forecast page. (QCCR1L50580)

## HP Time Management

Tracking Number	Problem Description
4643446509	Performance issue when logging in PPM Center to enter time. (QCCR1L49676)
4636791224	Disabled MISC items can be added to time sheets. (QCCR1L50055)
N/A	PPM Center does not copy charge codes when a time sheet is copied. (QCCR1L49512)

## Chapter 7: Known Problems and Limitations in PPM Center 9.22

The following problems and limitations are known to exist in PPM Center version 9.22 (or other software, as indicated). The problems are categorized by the affected product area. If a problem has an assigned internal tracking number, that tracking number is provided (in parentheses) at the end of the problem description.

- ["Accelerators - Best Practices" below](#)
- ["HP Demand Management" below](#)
- ["Integrations" on page 254](#)
- ["PPM Workbench" on page 258](#)
- ["HP Time Management" on page 259](#)

### Accelerators - Best Practices

---

**Problem:** (PPM Center version 9.20 or later) After deploying the best practices, when clicking **Search > Project Risk**, the following error occurs: "Request type business key, \_PROJECT\_RISK not found". (QCCR1L51372)

**Workaround:** After upgrading your PPM Center instance to version 9.22, if the problem exists, run the following command to re-deploy the updated best practices bundle available with version 9.22:

```
sh ./kDeploy.sh -best-practices
```

---

### HP Demand Management

---

**Limitation:** If a user only has the access grant of a workflow step, when searching requests, the user cannot select the request type that uses this workflow. (QCCR1L44594)

**Workaround:** None.

---

**Limitation:** On the Request Search Results page, when you select several requests and click the **Edit > Quick Edit** button, you receive the following error message:

An unknown error has occurred. For more information, please contact your PPM administrator and provide the following GUID number...

(QCCR1L50677)

**Workaround:** To resolve this issue, do one of the following:

- Select fewer requests and then click the **Edit > Quick Edit** button.
- Configure as follows:
  - a. Stop PPM Server.
  - b. Open the `<PPM_Home>/server/<PPM_Server_Name>/deploy/jbossweb-tomcat55.sar/server.xml` file, and add `maxPostSize="0"` right after `maxThreads="150"`.
  - c. Click **Save** to save your changes.
  - d. Clean up the `<PPM_Home>/server/<PPM_Server_Name>/tmp` and the `<PPM_Home>/server/<PPM_Server_Name>/work` directories.
  - e. Restart PPM Server.

---

**Limitation:** (PPM Center versions 9.20 and 9.21 only) On the **Project Details** tab of the Project Overview page, the **Jump To** quick navigation panel is not supported, and the ribbon style toolbar is not pinned at the top of the page. (QCCR1L51341)

**Workaround:** None.

---

**Limitation:** PPM Center fails to send notifications for a workflow step, when there are many recipients and you configure as follows:

1. In the Add New Recipient window of PPM Workbench, select **Enter a User Defined Token**.
2. In the **User Defined Token** field, enter the token name of a text field.
3. In the **Recipient Type** field, select **Email Address**. (QCCR1L51955)

**Workaround:** The root cause is that for text fields, the database column used to store email addresses of recipients has a character limitation of 80 (including separators).

To resolve the issue, stop PPM Server and run the following SQL:

```
alter table knta_notif_txn_recipients modify email_address varchar(1000 CHAR);
```

If you encounter errors related with the KNTA\_NOTIFICATION package after running the SQL, recompile all packages.

---

**Limitation:** When using the Request Browser to search requests (**Open > Demand Management > Request Browser > Browse Requests**), a user can select a maximum of 8 values for the **Column Values** field in the **Choose Additional Column to Display in Request Browser Tree** section. (QCCR1L51965)

**Workaround:** Starting from PPM Center version 9.22, a user can select a maximum of 12 values for the **Column Values** field.

---

**Problem:** When sending notifications of a workflow step or request field change, PPM Center behaves as follows:

- For recipients who are PPM Center users and have already logged on to PPM Center at least once, PPM Center groups them together according to their user locales (user locale includes regional settings and display language).
- For recipients who are not PPM Center users and who have PPM Center user accounts but have never logged on to PPM Center, PPM Center groups them together.

As a result, recipients in different groups receive different notification emails. (QCCR1L52110, QCCR1L52245)

**Workaround:** This is because only PPM Center users who have already logged on to PPM Center at least once have locales. To resolve this issue, do the following to define a default locale for all non-PPM Center users and PPM Center users who have never logged on to PPM Center:

1. Set a value for the `SERVER_LOCALE_COUNTRY_CODE` server configuration parameter. The default value is `null`. Valid values are any two-letter abbreviation of a country in uppercase.

For example, if you want to set the default regional settings to United States, set the `SERVER_LOCALE_COUNTRY_CODE` server configuration parameter to `US`.

2. Set a value for the `SERVER_LOCALE_LANGUAGE_CODE` server configuration parameter. The default value is `null`. Valid values are any two-letter abbreviation of a language in lowercase.

For example, if you want to set the default display language to English, set the `SERVER_LOCALE_LANGUAGE_CODE` server configuration parameter to `en`.

This ensures that PPM Center groups all PPM Center users and non-PPM Center users together when sending notifications.

---

**Limitation:** When there are several groups of workflow steps on the Request Details page and the browser cannot display all workflow steps, the **More Actions** buttons appear. However, one or more groups of workflow steps may disappear when you resize or restore down your browser

window. This is because the resized browser window is not wide enough to display the **More Actions** buttons. (QCCR1L52165)

**Workaround:** To resolve this issue, do one of the following:

- Maximize your browser.
  - From the Control Panel, select a higher screen resolution.
  - Press `ctrl` and `-` to zoom out your browser.
- 

## Integrations

### Integrations - Quality Center (ALM)

---

**Limitation:** (HP ALM version 11.00 or later) On an HP ALM-integrated Request Type, there is a field **QC/ALM Defect Attachment URL**. If and when an attachment is added to an ALM defect that is synchronized to a PPM request, the attachment shows an active link to this document on the PPM request page. When clicking the link, the HP ALM login page appears, prompting the user for the ALM login credentials.

This issue exists in PPM Center integration with HP ALM version 11.00 or later due to removal of a servlet class (`CTdAttachmentsServlet`) from ALM 11.00 (and later). (QCCR1L52005)

**Workaround:** After upgrading PPM Center to version 9.22, when an ALM entity is synchronized to PPM Center, the download links to the ALM-entity attachments are collected to a new page, where users can see all attachment files and choose to download.

---

**Problem:** (HP ALM versions 11.50 and 11.52 only) The PPM Center-ALM Integration Tool support for HP ALM versions 11.50 and 11.52 is not stable. Error may happen when you enable a project using the tool. (QCCR1L52353)

**Workaround:** For new users who plan to integrate PPM Center with HP ALM version 11.50 or 11.52, do either of the following:

- If the PPM Center-ALM Integration Tool is not working well, download and install the `TDConnect.exe` tool from HP ALM's logon page before you enable an HP ALM project using the tool.

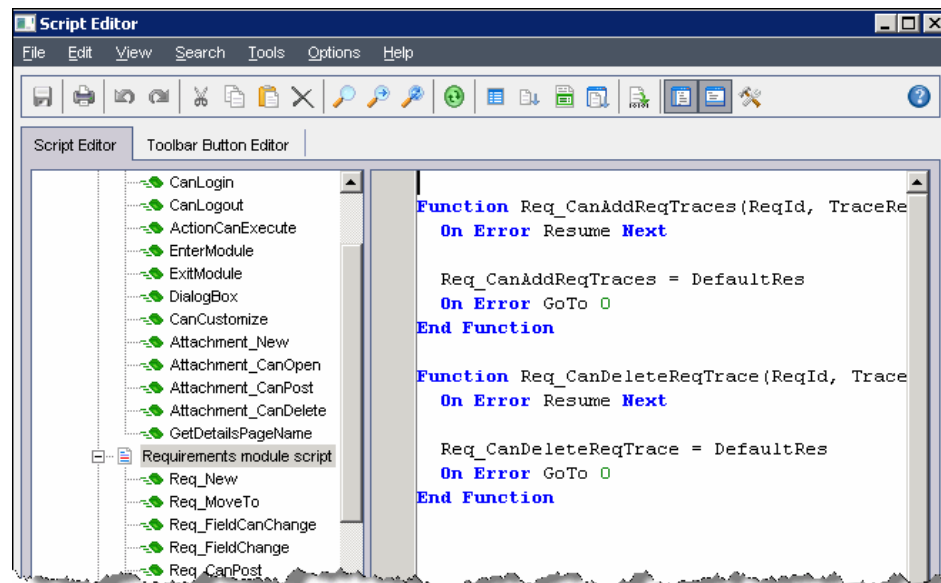
**Note:** This works well for HP ALM version 11.50, but not always well for version 11.52.

- Do not use the PPM Center-ALM Integration Tool at all. Instead, do the following:

To enable the hidden fields in HP ALM for the integration and to deploy the workflow scripts in HP ALM,

- Add scripts to perform the operation on HP ALM server side.
  - Log on to HP ALM as administrator.
  - From the menu bar, click **Tools > Customize > Workflow > Script Edit**.

The Script Editor opens.



- From the navigation pane, select **Requirement module script**, then go to the last script of this category, copy and append the content of add requirement script.txt to the end of the script in the editing pane.

**Note:** To obtain the add requirement script.txt, go to [KM00630244](#) and click **workflow scripts** to download the zip package.

- Click **Save**.

The new script is added to the **Requirement module script**.

- From the navigation pane, select **Defect module script**, then go to the last script of this category, copy and append the content of add\_defect\_script.txt to the end of

the scrip in the editing pane.

**Note:** To obtain the add defect script.txt, go to [KM00630244](#) and click **workflow scripts** to download the zip package.

vi. Click **Save**.

The new script is added to the **Defect module script**.

vii. Exit and log off.

b. Run the SQL scripts provided by HP Software Support manually:

- For instructions on how to enable PPM\* fields in HP ALM project, go to [KM1352699](#).
- For instructions on how to activate workflow script in HP ALM project, go to [KM1352700](#).

---

**Problem:** (HP ALM version 11.00 or later) When synchronizing content of HP ALM text fields that contain 4000+ bytes to PPM Center text fields, the content in PPM Center text fields show html encapsulation tags, which is confusing to end users. (QCCR1L52080)

**Workaround:** None, if you are on PPM Center version 9.21 or earlier.

After upgrading PPM Center to version 9.22, for each newly created ALM defect (or requirement), an html file is generated for each of the mapped text fields in the ALM defect (or requirement) as a reference attachment to the PPM request. For any existing ALM defect (or requirement), if it is updated, an html file is generated for each of the mapped text fields as a reference attachment to the PPM request.

For more information, see "[Synchronizing Memo Fields from HP ALM Defects or Requirements as HTML Reference Attachments to PPM Requests](#)" on page 172.

---

## Integrations - View Project Quality

**Limitation:** When mapping a PPM task to an HP ALM release, if the values in the target HP ALM server are in German or Korean, after you added a filter and specified an **ALM Criteria**, and then clicked the selector icon for **Criteria Value**, the available values retrieved by HP ALM REST API from HP ALM may display as garbled characters in the popup window, for example, "???".

**Workaround:** None.

---



**Limitation:** When mapping a PPM task to an HP ALM release and adding filters, some invisible fields in HP ALM are also retrieved by the HP ALM REST API and are displayed in the **ALM Criteria** column on the Quality tab of the Task Details page. Such invisible fields include:

- For Defect: **To Mail**
- For Requirement: Some fields that start with **RBQM**.

**Workaround:** None.

---

**Problem:** When mapping a PPM task to an HP ALM release and adding filters, though the **Subject** field value is empty in the Criteria Value column on the Quality tab of the Task Details page, the HP ALM REST APIs get test plan folder name as available values for this field from HP ALM.

**Workaround:** None.

---

## Integrations - Universal CMDB

---

**Problem:** (PPM Center version 9.20 and later) When you integrate PPM Center with Universal CMDB for impact analysis, the ";" character is not supported. If a UCMDB CI name contains a ";" character, it would be treated as a separator and two entries would show up in the **Impacted Configuration Items** section of the PPM Center request after you loaded selected CIs into the request. (QCCR1L52964)

**Workaround:** None.

---

## Integrations - HP Agile Manager

---

**Problem:** (PPM Center version 9.21 only) Display error with the Theme Status and Feature Status charts on the Timeline tab of the Project Overview page. This is caused by changes with the HP Agile Manager APIs. (QCCR1L52963)

**Workaround:** Upgrade PPM Center to version 9.22, then download and deploy version 1.2 of the Agile Manager Integration Plug-in for PPM.

---

## PPM Workbench

---

**Problem:** PPM Workbench cannot open after installing JRE7u25. This is caused by change in Java applet made by Oracle with the latest Java plug-in. For more details, see <http://www.oracle.com/technetwork/java/javase/7u25-relnotes-1955741.html>. (QCCR1L52313)

**Workaround 1:** Uninstall JRE7u25, then reinstall and use JRE7u11.

The latest Java plug-in causes the issue with the PPM Workbench, therefore it is recommended to use JRE7u11.

**Workaround 2:** Clear Java cache settings and disable certificate revocation checking. To do so,

1. Go to **Start > Control Panel > Java**.

The Java Control Panel window opens.

2. Clear Java cache settings.
  - a. On the **General** tab, click **Settings** in the Temporary Internet Files section. The Temporary Files Settings dialog opens.
  - b. Click **Delete Files**. The Delete Files and Applications dialog opens.
  - c. Select **Cached Applications and Applets** and click **OK**.
3. Disable certificate revocation checking.
  - a. Go to the **Advanced** tab of the Java Control Panel window.
  - b. Expand **Security > General**, uncheck the **Check certificates for revocation using Certificate Revocation Lists (CRLs)** option, and click **OK**.
4. Open the PPM Workbench again.

**Caution:** Disabling on line revocation checking should only be considered in managed environments as it decreases security protections.

---

## HP Time Management

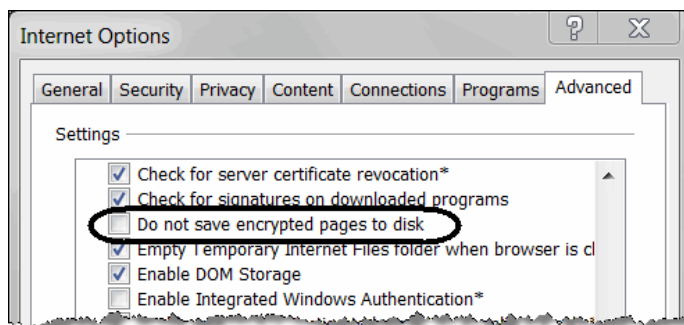
**PROBLEM:** (Internet Explorer 9 only) Blocking message pops up when exporting time sheets to Excel via HTTPS after upgrading PPM Center to version 9.14.0002. (QCCR1L50117)

**Workarounds:** There are two workarounds available.

**Note:** Try Workaround 2 only when Workaround 1 is not allowed by your organization's IT policies.

**Workaround 1:** Uncheck the **Do not save encrypted pages to disk** option in your advanced Internet Explorer settings.

To do so, on the Tools menu in Internet Explorer 9, click **Internet Options**, click the **Advanced** tab, click to clear the check mark from the **Do not save encrypted pages to disk** check box in the **Security** area, and then click **OK**. (This is the default Internet Explorer setting.)



**Workaround 2:** Edit registry key. To do so,

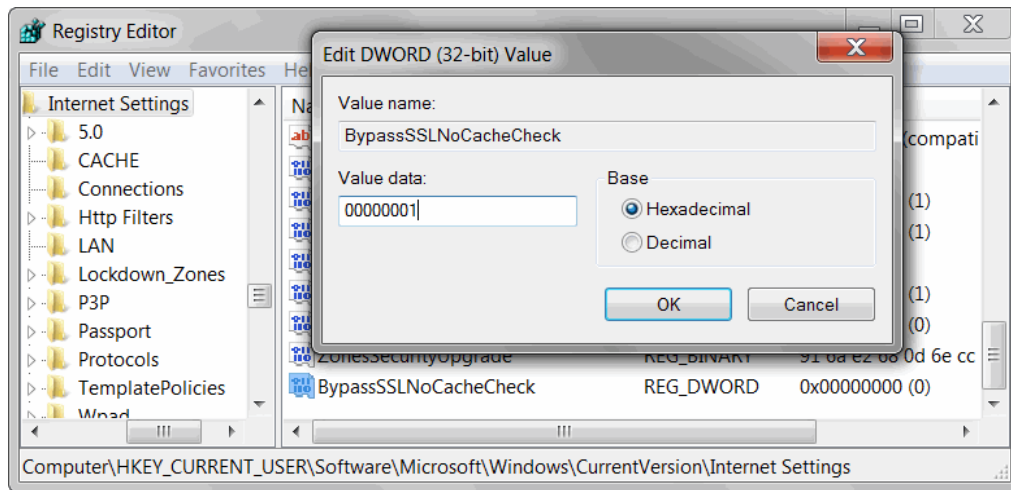
1. Start Registry Editor.
2. Locate the desired registry key.
  - For a per-user setting, locate the following registry key:

HKEY\_CURRENT\_USER\SOFTWARE\Microsoft\Windows\CurrentVersion\Internet Settings

- For a per-computer setting, locate the following registry key:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Internet Settings

3. On the **Edit** menu bar, click **New > DWORD (32-bit) Value**, and then add the following value name: **BypassSSLNoCacheCheck**.
4. Right click on BypassSSLNoCacheCheck and click **Modify**.
5. In the **Value data** field, enter 00000001 and click **OK**.



6. Exit Registry Editor.
-

## Chapter 8: Known Problems and Limitations in PPM Center 9.21

The following problems and limitations are known to exist in PPM Center version 9.21 (or other software, as indicated). The problems are categorized by the affected product area. If a problem has an assigned internal tracking number, that tracking number is provided (in parentheses) at the end of the problem description.

- ["HP Demand Management" below](#)
- ["Integrations" on page 263](#)
- ["iPad Certification" on page 264](#)
- ["Platform" on page 265](#)
- ["HP Project Management" on page 266](#)

### HP Demand Management

---

**PROBLEM:** You use a SQL rule to get a project name and display it on the Request Details page. When the project name contains an ampersand, the ampersand is not displayed and the name gets truncated on the Request Details page. (QCCR1L46993)

**Workaround:** PPM Center uses #@# as a separator. Make sure that:

- Values used in SQL rules do not contain & or #@#
- SQL rules do not contain #@#

You can use # and @ separately.

---

**PROBLEM:** On the **Timeout** tab of the Workflow Step window in the PPM Workbench, you set a timeout for a workflow step to make PPM Center send notifications when the step gets timed out. However, it does not work. (QCCR1L47224)

**Workaround:** The root cause is that the p\_step\_txn\_group\_IN\_list variable used to store step\_transaction\_id has a character limitation, which can contain around 4000 transaction ids.

To solve the issue, use the following query to check if there are too many transactions pending notification:

```
select step_transaction_id FROM KWFL_PENDING_STEP_TIMEOUTS_V
```

If the number of returned rows exceeds 4000, update the `timeout_date` column of the `KWFL_Step_Transactions` table. For example, you may run the following SQL:

```
update KWFL_STEP_TRANSACTIONS
set TIMEOUT_DATE = sysdate +floor(rownum / 3000)
where STEP_TRANSACTION_ID in
(select STEP_TRANSACTION_ID from KWFL_PENDING_STEP_TIMEOUTS_V)
```

After you run the SQL, the timeout dates of every 3000 rows are updated in batches. The date of the first batch is set to the current date and is one day later every time the batch number increases. As a result, PPM Center will send notifications of 3000 transactions per day, thus avoid exceeding the character limitation.

---

**LIMITATION:** You have a request type whose Request Header Type (RHT) contains an attachment field. You submit a request using this request type and attach a file in the field. On the request details page, you change the request type to the one using a different RHT and save the change. If attachment fields in both target and original RHTs use the same parameter, you receive the following error message when clicking the link of the attached file: You do not have access to this page...(KNTA-11013)

If you change the request type back to the original one, you can access the attached file again. (QCCR1L50552)

**Workaround:** None.

---

**LIMITATION:** If you are using Microsoft Internet Explorer 7.0, when you create a request whose request type contains table components, you cannot open the Create New *<Request Type>* page and receive the error message "Internet Explorer cannot open the Internet site..." in a pop-up window.

If you are using Microsoft Internet Explorer 8.0, when you create a request whose request type contains table components, you can open the Create New *<Request Type>* page but the page does not work properly. (QCCR1L51062)

**Workaround:** This is a Microsoft Internet Explorer limitation. To fix the problem, do one of the following:

- Download and install Microsoft patch "KB2416400" according to your operational system and browser version. You can download the patch from the following link:  
<http://www.microsoft.com/en-us/download/search.aspx?q=KB2416400>
- Upgrade your browser to Microsoft Internet Explorer 9.0.

**Note:** To achieve optimal viewing and application performance, HP recommends you use Internet Explorer 9.0.

---

**LIMITATION:** PPM Center does not support using UI rule `setFieldEditable()` to set table component validations as editable or read-only. (QCCR1L51073)

**Workaround:** None.

---

## Integrations

---

**PROBLEM:** (IE 9 only) When your screen resolution is lower than 1024 pixels, the Timeline tab of the Project Overview page does not display percentage for progress bars for waterfall projects.

**Workaround:** Use FireFox browser instead.

---

**PROBLEM:** (IE 9 only) In Quirks mode of the browser, the Timeline tab of the Project Overview page has the following display issues:

- On the master project timeline view, the tasks in the left navigation tree are not in alignment with the timeline bars in the right pane;
- The last month in the Gantt chart view may not display.

**Workaround:** Use other modes of the browser instead.

---

**PROBLEM:** (IE only) When adding an integration configuration on the View Project Quality integration landing page, entering a long name in the **QC/ALM Server Name** field may cause display alignment issue with the list of View Project Quality integration configurations.

**Workaround:** Enter a shorter name instead.

---

**PROBLEM:** If you are on the Timeline tab of the Project Overview page, the **More** drop-down menu does not display completely, the Delete option is missing. (QCCR1L51088)

**Workaround:** To display the Delete option, switch to another tab of the Project Overview page.

---

**PROBLEM:** On the Timeline tab of the Project Overview page, if there are more than 5 milestones in one day, only the first 5 milestones will display. No way to see other milestones.

**Workaround:** None.

---

**PROBLEM:** The Date label for agile project charts may not display completely.

**Workaround:** None.

---

**PROBLEM:** Error occurs when deleting a waterfall project if it is mapped to a task.  
(QCCR1L51101)

**Workaround:** Remove the mapping first, then delete the waterfall project.

---

## iPad Certification

---

**PROBLEM:** In the My Tasks portlet on the PPM Dashboard page, after you click **Edit Effort Breakdown**, input fields in the pop-up window are too narrow to display the inputted data.

**Workaround:** None.

---

**PROBLEM:** You cannot click the column headings to change the sort order of the table on the following pages:

- The **Subportfolios**, **Programs**, and **Proposal/Project/Asset** tabs of the View Portfolio page
- The **Scenario Content** section of the Scenario Comparison page.

**Workaround:** None.

---

**LIMITATION:** After you add a reference in the **References** section of the Program Overview page or on the **References** tab of the Task Details page, the newly added reference is not displayed in the **References to be added on Save** field. (QCCR1L49441)

**Workaround:** None.

---

**PROBLEM:** The View Work Plan page and the Project Settings page may not work properly. For example, when you click the **Name** or the **Predecessors** column on the View Work Plan page, the work plan gets truncated.

**Workaround:** HP recommends that you perform such actions on your computer.

---

**PROBLEM:** You cannot perform any action on the Administration Console page.

**Workaround:** None.

---



**PROBLEM:** You cannot use features related to right-clicking on PPM Center pages. This is because iPad does not support right-clicking.

**Workaround:** None.

---

**PROBLEM:** You may encounter style problems when using PPM Center. For example, table on the Manage Resource Pool page exceeds the right boarder of the page.

**Workaround:** None.

---

**PROBLEM:** You cannot export PPM Center pages to PDF/EXCEL files.

**Workaround:** None.

---

**LIMITATION:** You cannot see tooltips on PPM Center pages. This is because Apple Safari in mobile devices does not support Alt/Title attribute.

**Workaround:** None.

---

**LIMITATION:** (Apple IOS 5.0 only) You cannot upload files on PPM Center pages, this is because Apple IOS 5.0 does not support uploading files.

**Workaround:** None.

---

**LIMITATION:** Due to iPad limitations, you cannot use features utilizing Microsoft Silverlight, or download/upload EXCEL files in Application Portfolio Management.

**Workaround:** None.

---

## Platform

---

**PROBLEM:** Upgrade to 9.20 fails with the error below:

```
java.sql.SQLIntegrityConstraintViolationException: ORA-02299: cannot validate (P
PMSDUSER.SYS_C00262694) - duplicate keys found
(QCCR1L50735, QCIM1L50587)
```

**Workaround:** Follow the steps below to fix the problem:

1. Locate the /apps/ppmadmin/ppm/sandbox/upgrade\_920/920/ddl/fm/pfm\_lifecycle\_parent\_entity\_920\_1.sql file.

2. Comment out the following lines from the `pfm_lifecycle_parent_entity_920_1.sql` file:

```
/*  
  
ppm_db_utils.drop_index('pfm_lifecycle_project_req_idx');  
ppm_db_utils.drop_index('pfm_lifecycle_asset_req_idx');  
ppm_db_utils.drop_index('pfm_lifecycle_proposal_req_idx');  
ppm_db_utils.create_unique('pfm_lifecycle_parent_entity', 'proposal_req_id');  
ppm_db_utils.create_unique('pfm_lifecycle_parent_entity', 'project_req_id');  
ppm_db_utils.create_unique('pfm_lifecycle_parent_entity', 'asset_req_id');  
*/
```

3. Save the file.
4. Perform the upgrade again.

---

## HP Project Management

---

**PROBLEM:** When you click **Save** on the Project Details tab of the Project Overview page, you receive the following error message:

An Error has Occurred. The parameter (portletNoPreview) is invalid or missing.  
(QCCR1L42882)

**Workaround:** None.

---

## Chapter 9: Documentation Errata

The following documentation items are incorrect.

### ***Commands, Tokens, and Validations Guide and Reference***

---

#### **Incorrect name of the REQUEST\_SUB\_TYPE\_ID token**

**Location:** *Commands, Tokens, and Validations Guide and Reference*, version 9.20, page 192

**Error:** The name of the REQUEST\_SUB\_TYPE\_ID token in Table A-29 is incorrect.

**Correction:** The correct name of the REQUEST\_SUB\_TYPE\_ID token is REQUEST\_SUBTYPE\_ID.

---

### ***Customizing the Standard Interface***



---

#### **Insufficient information about files used in the PPM Center standard interface**

**Location:** *Customizing the Standard Interface*, version 9.20, pages 16, 74 and 75

**Error:** The information about files used in the PPM Center standard interface is insufficient.

**Correction:** Add the following two entries to the “Corporate logo files used in the PPM Center standard interface” table on page 16:

Image	File Location	Size (in pixels)
<b>Stored on the PPM Server File System</b>		
	<PPM_Home>/server/<PPM_Server_Name>/deploy/itg.war/web/new/img/HP_Blue_64x64.png	64 x 64
	<PPM_Home>/server/<PPM_Server_Name>/deploy/itg.war/web/new/img/ppm_logo.png	400 x 400

On page 74, change the bullet **GIF files (in English)** into **image files (in English)**, and add the following location:

<PPM\_Home>/server/<PPM\_Server\_Name>/deploy/itg.war/web/new/img/

On page 75, under the bullet **CSS files**, add the following location:

<PPM\_Home>/server/<PPM\_Server\_Name>/deploy/itg.war/web/new/css/

---

## Data Model Guide

---

### Incorrect definition for the PPM\_SERVICE\_RECORDS table

**Location:** *Data Model Guide*, version 9.20, page 1097

**Error:** The document specifies that the PPM\_SERVICE\_RECORDS table is populated with the last 50 runs of each background service. However, this table contains no rows.

**Correction:** The following text shall be added to the table definition for the PPM\_SERVICE\_RECORDS table:

To see the data populated in the PPM\_SERVICE\_RECORDS table, PPM Server administrators need to set the server configuration parameter `com.kintana.core.server.LOG_EXCEPTIONS_TO_DB` to true.

---

### Incorrect data table name: RSC\_TRACE\_DETAILS

**Location:** *Data Model Guide*, version 9.20, pages 124 and 1285

**Error:** The data table name of RSC\_TRACE\_DETAILS described on pages 124 and 1285 is incorrect.

**Correction:** The correct table name shall be RPT\_TRACE\_DETAILS.

---

## HP Demand Management Configuration Guide

---

### Limitation of special characters on configuring SQL rules not documented

**Location:** *HP Demand Management Configuration Guide*, version 9.20, page 198

**Error:** Limitation of special characters on configuring SQL rules is not documented.

**Correction:** The following information about configuring SQL rules shall be added to the HP Demand Management Configuration Guide:

PPM Center uses #@# as a separator. Make sure that:

- Values used in SQL rules do not contain & or #@#
- SQL rules do not contain #@#

You can use # and @ separately.

---

### **Insufficient information about rule event behavior on the look-ahead page**

**Location:** *HP Demand Management Configuration Guide*, versions 9.20, page 194

**Error:** The information about rule event behavior on the look-ahead page is insufficient.

**Correction:** Add a note as follows on page 194 of this guide:

When a user clicks either **Save Progress** or **Continue Workflow Action** on the look-ahead page, only "Apply before save" rules are triggered. This is because when the user clicks the workflow "action" button on the Request Details page before going to the look-ahead page, PPM Center has executed "Apply before transition" rules.

---

## ***Deployment Best Practices Guide***

---

### **HP Diagnostics Probe mentioned as supported in the Deployment Best Practices Guide**

**Location:** *Deployment Best Practices Guide*, version 9.20, page 32

**Error:** The document says that HP Diagnostics Probe "Ships with PPM Center and helps monitor transient data", which is not true.

**Correction:** Remove the line from the document.

---

## ***HP Center Management for Quality Center Guide***

---

### **Outdated limitation for CMQC solution**

**Location:** *HP Center Management for Quality Center Guide*, version 9.10, page 24

**Error:** The limitation note on page 24 that says "CMQC is not supported with Oracle database version 11.2.0.1" is outdated.

**Correction:** Oracle 11.2.0.2 and 11.2.0.3 (Standard/Enterprise Edition) (RAC and Non-RAC) support for the Center Management for Quality Center solution has been added.

---

## ***HP Financial Management User's Guide***

---

### **Insufficient description about the cost factor "role" that applies to the entity "task planned cost"**

**Location:** *HP Financial Management User's Guide*, version 9.20, page 23

**Error:** The description about the cost factor "role" that applies to the entity "task planned cost" is insufficient.

**Correction:** Add a note as follows after the description about "role" on page 23 of this guide:

**Note:** If, for the assigned portion of the task, the assigned resource does not have a role, PPM Centeruses the task role by default.

---

## ***Installation and Administration Guide***

---

### **Outdated information about the JAVA\_PLUGIN\_XPI\_PATH parameter**

**Location:** *Installation and Administration Guide*, version 9.20, page 141

**Error:** The document says the JAVA\_PLUGIN\_XPI\_PATH parameter "specifies the Web location for downloading the cross-platform Java plug-in installer for Firefox browsers. The default setting for this parameter is `java.com/en/download/windows_xpi.jsp`." This information is outdated.

**Correction:** The correct information shall be as follows:

The JAVA\_PLUGIN\_XPI\_PATH parameter specifies the Web location for downloading the cross-platform Java plug-in installer for Firefox browsers. The default setting for this parameter is [http://javadl.sun.com/webapps/download/GetFile/1.7.0\\_11-b21/windows-i586/xpiinstall.exe](http://javadl.sun.com/webapps/download/GetFile/1.7.0_11-b21/windows-i586/xpiinstall.exe).

**Note:** Normally it is not recommended to set this parameter. The XPI is installed if you install JRE. To download and install JRE, go to

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>.

However, if needed, you can go to the following address to find the specific web location for downloading the .xpi file for your Firefox browser:

<http://www.oracle.com/technetwork/java/javase/autodownload-140472.html>.

---

### **Outdated default values or examples for Java Plug-in parameters**

**Location:** *Installation and Administration Guide*, version 9.20, pages 468 and 469

**Error:** The default values provided for Java Plug-in related parameters are outdated.

**Correction:** The correct default values or examples shall be as follows:

Parameter Name	Description, Usage	Default and Valid Values
JAVA_PLUGIN_CLASSID	Class ID for the Java plugin used for the PPM Workbench.	Default:  CAFEEFAC-0017-0000-FFFF-ABCDEFFE DCBA
JAVA_PLUGIN_PATH_IE	Web location for downloading the cross-platform Java plug-in bundle for Internet Explorer browsers.  <b>Warning:</b> Internet Explorer versions 7 and 8 display a warning if the JAVA_PLUGIN_PATH_IE value contains the protocol identifier "http:". If you override the default setting for this parameter, make sure that you remove the protocol identifier "http:"	Default:  //java.sun.com/update/1.7.0/jinstall-7u11-windows-i586.cab
JAVA_PLUGIN_PATH_NS	Web location for downloading the cross-platform Java plug-in installer for Netscape browsers.	Default:  <a href="http://www.oracle.com/technetwork/java/javase/downloads/index.html">http://www.oracle.com/technetwork/java/javase/downloads/index.html</a>
JAVA_PLUGIN_VERSION	Earliest version of the Oracle Java plug-in used to start the PPM Workbench.	Default: 1.7.0_11
JAVA_PLUGIN_XPI_PATH	Web location for downloading the cross-platform Java plug-in installer for Firefox browsers.	Example:  <a href="http://javadl.sun.com/webapps/download/GetFile/1.7.0_11-b21/windows-i586/xpiinstall.exe">http://javadl.sun.com/webapps/download/GetFile/1.7.0_11-b21/windows-i586/xpiinstall.exe</a>

### Incomplete description for the DISTINGUISHED\_NAME attribute of the KNTA\_USERS\_INT parameter

**Location:** *Installation and Administration Guide*, version 9.20, page 222

**Error:** The description of the DISTINGUISHED\_NAME attribute is incomplete.

**Correction:** The complete description shall be as follows:

**DISTINGUISHED\_NAME:** Maps to a unique and fixed field of the LDAP server. For example, DISTINGUISHED\_NAME = distinguishedName.

**Note:** By default, the `DISTINGUISHED_NAME` attribute maps to `distinguishedName` of the LDAP server. If `distinguishedName` of the LDAP server is changeable, make sure you map `DISTINGUISHED_NAME` to another field that is unique and fixed on the LDAP server.

Required if using SSO, LDAP, or NTLM as the user authentication mode.

---

## The `WEB_CACHE_DIR` parameter was not documented

**Location:** *Installation and Administration Guide*, version 9.20

**Error:** The `WEB_CACHE_DIR` parameter was not documented in the guide.

**Correction:** Add the definition of the `WEB_CACHE_DIR` parameter to the guide as follows:

Parameter Name (*Required, **Required If)	Description, Usage	Default and Valid Values
** <code>WEB_CACHE_DIR</code>	<p>Specifies web cache directory.</p> <p>Add this parameter to the <code>server.conf</code> file if it is not there, and make sure to use a shared folder in clustered configuration so that whenever a chart in portlet is loaded by PPM Dashboard, it creates charts pictures into this shared folder. Then, the Directory Cleanup Service can automatically clean up the older pictures files.</p> <p>Required only if all the nodes of the cluster are not located on the same physical machine AND in the same <code>&lt;PPM_Home&gt;</code> folder.</p>	<p>Examples:</p> <pre>//&lt;IP_ Address&gt;/&lt;Local_ Drive_ Letter &gt;\$/&lt;Shared_ Folder&gt;/ or  &lt;File_Server_ Name&gt;\$/&lt;Shared_ Folder&gt;</pre>

---

## Confusing requirement about password when using Private Key Authentication with Secure Shell with RSA keys

**Location:** *Installation and Administration Guide*, version 9.20, pages 110-111

**Error:** Step 2 says "You should not be prompted for the password. It should log on to the remote host using the RSA key file", but Step 8.d requires a value to be provided in the **Password** field. These two steps are confusing as they seem conflicting with each other.

**Correction:** The password required in step 8.d for the `<User_ID>` in step 2 is designed to provide backup authentication if the RSA key file fails. Therefore, the note in step 8.d shall be modified as follows to clearly state the purpose of the requirement:



**Note:** The PPM Workbench requires that you provide a password, regardless of whether the authentication uses RSA. If authentication with RSA fails, the password you provide here will be used instead to connect to the remote host.

---

## Information on how to configure the Microsoft Telnet server missing

**Location:** *Installation and Administration Guide*, version 9.20, page 66

**Error:** The document does not mention how to configure the Microsoft Telnet server on Windows 2003 and 2008 servers. (QCCR1L51668)

**Correction:** Add a new section to the document under the "Installing a UNIX Emulator and Telnet Server (Windows)" heading. For details, see ["Configuring Microsoft Telnet Server in Windows 2003 and 2008 Servers" on page 285](#)

---

## Information about setting JAVA\_HOME in Cygwin missing

**Location:** *Installation and Administration Guide*, version 9.20, page 64

**Error:** The document does not mention how to set JAVA\_HOME in Cygwin.

**Correction:** Add the following content to the guide:

### Setting the JAVA\_HOME value in Cygwin

To set the JAVA\_HOME value in Cygwin,

1. Add the JAVA\_HOME parameter to System Variables.

For detailed instruction, you may refer to the "Setting the JAVA\_HOME Value in Windows" section on page 64 of the document.

2. (Optional, but recommended) Set the .bash\_profile file.
  - a. Open the <Cygwin\_HOME>/ .bash\_profile file in a text editor.
  - b. Add the following to the end of the file:

```
export JAVA_HOME=/cygdrive/<Drive_Letter>/<JDK_HOME>
export PATH=$JAVA_HOME/bin:$PATH
```

- c. Save the .bash\_profile file and quit.

## Instructions about LDAP password encryption procedures are confusing

**Location:** *Installation and Administration Guide*, version 9.20, page 220

**Error:** The instructions about KINTANA\_LDAP\_PASSWORD encryption procedures are confusing. (QCCR1L52183)

**Correction:** Replace the text for the KINTANA\_LDAP\_PASSWORD parameter with the following.

- KINTANA\_LDAP\_PASSWORD. The KINTANA\_LDAP\_PASSWORD parameter in the `server.conf` file is an encrypted string enclosed with `#!#!#` character delimiters.

Example

```
com.kintana.core.server.KINTANA_LDAP_PASSWORD=#!#!#encryptedstring#!#!#
```

You may set the KINTANA\_LDAP\_PASSWORD parameter in two ways:

- Run the `kConfig.sh` script and provide the plaintext LDAP password when prompted. The script will write out the `server.conf` file with the KINTANA\_LDAP\_PASSWORD entry encrypted as above. Or,
- If the LDAP password change is the only change you want to make to the `server.conf` file, then do the following:
  - i. Run `kEncrypt.sh`, and provide the plaintext LDAP password when prompted.
  - ii. Paste the encrypted string output into the `server.conf` file KINTANA\_LDAP\_PASSWORD entry enclosed with the `#!#!#` character delimiters as in the example above.

---

## Oracle database parameter optimizer\_mode not documented

**Location:** *Installation and Administration Guide*, version 9.20, page 127

**Error:** Oracle database parameter optimizer\_mode is not documented in the document, which may cause performance issues when the parameter is not set to ALL\_ROWS.

**Correction:** Add the following to the document:

### OPTIMIZER\_MODE

The OPTIMIZER\_MODE parameter establishes the default behavior for choosing an optimization approach for the instance.

Values:

- `first_rows_n`

The optimizer uses a cost-based approach and optimizes with a goal of best response time to return the first  $n$  rows (where  $n = 1, 10, 100, 1000$ ).

- `first_rows`

The optimizer uses a mix of costs and heuristics to find a best plan for fast delivery of the first few rows.

- `all_rows`

The optimizer uses a cost-based approach for all SQL statements in the session and optimizes with a goal of best throughput (minimum resource use to complete the entire statement).

### Recommended Setting

Set this parameter to `all_rows`.

---

### Default permissions for PPM Center schemas not documented

**Location:** *Installation and Administration Guide*, version 9.20, page 69; *Upgrade Guide*, version 9.20, page 46

**Error:** The following two permissions are not documented.

- `grant create job`
- `grant execute on ctxsys.ctx_ddl`

**Correction:** Add the following two permissions to the concerning documents:

- `grant create job`
- `grant execute on ctxsys.ctx_ddl`

---

### Missing description for the `WF_DISABLE_DELEGATE_DECISION_STEP` parameter

**Location:** *Installation and Administration Guide*, version 9.20

**Error:** The description for the `WF_DISABLE_DELEGATE_DECISION_STEP` parameter is missing.

**Correction:** Add the following line to the document:

Parameter Name (*Required, **Required If)	Description, Usage	Default and Valid Values
WF_DISABLE_ DELEGATE_ DECISION_STEP	By adding this parameter to the <code>server.conf</code> file and setting it to <code>true</code> , you can hide the <b>Delegate Decision</b> button for workflow steps where the <b>Decision Required</b> option is set to <b>At Least One</b> or <b>All</b> . If this parameter is not set or set to <code>false</code> , the <b>Delegate Decision</b> button will be displayed.	Default: <code>false</code>  Valid values: <code>true</code> , <code>false</code>

---

## Language Pack Release Notes

---

### Improper Oracle database settings recommended

**Location:** *Language Pack Release Notes*, version 9.20 (page 1), 9.21 (page 7)

**Error:** The document recommends improper settings for Oracle database properties as follows:

- Set the following Oracle database properties in addition to the standard PPM settings:
  - `NLS_LENGTH SEMANTICS = CHAR`
  - `NLS_CHARACTERSET = UTF8`
  - `NLS_NCHAR_CHARACTERSET = UTF8`

(QCCR1L52311)

**Correction:** The correct settings shall be as follows:

- Set the following Oracle database properties in addition to the standard PPM settings:
    - `NLS_LENGTH SEMANTICS = CHAR`
    - `NLS_CHARACTERSET = AL32UTF8`
    - `NLS_NCHAR_CHARACTERSET = AL16UTF16`
-

## ***Multilingual User Interface Guide***

---

### **Incorrect description of HP Demand Management notifications**

**Location:** *Multilingual User Interface Guide*, version 9.20, page 23

**Error:** The description of "HP Demand Management notifications" contains incorrect information.

**Correction:** The correct description of "HP Demand Management notifications" is as follows:

HP Demand Management notifications are sent to recipients in the system language of the PPM Center instance (as selected for the PPM Center installation). The formatting of dates and numbers displayed in notification messages is based on each recipient's formatting locale (as specified on the **Regional Settings** tab of the Edit My Profile page).

---

### **Incomplete description of installing Unicode fonts for export to PDF**

**Location:** *Multilingual User Interface Guide*, version 9.20, page 49

**Error:** The description of "Installing Unicode Fonts for Export to PDF" is incomplete.

**Correction:** The following information shall be added to the description:

The dashboard settings do not apply to exporting translated work plans to PDF files. For work plans containing multiple languages, you must update the `<PPM_Home>/server/<PPM_Server_Name>/deploy/itg.war/WEB-INF/conf/FontOptions_<Language>.properties` file and change the font to one that supports all the languages used in your work plan.

---

## ***Operational Reporting Administrator's Guide***

---

### **Incorrect E-Media Suggested for BusinessObjects Enterprise Bundles**

**Location:** *Operational Reporting Administrator's Guide*, version Content Pack 1.3, page 19 and page 104

**Error:** In Step f, the document incorrectly suggests to download the BusinessObjects Enterprise XI 3.1 SP5 installation bundle and the BusinessObjects Enterprise XI 3.1 SP5 FP3 upgrade bundle by selecting **HP PPM 9.10 Eng SW E-Media** or **HP PPM 9.20 Eng SW E-Media**.

**Correction:** Change Step f and Step g as follows:

f. Select **HP PPM 9.10 Eng SW E-Media**, and then click **Get Software Updates**.

g. Click **Get Software** for **T5570-15087 (PPM OpRpt BO 3.1 SP5.3 Windows Install)** (This software also applies to PPM Center 9.20).

---

### **Insufficient information about <Op\_Reports\_Home> folder**

**Location:** *Operational Reporting Administrator's Guide*, version Content Pack 1.3, pages 29, 32, 33, 78, 82 and 85.

**Error:** The document suggests to copy the files to the <Op\_Reports\_Home> folder. However, the information about this folder is insufficient.

**Correction:** Add a note as follows after those steps:

The <Op\_Reports\_Home> folder is the BusinessObjects installation directory where you extract the installation bundle for Operational Reporting Content Pack 1.3 to.

---

### **Non-existing Folder: DB**

**Location:** *Operational Reporting Administrator's Guide*, version Content Pack 1.3, Chapter 2 and Chapter 3

**Error:** The document suggests to go to the <Op\_Reports\_Home>/DB folder. However, the DB folder does not exist in the installation bundle for Operational Reporting Content Pack 1.3.

**Correction:** Remove all occurrences of the DB folder from Chapter 2 and Chapter 3 of the document.

---

### **Incorrect Value Suggested for SS\_INDEX\_LOCATION**

**Location:** *Operational Reporting Administrator's Guide*, version Content Pack 1.3, page 34

**Error:** The value suggested for the SS\_INDEX\_LOCATION parameter is incorrect.

**Correction:** The correct value shall be C:\hp\ppm\reporting\boe31\BusinessObjects Enterprise 12.0\data/search.

---

## ***Overview of Platform Support***

### **Microsoft Hyper-V listed as supported**

**Location:** *Overview of Platform Support*, version 9.21, page 2

**Error:** The following virtualization configuration items are listed in the document as supported:

- Microsoft Hyper-V running Microsoft Windows 2008 SP2 Enterprise Edition (32-bit)
- Microsoft Hyper-V running (Red Hat) Linux 4 (64-bit)

This is incorrect as Hyper-V was desupported on PPM Center version 9.20.

**Correction:** Remove these items from the document.

---

## ***HP Program Management Configuration Guide***

---

### **The PMO - CR Level validation not documented**

**Location:** *HP Program Management Configuration Guide*, version 9.20, page 26

**Error:** The PMO - CR Level validation is not documented.

**Correction:** The following information shall be added as a warning on page 26:

Do not edit the PMO - CR Level validation because it is seed data. Editing it can cause both the KPMO\_PROGRAM\_SCOPE\_CHANGE\_V view and the Program Scope Change List portlet to fail.

---

## ***HP Project Management User's Guide***


---

### **Legend of work plan Gantt view not documented**

**Location:** *HP Project Management User's Guide*, version 9.20, page 109



**Error:** Legend of work plan Gantt view is not documented.












**Correction:** The following information shall be added:

To view the Gantt legend of a work plan, click the  icon next to the **Edit** drop-down list on the Work Plan page. The icon appears only when you select **Gantt View** for the **View** drop-down list.

To view the Gantt legend of a Project Gantt portlet, select the **Show Legend** checkbox in the **Display Options** section on the Edit Portlet Preferences page.

Table below provides detailed information about items included in the Gantt legend.

Legend Item	Description
	Status of the task is ready.
	Status of the task is in progress.

Legend Item	Description
 or 	Status of the task is complete.
	Status of the task is pending predecessor.
	Status of the task is cancelled.
 or 	The task is on the critical path of a work plan.
	The task contains one or more exceptions.
	The task is marked as a milestone.
	The task is a summary task. Its color indicates the schedule health of the task.
	The pointed task has a predecessor. The arrow starts from the preceding task and points to the pending task.
	The pointed task has an external predecessor.

---

## Release Notes

---

### Issue causing the error message “An Error has occurred. The parameter (portletNoPreview) is invalid or missing.” partially fixed

**Location:** *Release Notes*, version 9.14, third edition, page 109

**Error:** Issue causing the error message “An Error has occurred. The parameter (portletNoPreview) is invalid or missing.” (under the tracking number 4629313349 or defect number QCCR1L42882) was only partially fixed.

**Correction:** Move the description for the issue from the **Fixes** section of the document to the **Known Problems and Limitations in PPM Center 9.14** section.

---

## Reports Guide and Reference

---

### Insufficient information about the Security tab of Report Type window in PPM Workbench

**Location:** *Reports Guide and Reference*, version 9.20, page 191



**Error:** The information about the Restricted Security Groups field and Allowed Security Groups field under the Security tab of Report Type window is insufficient.

**Correction:** Add a note as follows in the Security Tab section of this guide:

**Note:** Only security groups that have Edit Report Types AND View Report Types access grant can be shown in Restricted Security Groups field and Allowed Security Groups field.

---

## ***HP Resource Management User's Guide***

---

### **Missing information about Total Assignment Calculation**

**Location:** *HP Resource Management User's Guide*, version 9.20, page 124

**Error:** The information about Total Assignment Calculation is missing.

**Correction:** Add a table note as follows for "Total Assignment" on page 124 of this guide:

**Note:** Total Assignment is calculated based on the project's Cost and Effort settings:

- If "Staffing Profile represents the work load imposed by the project" is selected, Total Assignment includes the sum of effort scheduled in the related staffing profiles.
- If "Work plan task assignments represents the work load imposed by the project" is selected, Total Assignment includes the sum of the effort scheduled in the related work plan.

---

## ***System Requirements and Compatibility Matrix***

---

**Documentation does not clearly state that when language packs are applied, integrations will not work.**

**Location:** *System Requirements and Compatibility Matrix*, versions 7.5, 8.x, 9.1x, and 9.2x

**Error:** The document does not clearly state that when language packs are applied, PPM Center integrations will not work. (QCCR1L37602)

**Correction:** The following note need to be added to the *An Overview of Language Support* section of the document:

From version 7.5 to version 9.2x, PPM Center integrations with other HP Software products or third-party products will not work if language packs are applied. However, the following integration solutions available since PPM Center version 9.20 support multiple languages:

- The View Project Quality integration solution
- The integration between PPM Center tasks and HP Agile Manager

Even if the integrated product is an English-only instance, PPM Center can still retrieve data, but displays the data in English.

---

### **Incorrect optional products listed**

**Location:** *System Requirements and Compatibility Matrix*, version 9.20, pages 19

**Error:** The following optional products are listed as supported:

Visual Studio Tools for Office (VSTO)

- Version 2005 SE for Microsoft Project 2003

Microsoft Office Primary Interop Assemblies for Microsoft Project

- Version 2003 for Microsoft Project 2003

**Correction:** These two entries shall be removed as Microsoft Project 2003 is desupported on PPM Center 9.20.

---

### **The document does not clearly indicate whether 32-bit or 64-bit of Microsoft Project 2010 is supported**

**Location:** *System Requirements and Compatibility Matrix*, version 9.20 (page 19), version 9.21 (page 19)

**Error:** The document does not clearly indicate whether 32-bit or 64-bit or both of Microsoft Project 2010 (Standard/Professional) are supported.

**Correction:** Both 32- and 64-bit of Microsoft Project 2010 (Standard/Professional) are supported. Add "(both 32- and 64-bit)" to all items under the *Microsoft Project* section.

---

### **Supported Java™ Plug-In version**

**Location:** *System Requirements and Compatibility Matrix*, version 9.20 and 9.21, page 18;  
*Overview of Platform Support*, version 9.20 and 9.21, page 2

**Error:** The two documents say the following about Java™ Plug-In requirements:

- Java 7 Update 11 (7u11) or later (32-bit and 64-bit) for all supported browsers

**Correction:** Remove "or later" from the line.

---

## HP Solution Integrations Guide

---

### Missing documentation on ksc\_get commands related to QC/ALM

**Location:** *HP Solution Integrations Guide*, version 9.20, page 100

**Error:** The document lacks information about some ksc\_get special commands.

**Correction:** Add description about the following ksc\_get commands into the document:

**Table 3-24. Special commands for integration of PPM Center with Quality Center**

Special Command	Description
ksc_get_QC_Assigned_To_List	Gets domain users from Quality Center
ksc_get_QC_Defect_Instance_Domains_List	Gets a list of Quality Center instance domains for defect
ksc_get_QC_Defect_Instance_Projects_List	Gets a list of Quality Center instance projects for defect
ksc_get_QC_Domain_List	Get a list of Quality Center domains
ksc_get_QC_Instance_Domains_List	Get a list of Quality Center instance domains
ksc_get_QC_Instance_List	(Not in use) Gets a list of Quality Center instances
ksc_get_QC_Instance_Projects_List	Gets a list of Quality Center instance projects
ksc_get_QC_Project_List	Gets the available project for the Quality Center
ksc_run_QC_Automated_Testset	Runs Quality Center automated test set

For more information about how to use special commands, see the *Commands, Tokens, and Validations Guide and Reference*.

---

## Upgrade Guide

---

### Task 17 (Prepare a Back Out Plan) shall be a mandatory task

**Location:** *Upgrade Guide*, version 9.20, page 41

**Error:** The content for the task goes as follows: "If there is an error during a PROD environment upgrade, you may want to restore the backup of the file system and database schema so PROD environment down time is minimal. Then restore the PROD file system and database schema to the STAGE environment and test the upgrade again." Usage of "may" here is too weak. (QCCR1L52588)

**Correction:** The content for the task shall be modified to the following:

**Task 17: Prepare a Back Out Plan**

If there is an error during a PROD environment upgrade, restore the backup of the file system and database schema so PROD environment down time is minimal. Then restore the PROD file system and database schema to the STAGE environment and test the upgrade again.

---

## Configuring Microsoft Telnet Server in Windows 2003 and 2008 Servers

Microsoft Telnet server configuration involves the following tasks:

- ["Configure the Shell Startup and Login Scripts" below](#)
- ["Configure the Telnet Server" on page 287](#)
- ["Set the JAVA\\_HOME value in Cygwin" on page 289](#)
- ["Start the MS Telnet server service" on page 290](#)

### Configure the Shell Startup and Login Scripts

For the MS Telnet server to successfully invoke the BASH shell as the command shell, the following two scripts must be created:

- Shell startup script: `cygnus.bat`
- Login script: `login.cmd`

#### Configure the shell startup script (`cygnus.bat`)

1. Choose a location for the startup script.

Convention dictates that this script be located in the Cygwin root directory. In this example, assume the Cygwin root directory is located at `C:\Program Files\cygwin\`.

**Note:** You will also need the path to the `Cygwin\bin\` directory. In this example, assume the `Cygwin\bin\` directory is located at `C:\Program Files\cygwin\H-i586-cygwin32\bin\`.

2. In the Cygwin root directory, create a batch file named `cygnus.bat`, with the following contents:

```
@ECHO OFF
SET MAKE_MODE=UNIX
SET PATH=C:\PROGRA~1\cygwin\H-I586~1\bin;%PATH%
echo thank you bill >nul
bash -login -noediting -noprofile -i
```

**Note:**

- It is important to specify the `PATH` in this script, even if the system environment path already includes the `Cygwin\bin\` directory.
- The line `echo thank you bill >nul` is a trick to get around a bug that prohibited the shell from starting. For more information, visit <http://www.cygwin.com/ml/cygwin/2002-01/msg01395.html>.
- It is recommended to type the above text manually into the `cygnus.bat` file using a standard ASCII text editor like Notepad or VI, rather than copying and pasting. Some Microsoft Word non-ASCII characters are not recognized by the command shell, and can lead to mysterious errors.

**Configure the login script (login.cmd)**

A login cmd script is required during Telnet session initiation. This can be as simple as a single-line “echo” statement, or it can perform additional functionality upon session startup if desired.

In the Cygwin root directory, create a `.cmd` file named **login.cmd**, with the following contents (replace the echo string with any desired message):

```
echo 'welcome to <machine name>'
```

**Setting the JAVA\_HOME value in Cygwin**

To set the `JAVA_HOME` value in Cygwin,

1. Add the `JAVA_HOME` parameter to System Variables.

For detailed instruction, you may refer to the "Setting the `JAVA_HOME` Value in Windows" section on page 64 of the document.

2. (Optional, but recommended) Set the `.bash_profile` file.
  - a. Open the `<Cygwin_HOME>/ .bash_profile` file in a text editor.
  - b. Add the following to the end of the file:

```
export JAVA_HOME=/cygdrive/<Drive_Letter>/<JDK_HOME>
export PATH=$JAVA_HOME/bin:$PATH
```

- c. Save the `.bash_profile` file and quit.

## Configure the Telnet Server

To do so,

1. Edit the Microsoft Telnet server registry to specify the shell startup.

There is no interface provided for specifying the shell startup script, so this must be done directly in the windows registry. This is a simple operation -only two parameters need to be updated.

- a. Go to **Start > Run**, enter **regedt32**, and click **OK**.

The Registry Editor window opens.

- b. Go to **HKEY\_LOCAL\_MACHINE > SOFTWARE > Microsoft > TelnetServer > 1.0**.

When you highlight the **1.0** folder, the parameter list is displayed in the right-hand panel of the registry window.

- c. Double-click the **DefaultShell** entry.

Enter the full path to the `bash.exe` file and then click **OK** to apply the change.

In this example, it is `C:\cygwin\bin\bash.exe`.

- d. Double-click the **Shell** entry and clear the existing value.
- e. Double-click the **SwitchToKeepShellRunning** entry and clear the existing value.
- f. Double-click the **LoginScript** entry and change the value to

`-login -noediting -noprofile -i`

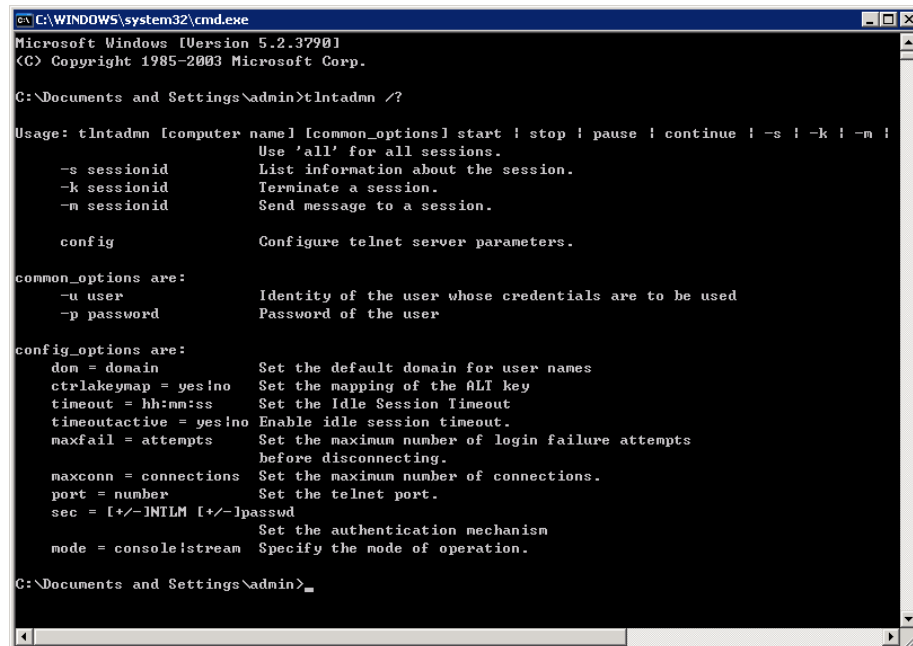
2. Run the Telnet administration utility to configure the Telnet server settings.

A command-line utility called `tlntadm` is provided for administering properties of the Telnet server such as the authentication mode, port number, number of simultaneous sessions allowed, and so on.

The authentication mode must be configured to use **Password** authentication, not NTLM authentication. The port must be set to the default value 23.

To do so,

- a. In a DOS command shell, you can view the current Telnet server settings by simply running `tlntadmn` with no arguments. The help screen can be displayed by typing `tlntadmn /?` at the command line.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\admin>tlntadmn /?

Usage: tlntadmn [computer name] [common_options] start | stop | pause | continue | -s | -k | -m |
        Use 'all' for all sessions.
        List information about the session.
        Terminate a session.
        Send message to a session.

        config          Configure telnet server parameters.

common_options are:
        -u user          Identity of the user whose credentials are to be used
        -p password      Password of the user

config_options are:
        dom = domain     Set the default domain for user names
        ctrlakeymap = yes|no Set the mapping of the ALT key
        timeout = hh:mm:ss Set the Idle Session Timeout
        timeoutactive = yes|no Enable idle session timeout.
        maxfail = attempts Set the maximum number of login failure attempts
                        before disconnecting.
        maxconn = connections Set the maximum number of connections.
        port = number     Set the telnet port.
        sec = [+/-]NTLM [+/-]passwd Set the authentication mechanism
        mode = console|stream Specify the mode of operation.

C:\Documents and Settings\admin>
```

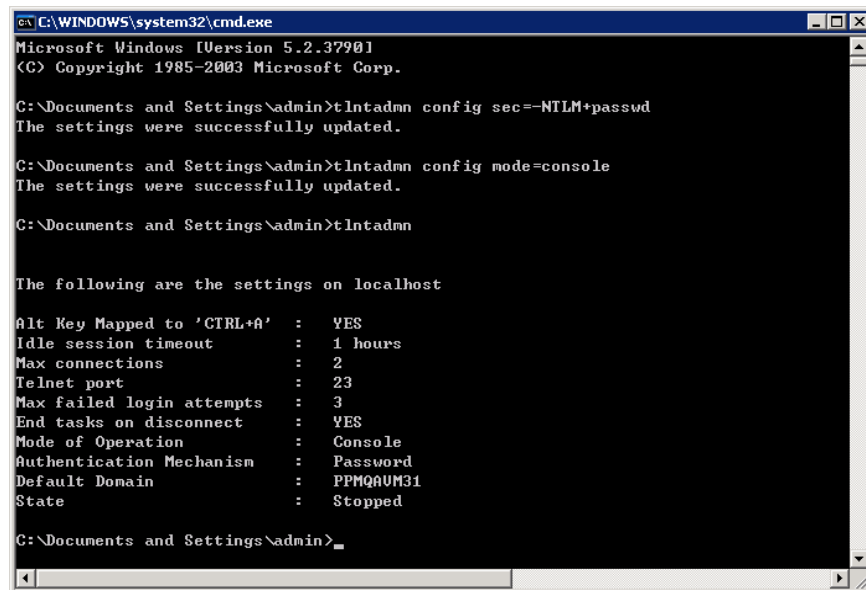
- b. To configure the Telnet server for **Password** authentication, use the following command:

```
tlntadmn config sec=-NTLM+passwd
```

- c. To configure the Telnet server for **console** mode, use the following command:

```
tlntadmn config mode=console
```





```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\admin>tlntadmn config sec=-NTLM+passwd
The settings were successfully updated.

C:\Documents and Settings\admin>tlntadmn config mode=console
The settings were successfully updated.

C:\Documents and Settings\admin>tlntadmn

The following are the settings on localhost

Alt Key Mapped to 'CTRL+A' : YES
Idle session timeout      : 1 hours
Max connections           : 2
Telnet port                : 23
Max failed login attempts : 3
End tasks on disconnect   : YES
Mode of Operation         : Console
Authentication Mechanism  : Password
Default Domain            : PPMQAUM31
State                     : Stopped

C:\Documents and Settings\admin>
```

**Tip:** The mode of operation can be set to either of the two available options, **Console** or **Stream**. If you will also be supporting manual Telnet sessions, then the **Console** setting provides additional output formatting to facilitate a human user setting, and is thus recommended.

**Note:** Make sure that the Telnet port is set to 23.

3. To change the PATH settings if all the UNIX commands are not working,
  - a. Go to **Control Panel > System > Advanced > Environment Variables > System variables > Path**, and click **Edit**.

The Edit System Variable dialog opens.

- b. In the **Variable value** field, add the following entry:

```
;C:\<cygwin_base_path>\usr\bin
```

where <cygwin\_base\_path> is the path where Cygwin is installed.

- c. Click **OK** three times.

## Set the JAVA\_HOME value in Cygwin

To set the JAVA\_HOME value in Cygwin,

1. Add the JAVA\_HOME parameter to System Variables.

For detailed instruction, you may refer to the "Setting the JAVA\_HOME Value in Windows" section on page 64 of the document.

2. (Optional, but recommended) Set the .bash\_profile file.
  - a. Open the <Cygwin\_HOME>/ .bash\_profile file in a text editor.
  - b. Add the following to the end of the file:

```
export JAVA_HOME=/cygdrive/<Drive_Letter>/<JDK_HOME>  
export PATH=$JAVA_HOME/bin:$PATH
```

- c. Save the .bash\_profile file and quit.

## Start the MS Telnet server service

Starting and stopping the Microsoft Telnet server is done in the same manner as starting and stopping any other Windows Service.

1. Go to **Start > Control Panel > Administrative Tools > Services**.

The Services control panel opens.

2. To start the service, highlight the row containing **Telnet Server**, and click the **Start** button.
3. To stop the service, highlight the same row and click the **Stop** button.

## Setting Up Integration Between PPM Center 9.2x and HP ALM 11.52 from Scratch

This section provides information for setting up a full integration between PPM Center version 9.2x and HP ALM version 11.52 from scratch.

This process includes the following tasks:

- ["Task 1: Update the OOTB ALM - Request For Change Workflow" below](#)
- ["Task 2: Create and configure a new project in ALM" on the next page](#)
- ["Task 3: Add scripts to perform the operation on HP ALM server side" on page 303](#)
- ["Task 4: Add an integration configuration entry in PPM Center" on page 305](#)
- ["Task 5: Create a request in PPM Center" on page 306](#)

### Prerequisites

Make sure the following prerequisites are met:

- PPM Center version 9.2x is installed, with ALM content bundle deployed.
- The Oracle database is already there
- HP ALM version 11.52 is installed

### Task 1: Update the OOTB ALM - Request For Change Workflow

To do so,

1. Log on to PPM Center as administrator.
2. From the menu bar, select **Open > Administration > Open Workbench**.

The PPM Workbench opens.

3. From the shortcut bar, select **Configuration > Workflows**.

The Workflow Workbench opens to the Query tab.

- Click **List** and then, on the **Results** tab, double-click **ALM - Request For Change**.

The Workflow windows opens to the Layout tab.

- Go to step **23. Non Release Sub WF**, right click and select **Edit Source** from the context menu.

The Workflow: Non Release Sub WF window opens to the Layout tab.

- Right click step **4. Quality Process Mode**, and select **Edit** from the context menu.

The Workflow Step window opens to the Properties tab.

The screenshot shows the 'Workflow Step' dialog box with the 'Properties' tab selected. The dialog has a title bar with the HP logo and a close button. The tabs at the top are: Properties, Security, Segregation of Duties, Notifications, Timeout, User Data, Results, and Display Settings... The main area contains the following fields and controls:

- Step Number: 4
- Step Name: Quality Process Mode
- Action Summary: (empty text box)
- Description: (empty text box)
- Source Type: Decision
- Source Name: ALM - Quality Process Manual mode
- Enabled: ☒ Yes ☐ No
- Display: Always (dropdown menu)
- Workflow Parameter: NONE (dropdown menu)
- Avg Lead Time: (empty text box)
- Request Status: Approved (dropdown menu)
- Current % Complete: (empty text box)
- Parent Assigned To User: (empty text box) with Edit and Clear buttons
- Parent Assigned To Group: (empty text box) with Edit and Clear buttons
- Workflow Step Information: (empty text box) with a 'U' icon button
- Authentication Required: None (dropdown menu)

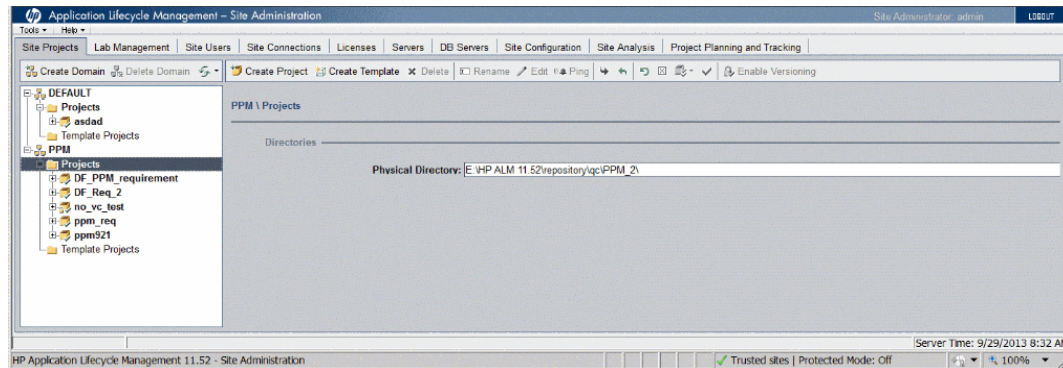
At the bottom right are the OK, Apply, and Cancel buttons. The status bar at the bottom left says 'Ready'.

- Update the value for **Request Status** to **Approved**.
- Click **OK**.
- Click **Save** and exit the workflow completely.

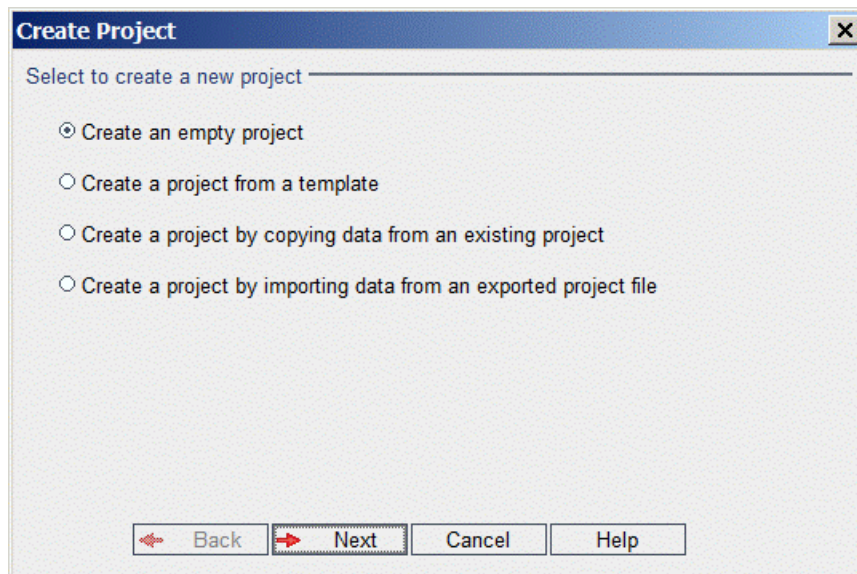
## Task 2: Create and configure a new project in ALM

To create a new project in Site Administration of ALM,

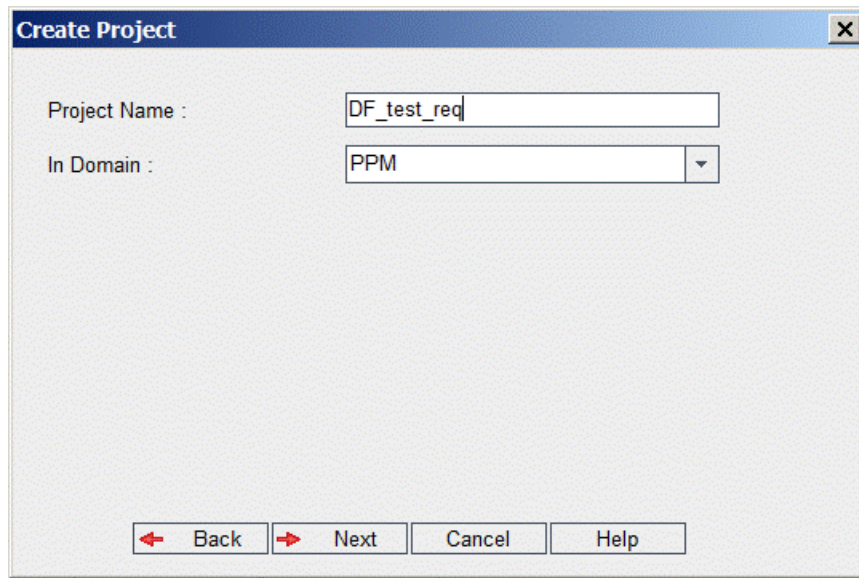
1. Log on to Site Administration of ALM.
2. On the Site Projects tab, navigate to the desired location, and provide a path for your project in the **Physical Directory** field, and click **Create Project**.



3. In the Create Project dialog, select **Create an empty project**, and then click **Next**.

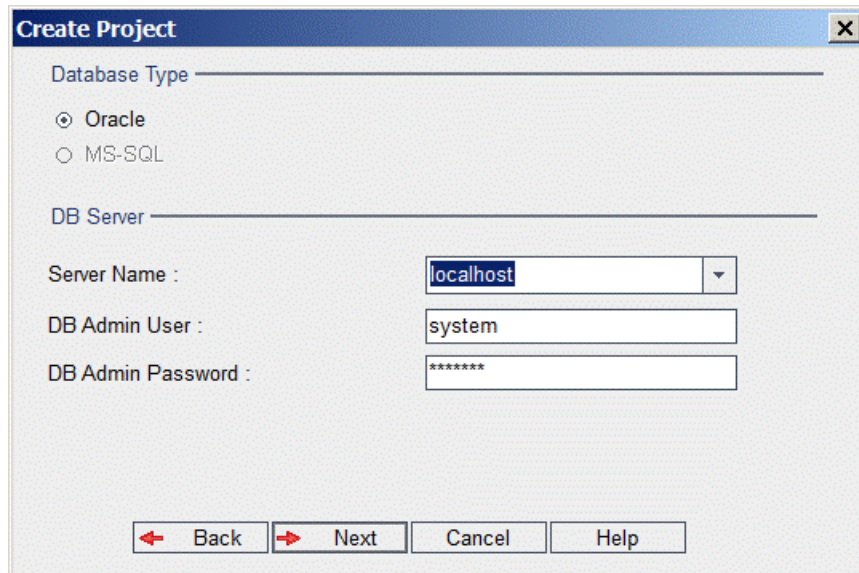


4. Enter a project name in the **Project Name** field, select a domain for the project from the **In Domain** drop-down list, and then click **Next**.



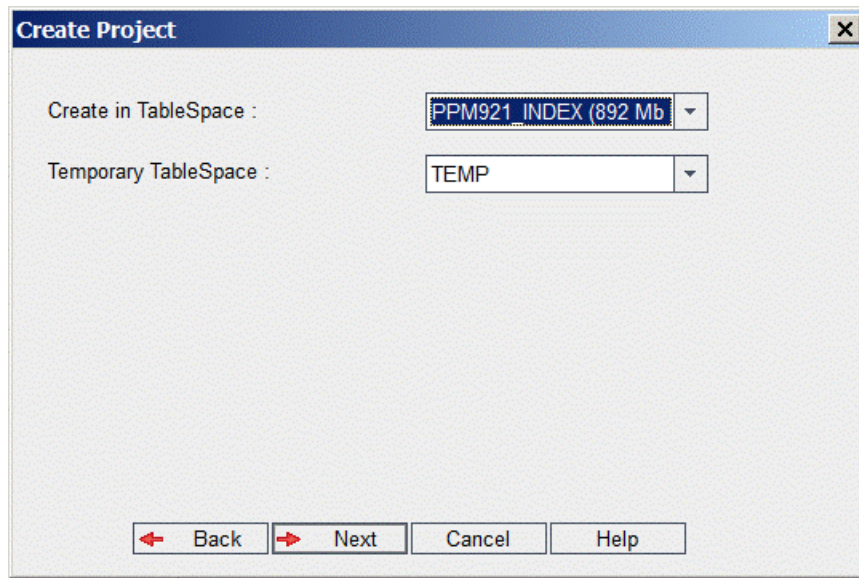
The 'Create Project' dialog box has a title bar with a close button. It contains two input fields: 'Project Name' with the text 'DF\_test\_req' and 'In Domain' with a dropdown menu showing 'PPM'. At the bottom, there are four buttons: 'Back' (with a left arrow), 'Next' (with a right arrow), 'Cancel', and 'Help'.

5. Select **Oracle** as Database Type, and then provide credentials for the DB Server in the **Server Name**, **DB Admin User**, and **DB Admin Password** fields, and then click **Next**.



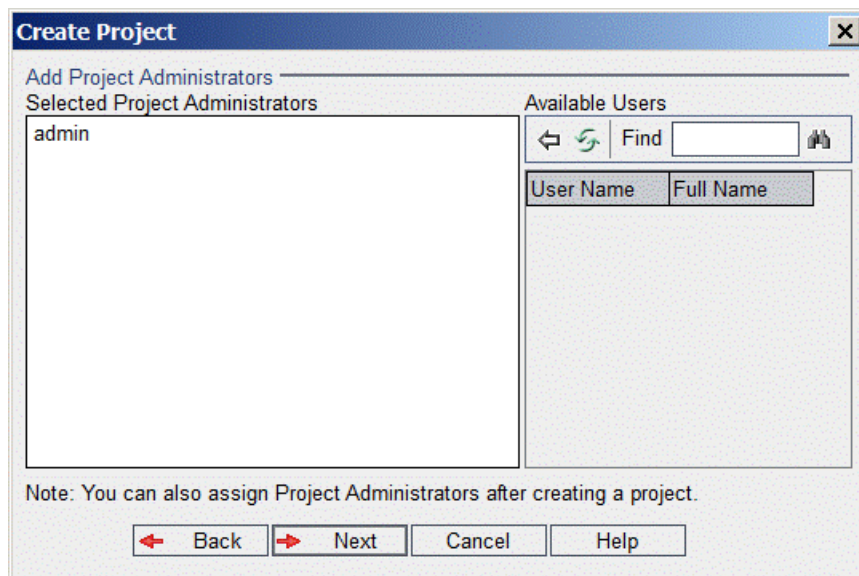
The 'Create Project' dialog box shows the 'Database Type' section with 'Oracle' selected (radio button) and 'MS-SQL' unselected. Below this is the 'DB Server' section with three input fields: 'Server Name' with a dropdown menu showing 'localhost', 'DB Admin User' with the text 'system', and 'DB Admin Password' with masked text '\*\*\*\*\*'. At the bottom, there are four buttons: 'Back' (with a left arrow), 'Next' (with a right arrow), 'Cancel', and 'Help'.

6. Specify tablespaces, and then click **Next**.



The 'Create Project' dialog box features a title bar with a close button. It contains two dropdown menus: 'Create in TableSpace' with the value 'PPM921 INDEX (892 Mb)' and 'Temporary TableSpace' with the value 'TEMP'. At the bottom, there are four buttons: 'Back' (with a left arrow), 'Next' (with a right arrow), 'Cancel', and 'Help'.

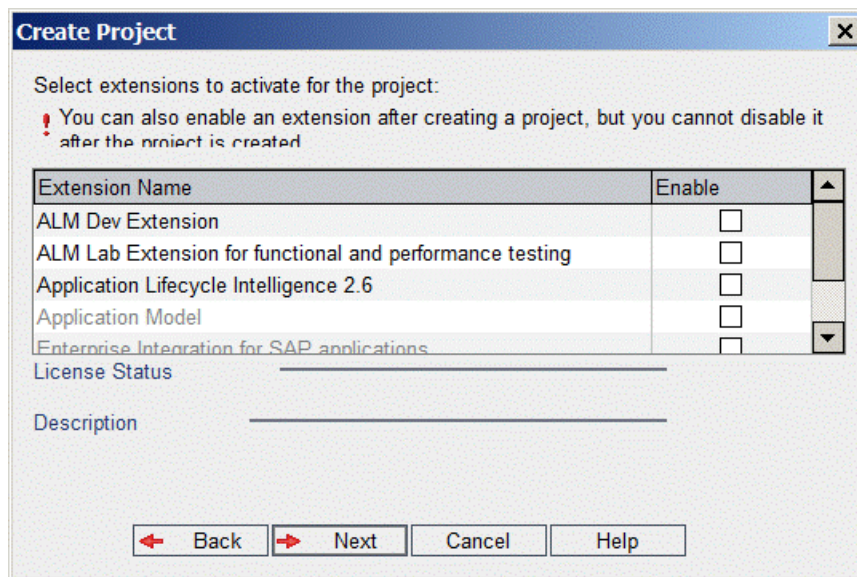
7. Select project administrators, and then click **Next**.



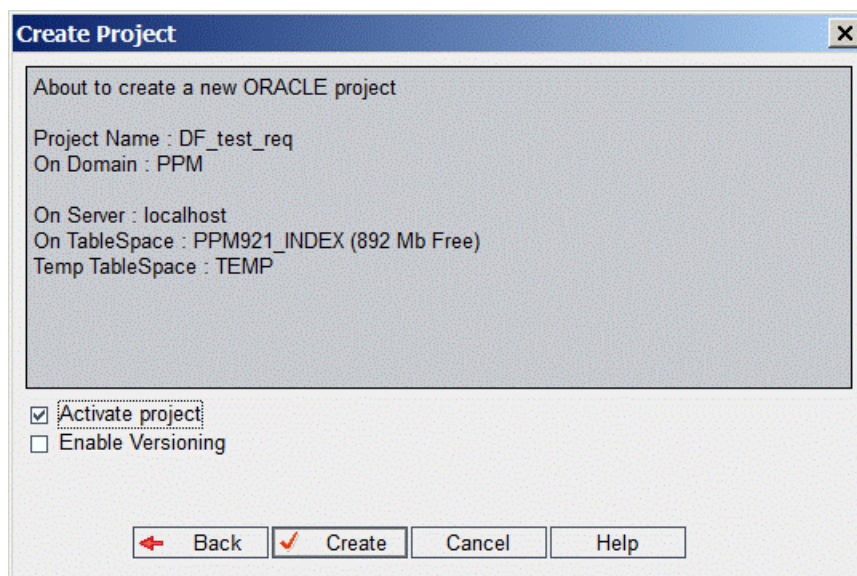
This screen of the 'Create Project' dialog box is titled 'Add Project Administrators'. It is divided into two main sections. The left section, 'Selected Project Administrators', contains a list with the entry 'admin'. The right section, 'Available Users', includes a search bar with a 'Find' button and a list table with columns 'User Name' and 'Full Name'. At the bottom, a note states: 'Note: You can also assign Project Administrators after creating a project.' Below the note are four buttons: 'Back' (with a left arrow), 'Next' (with a right arrow), 'Cancel', and 'Help'.

8. Select extensions to activate for the project, and then click **Next**.

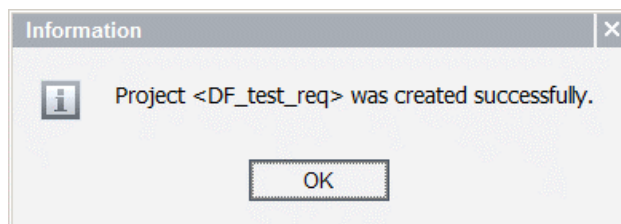




9. Review summary of project information, select **Activate project**, and then click **Create**.



10. Click **OK** when the confirmation message box pops up.

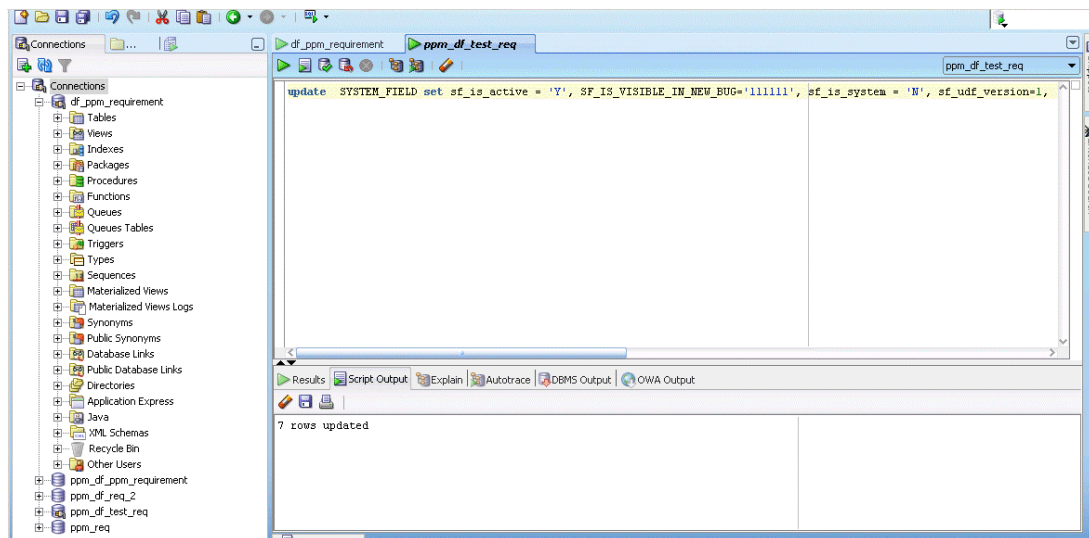




11. Run the following SQL script to enable hidden fields in the ALM project for the requirement module for the integration:

```
update <db_name>.SYSTEM_FIELD set sf_is_active = 'Y', SF_IS_VISIBLE_IN_NEW_BUG='111111', sf_is_system = 'N', sf_udf_version=1, sf_can_change_permissions='Y', sf_is_transition_logic='Y', sf_grant_modify='111001' where sf_table_name = 'REQ' and SF_COLUMN_NAME like 'RQ_REQUEST%';

commit;
```



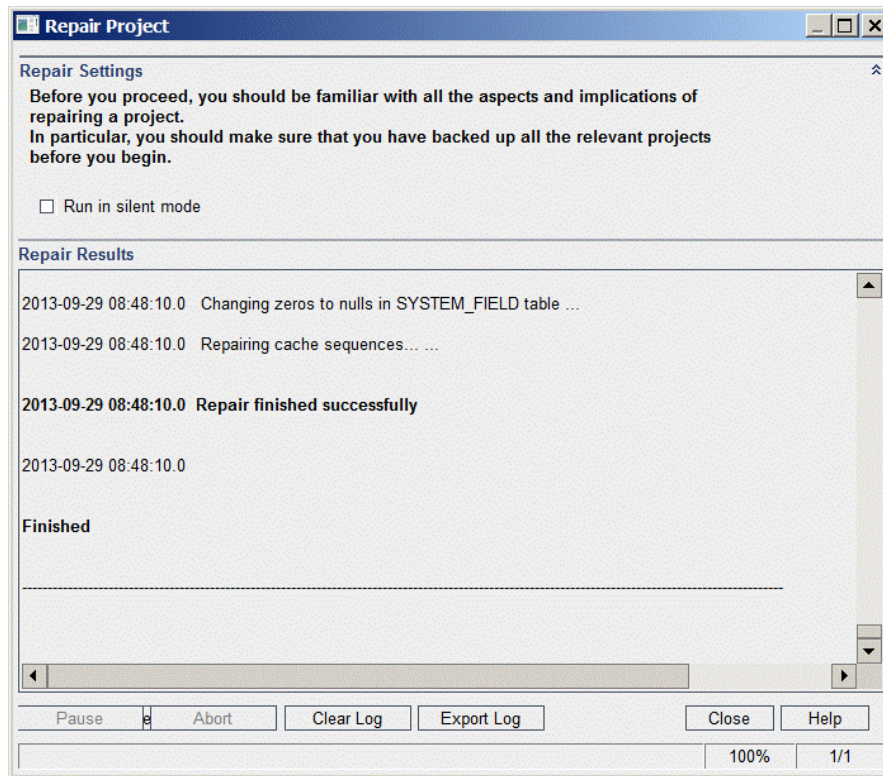
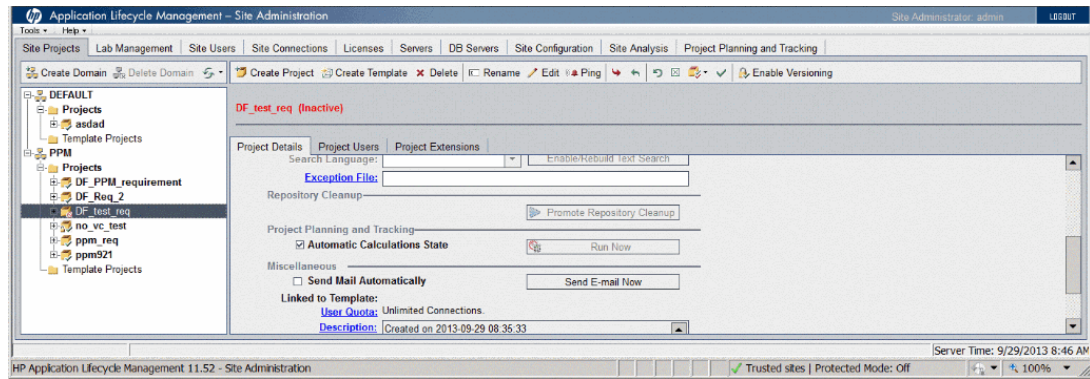
**Note:** This script applies to HP ALM with Oracle as database.

For instructions on how to enable hidden fields in the HP ALM project for the defect module for the integration, go to

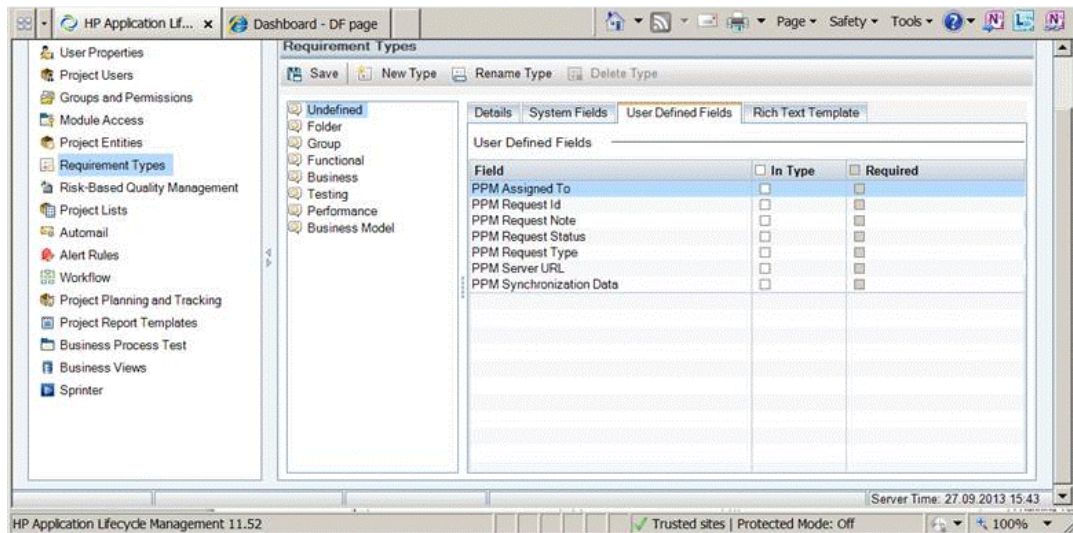
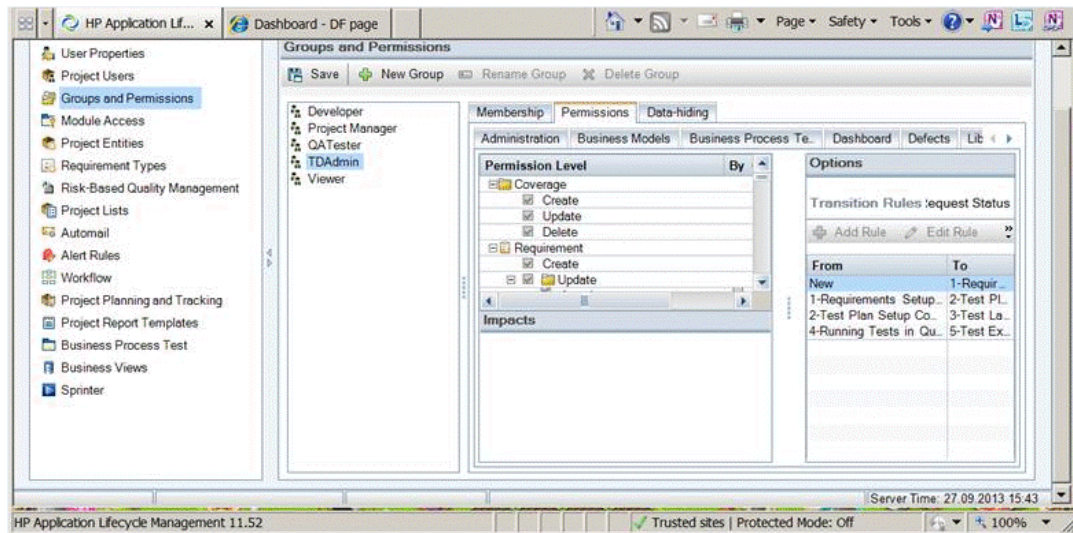
<http://support.openview.hp.com/selfsolve/document/KM1352699>.

**Note:** The configuration information provided here is based on the out-of-the-box ALM - Request For Change workflow. If your organization has customized any out-of-the-box workflow, make sure you adjust the SQL script accordingly.

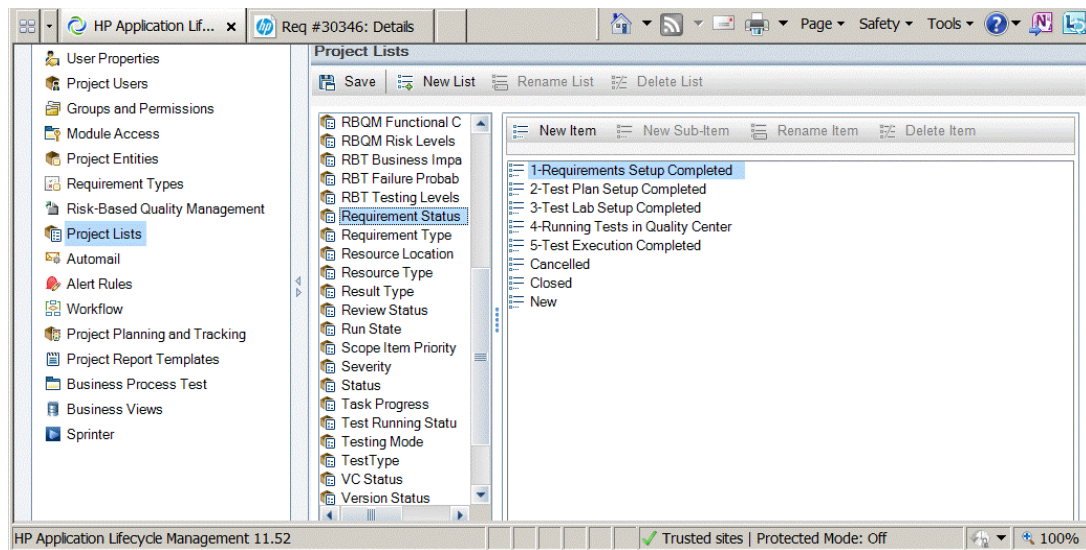
12. In Site Administration, deactivate the project, repair the project, and then activate the project.



13. Check in ALM groups and permissions if the fields are active.



14. Go to **Project Lists > Requirement Status** to check if any status is missing.

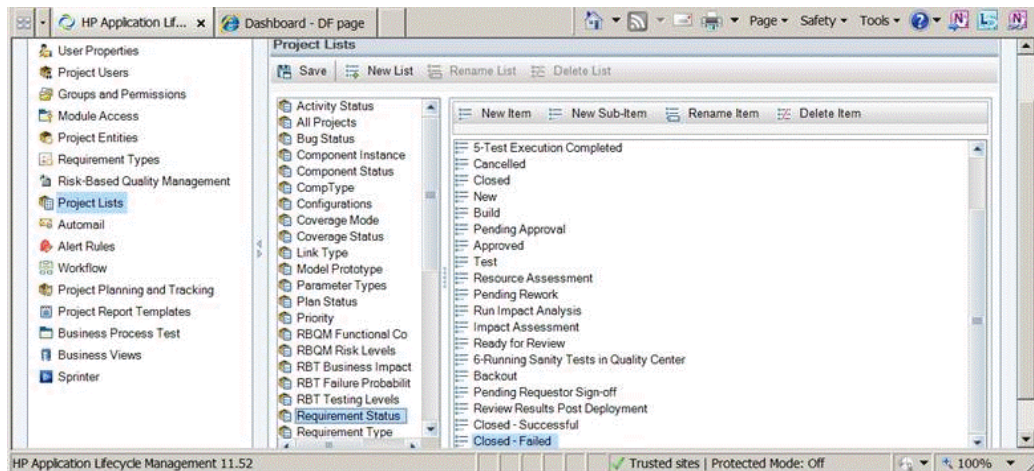


The statuses are not complete.

15. Add request statuses that PPM Center workflow (ALM - Request For Change) contains but ALM requirement does not. To do so,
  - a. Log on to the integrated ALM project.
  - b. From the menu bar, click **Tools > Customize > Project Lists > Requirement Status > New Item**.
  - c. Set **Item Name** as the following PPM request status name, and add them one by one:
    - Build
    - Pending Approval
    - Approved
    - Test
    - Resource Assessment
    - Pending Rework
    - Run Impact Analysis
    - Impact Assessment



- Ready for Review
- 6-Running Sanity Tests in Quality Center
- Backout
- Pending Requestor Sign-off
- Review Results Post Deployment
- Closed - Successful
- Closed – Failed



16. Return to the ALM project schema database.

Update the TRAN\_RULES table by running the following script:

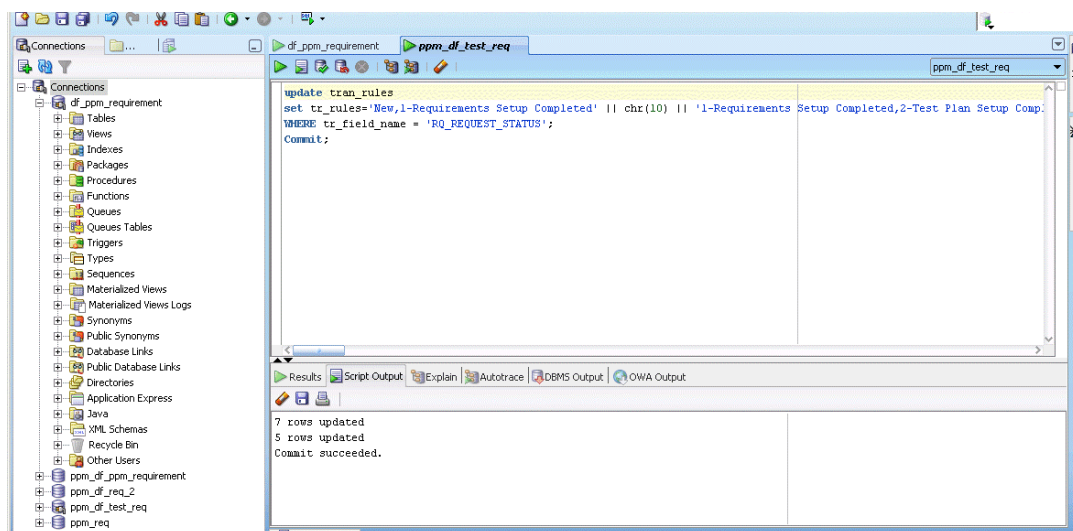
```
update <database schema name of your QC/ALM project>.tran_rules

set tr_rules='New,1-Requirements Setup Completed' || chr(10) || '1-Requirements Setup Completed,2-Test Plan Setup Completed' || chr(10) || '2-Test Plan Setup Completed,3-Test Lab Setup Completed' || chr(10) || '4-Running Tests in Quality Center,5-Test Execution Completed' || chr(10) || '3-Test Lab Setup Completed,Build' || chr(10) || 'Build,Pending Approval' || chr(10) || 'Pending Approval,Approved' || chr(10) || 'Approved,4-Running Tests in Quality Center' || chr(10) || 'Approved,Test' || chr(10) || '4-Running Tests in Quality Center,Pending Rework' || chr(10) || 'Test,Pending Rework' || chr(10) || '4-Running Tests in Quality Center,Resource'
```

```
Assessment' || chr(10) || 'Test,Resource Assessment' || chr(10) || 'Resource Assessment,Run Impact Analysis' || chr(10) || 'Run Impact Analysis,Impact Assessment' || chr(10) || 'Impact Assessment,Ready for Review' || chr(10) || 'Ready for Review,Run Impact Analysis' || chr(10) || 'Ready for Review,Pending Approval' || chr(10) || 'Approved,6-Running Sanity Tests in Quality Center' || chr(10) || 'Pending Rework,Closed - Failed' || chr(10) || 'Pending Rework,Build' || chr(10) || '6-Running Sanity Tests in Quality Center,Closed - Failed' || chr(10) || 'Pending Rework,Test' || chr(10) || '6-Running Sanity Tests in Quality Center,Test' || chr(10) || 'Test,Pending Requestor Sign-off' || chr(10) || 'Test,Backout' || chr(10) || 'Backout,Pending Requestor Sign-off' || chr(10) || 'Build,Pending Requestor Sign-off' || chr(10) || 'Pending Requestor Sign-off,Review Results Post Deployment' || chr(10) || 'Review Results Post Deployment,Closed - Successful' || chr(10) || 'Review Results Post Deployment,Closed - Failed'

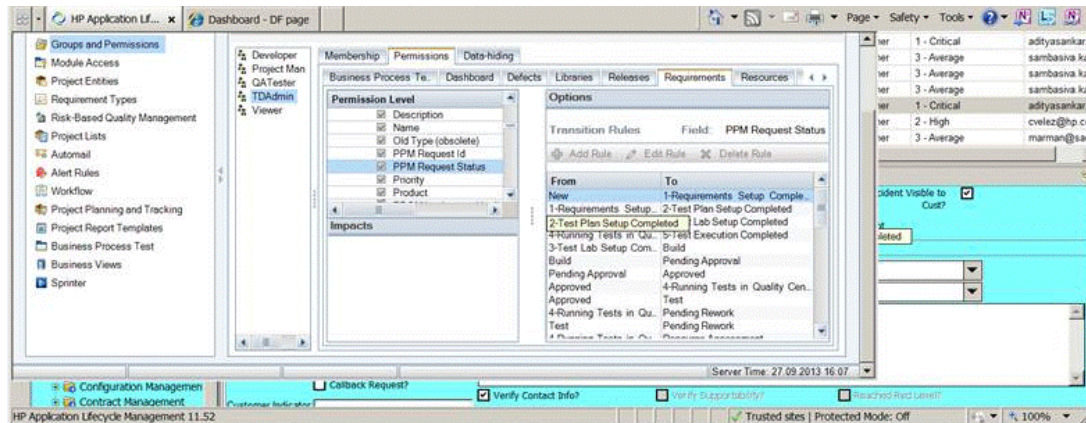
WHERE tr_field_name = 'RQ_REQUEST_STATUS';

commit;
```



**Note:** The configuration information provided here is based on the out-of-the-box ALM - Request For Change workflow. If your organization has customized any out-of-the-box workflow, make sure you adjust the SQL script accordingly.

17. In Site Administration, deactivate the project, repair the project, and then activate the project.
18. Check again for TRAN RULES in the permissions of the PPM Request Status.



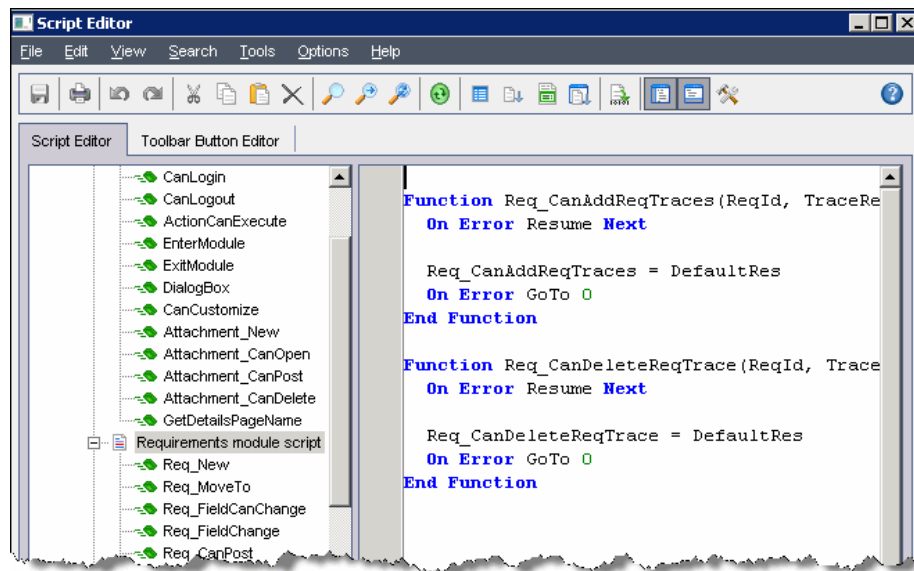
## Task 3: Add scripts to perform the operation on HP ALM server side

**Note:** The configuration information provided here is based on the out-of-the-box ALM - Request For Change workflow. If your organization has customized any out-of-the-box workflow, make sure you adjust the scripts accordingly.

To do so,

1. Add scripts to perform the operation on HP ALM server side.
  - a. Log on to HP ALM as administrator.
  - b. From the menu bar, click **Tools > Customize > Workflow > Script Edit**.

The Script Editor opens.



- c. From the navigation pane, select **Requirement module script**, then go to the last script of this category, copy and append the content of `add requirement script.txt` to the end of the script in the editing pane.

**Note:** To obtain the `add requirement script.txt`, go to [KM00630244](#) and click **workflow scripts** to download the zip package.

- d. Click **Save**.

The new script is added to the **Requirement module script**.

- e. From the navigation pane, select **Defect module script**, then go to the last script of this category, copy and append the content of `add defect script.txt` to the end of the script in the editing pane.

**Note:** To obtain the `add defect script.txt`, go to [KM00630244](#) and click **workflow scripts** to download the zip package.

- f. Click **Save**.

The new script is added to the **Defect module script**.

- g. Exit and log off.

2. Run the SQL scripts provided by HP Software Support manually.



For instructions on how to activate workflow script in HP ALM project, go to  
<http://support.openview.hp.com/selfsolve/document/KM1352700>

## Task 4: Add an integration configuration entry in PPM Center

1. Log on to PPM Center.
2. From the menu bar, click **Open > Administration > Integrations**.

The Integration landing page opens to the Manage Application Change tab.

3. In the Server Configuration Details section, select **ALM – Request for Change (RFC)** from the drop-down list and click **Add Integration Configuration**.

**Manage Application Change**

View Project Quality

Integrating PPM Center with Quality Center and/or HP ALM enables to create requirements and defects in Quality Center and/or HP ALM while using PPM Center. This allows users of both applications to participate in the processing of defects, change requests, and release requests.  
[Download PPM Center-ALM Integration Tool](#)

**Integration Configurations**

Request Type	Status	Server URL	Version	Domain	Project	Entity Type	Actions
ALM - Defect Template wit...		http://vm19.gbr.hp.com:8888/qcbin/	ALM 11.5	PPM	ppm921	Defect	
ALM - Request for Change ...		http://vm19.gbr.hp.com:8888/qcbin/	ALM 11.5	PPM	DF_Req_2	Requirement	
ALM - Request for Change ...		http://vm19.gbr.hp.com:8888/qcbin/	ALM 11.5	PPM	no_vc_test	Requirement	

**Server Configuration Details:**

ALM - Request for Change (RFC) + [Add Integration Configuration](#)

The screenshot shows the 'Step 3: Complete Configuration' screen of a wizard. At the top, there are three steps: 'Step 1: Configure Server Details', 'Step 2: Map PPM-QC/ALM Fields', and 'Step 3: Complete Configuration'. The main area contains several configuration fields:

- Status:** Disabled
- \*QC/ALM Version:** A dropdown menu showing 'ALM 11.50'.
- \*QC/ALM Server URL:** A text field containing 'http://vm19.gbr.hp.com:8888/qcbin/'.
- \*QC/ALM Username:** A text field containing 'admin'.
- \*QC/ALM Password:** A text field with masked characters '.....'.
- \*QC/ALM Server Time Zone:** A dropdown menu showing 'GMT +01:00 (Europe/Berlin) Heure d'Europe ce'.
- \*QC/ALM Domain:** A dropdown menu showing 'PPM' and a 'Get Domains' button.
- \*QC/ALM Project:** A dropdown menu showing 'DF\_test\_req'.
- \*Entity Type:** Requirement
- Integration Options:**
  - \*Default QC/ALM Folder Name:** A text field containing 'DF Requirements'.
  - ☐ Make QC/ALM requirement hierarchy matching PPM request hierarchy

A 'Next' button is located at the bottom right of the configuration area.

**Note:** The **Default QC/ALM Folder Name** is the folder that will store the requirements created with this integration.

4. Click **Next**.
5. Provide values for the fields as desired or leave as is until the wizard has finished.

## Task 5: Create a request in PPM Center

1. Create a request in PPM Center.

The screenshot shows the 'Request for Change (RFC) 30347' form in the PPM Center. The status is 'In Review'. The form includes a 'Filter RFC' section with 'More Information ...', 'Accepted', and 'Rejected' buttons. A 'Jump To' sidebar on the left lists various sections: RFC Summary, QC/ALM Info, RFC Details, SOX Information, Implementation Det..., Impact & Resource..., Impacted Configura..., QA Details, Service Desk Syste..., Review Summary, and Notes. The main content area is titled 'RFC Summary' and contains the following fields:

- RFC ID:** 30347
- Created By:** Admin User
- Created On:** 29 septembre 2013
- RFC Status:** In Review
- Contact Name:** (text field)
- Contact Phone:** (text field)
- RFC Priority:** Low
- Contact Email:** (text field)
- Contact Location:** (text field)
- RFC Summary:** (text area)
- Expected Start Date:** (calendar icon)
- Expected Finish Date:** (calendar icon)
- Assigned Developer:** (text field)
- Release ID:** (text field)

Jump To

- RFC Summary
- QC/ALM Info
- RFC Details
- SOX Information
- Implementation Det...
- Impact & Resource ...
- Impacted Configura...
- QA Details
- Service Desk Syste...
- Review Summary
- Notes
- References

Expected Start Date: [ ] Expected Finish Date: [ ]

Assigned Developer: [ ] Release ID: [ ]

QC/ALM Info

QC/ALM Instance: [http://vm19.gbr.hp.com:8888/qcbin/] QC/ALM Domain: [PPM]

QC/ALM Project: [ ] Assigned To: [ ]

Requirement No. Requirement Status

Requirement Integration Message Synchronize to QC/ALM Requirement

Requirement Attachment URL (No Link) Yes No

QC/ALM Requirement Type: [ ]

**Note:** The **QC/ALM Instance** and **QC/ALM Domain** fields are prepopulated. This also applies to the **QC/ALM Project** field if there IS only one project. If you have associated your Request Type with several projects, this field is not populated. Use a rule or populate the field manually.

2. Follow the workflow until the request is pushed to ALM.

Build Application Change

Package Changes Manual Changes

Quality Center Requirements Setup

1-Requirements S...

Jump To

- RFC Summary
- QC/ALM Info
- RFC Details
- SOX Information
- Implementation Det...
- Impact & Resource ...
- Impacted Configura...
- QA Details
- Service Desk Syste...
- Review Summary
- Notes
- Status
- References

RFC ID: 30347 Created By: Admin User Created On: 29 septembre 2013

RFC Status: New Contact Name: [ ] Contact Phone: [ ]

RFC Priority: Low Contact Email: [ ] Contact Location: [ ]

RFC Summary: DF test req change 1

Expected Start Date: [ ] Expected Finish Date: [ ]

Assigned Developer: [ ] Release ID: [ ]

QC/ALM Info

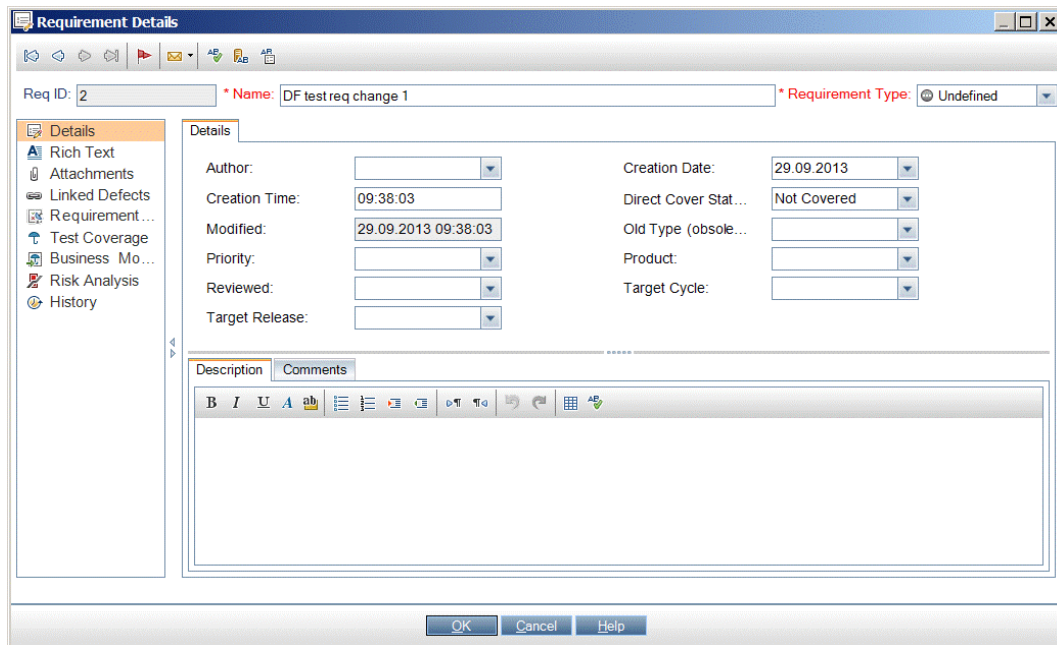
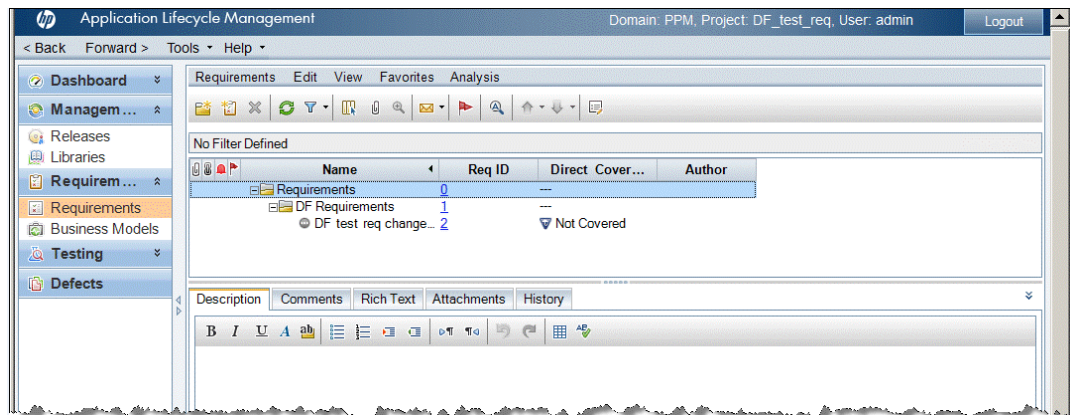
QC/ALM Instance: [http://swspvm19.gbr.hp.com:8888/qcbin/] QC/ALM Domain: [PPM]

QC/ALM Project: [DF\_test\_req] Assigned To: [ ]

Requirement No. Requirement Status

2 New

Requirement Integration Message Synchronize to QC/ALM Requirement



3. Follow the request to closure.



Copy

Print

Delete

Expand All | Collapse All

Jump To

- RFC Summary
- QC/ALM Info
- RFC Details
- SOX Information
- Implementation Det...
- Impacted Configura...
- QA Details
- Service Desk Syste...
- Review Summary
- Status

- RFC Summary

<b>RFC ID:</b> 30347	<b>Created By:</b> Admin User	<b>Created On:</b> 29 septembre 2013
<b>RFC Status:</b> Closed - Successful	<b>Contact Name:</b>	<b>Contact Phone:</b>
<b>RFC Priority:</b> Low	<b>Contact Email:</b>	<b>Contact Location:</b>
<b>RFC Summary:</b> DF test req change 1		
<b>Expected Start Date:</b>	<b>Expected Finish Date:</b>	
<b>Assigned Developer:</b>	<b>Release ID:</b>	

- QC/ALM Info

<b>QC/ALM Instance</b> http://swspvm19.gbr.hp.com:8888/qcbin/	<b>QC/ALM Domain</b> PPM
<b>QC/ALM Project</b> DF_test_req	<b>Assigned To</b>
<b>Requirement No.</b> 2	<b>Requirement Status</b> Closed - Successful

# We appreciate your feedback!

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

**Feedback on Release Notes (Project and Portfolio Management Center 9.22)**

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [HPSW-BTO-PPM-SHIE@hp.com](mailto:HPSW-BTO-PPM-SHIE@hp.com).