Oracle
Primavera
Gateway Upgrade Guide for On-Premises

Version 20
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Contents

Overview

The *Primavera Gateway Upgrade Guide* describes how to:

- Download the Primavera Gateway application
- Perform an automated upgrade using the wizard
- Configure Primavera Gateway components

This guide is intended for IT professionals who are installing and configuring the server environment for Primavera Gateway and who are supporting Primavera Gateway users. For the full list of system requirements and versions, see the *Primavera Gateway Tested Configurations* document.

In This Section

Downloading Primavera Gateway

To download Primavera Gateway:

1) Go to the Oracle Software Delivery Cloud.
2) Download Primavera Gateway and extract the **Genericinstaller** folder.
3) Review the *Supported Technologies* and *Tested Configurations* documents for Primavera Gateway in Oracle Help Center.

Upgrading Primavera Gateway

To upgrade to Version 20, select your current on-premises version in the following table to determine your upgrade path:

	Available Versions for Upgrade		
Current On-Premises Version	**Gateway 18.8**	**Gateway 19.12**	**Gateway 20.12**
Gateway 19.12	Not applicable	Not applicable	Upgrade
Gateway 18.8	Not applicable	Not required	Upgrade
Gateway 17.12	Prerequisite for upgrade	Not required	Upgrade

Refer to the corresponding *Upgrade Guide* for each Gateway version included in your upgrade path.

Upgrade Procedure

To upgrade to Primavera Gateway Version 20, complete the following procedures:

1) ***Prerequisites*** (on page 7) for upgrading
2) ***Updating the gateway.ear File for On-Premises*** (on page 8)

> **Note:** An existing Primavera Gateway database is upgraded during startup by checking the database version automatically.

In This Section

Prerequisites

Before upgrading Primavera Gateway:

- Upgrade JDK
- Upgrade WebLogic Application Server

  For supported versions, refer to the *Tested Configurations* document.

> **Note**: If you have deleted fields in an out-of-the-box (OOTB) template in the current version, when you upgrade Gateway, the deleted fields will be added back in the upgraded version. To ensure your modifications are retained after an upgrade, copy and rename the OOTB template.

Modify the fields in the copied template and then use it in the business flows.

Updating the gateway.ear File for On-Premises

Upgrade Primavera Gateway by updating the gateway.ear in WebLogic.

Prerequisites

Backup the current database and gateway.ear file before copying the new .ear file.

Procedure

Complete the following steps to update the gateway.ear file in WebLogic:

1) Ensure the Primavera Gateway domain is running.
2) Sign in to the WebLogic Administration Server Console for Primavera Gateway domain:
   http://<hostname>:<port>/console
   Where, *<hostname>* and *<port>* is that of the Primavera Gateway domain in WebLogic. The default port is **7001**.
3) Enter the WebLogic administrator user name and password.
4) In the **Change Center** pane, select **Lock & Edit**.
5) In the **Domain Structure** pane, select **Deployments**.
6) Stop the Gateway deployment as follows:
   a. In the **Deployments** tab, select *gateway* in the **Name** column.
   b. Select the **Control** tab.
   c. Select **gateway**.
   d. Select **Stop** to stop the current Gateway deployment.
7) Update the gateway.ear file as follows:
   a. Select the **Configuration** tab.
   b. Select the check box corresponding to *gateway* in the **Name** column.
   c. Select the **Update** button.
   d. In the **Source Path** field, select the **Change Path** button to browse and locate the updated gateway.ear file.
      In the downloaded Gateway software, gateway.ear file is located in the **/GenericInstaller/GatewayUtility/bin** folder.
   e. Select **Finish**.
8) In the **Change Center** pane, select **Activate Changes**.
9) Restart **gateway** deployment.

Using Gateway Configuration Utilities

The following configuration utilities are provided in Primavera Gateway.

- Gateway-P6Setup utility

- Gateway-Configuration utility

Run each utility for the purpose described below.

Gateway-P6Setup Utility

Run this utility to add user-defined fields (UDFs) and codes to P6 EPPM.

To use this utility:

1) Go to any of the following folder locations:
   - **<Primavera_Gateway_Home>/gateway/app/utilities** folder
     where
     <Primavera_Gateway_Home> is the installed location of Gateway.
   - **<Gateway Download Folder>/GenericInstaller/GatewayUtility** folder.
2) Select the Gateway-P6Setup utility.
   - For Windows installations: Run `Gateway-P6Setup.bat`
   - For Linux or Solaris installations: Run `Gateway-P6Setup.sh`

Gateway-Configuration Utility

Run this utility to manage metadata, and add or remove providers and customizations. The following configuration options are available:

- Manage Gateway metadata
- Manage providers
- Manage customizations

> **Note:** Before executing the utilities on Windows, Linux, or Solaris, ensure the following:
>
> - The **bin** folder of the supported Java JDK is included in the PATH.
> - If there are other JDK bin folders in the PATH, then the supported Java JDK must be listed first.

To use this utility:

1) Go to any of the following folder locations:
   - **<Primavera_Gateway_Home>/gateway/app/utilities** folder
     where
     <Primavera_Gateway_Home> is the installed location of Gateway.
   - **<Gateway Download Folder>/GenericInstaller/GatewayUtility** folder.
2) Select the Gateway-Configuration utility.
   - For Windows installations: Run `Gateway-Configuration.bat`
   - For Linux or Solaris installations: Run `Gateway-Configuration.sh`

Adding User-Defined Fields (UDFs) and Codes to P6 EPPM

You have the option to add user-defined fields (UDFs) and codes to P6 EPPM and to prepare the P6 EPPM database for synchronizing the data. Use this procedure to also add UDFs and codes from Oracle Primavera Cloud, Primavera Unifier, Sample provider and third-party applications to P6 EPPM.

For example, if your application has UDFs or codes that P6 EPPM does not have, you can add these UDFs or codes using an XML file that you edit and then point to it in the Gateway Configuration utility. The XML file needs to conform to the DataConfiguration.xsd schema. For more information on the DataConfiguration.xsd schema, see the *Primavera Gateway Provider Development Guide*.

To add your application UDFs or codes to P6 EPPM:

1) Ensure that your **JAVA_HOME** variable is pointing to a supported JDK folder.

   Note: Ensure the following:

   - The **bin** folder of the supported Java JDK is included in the PATH.
   - If there are other JDK bin folders in the PATH, it should be listed first.

2) Go to any of the following folder locations:
   - **<Primavera_Gateway_Home>/gateway/app/utilities** folder

     where

     <Primavera_Gateway_Home> is the installed location of Gateway.
   - **<Gateway Download Folder>/GenericInstaller/GatewayUtility** folder.
3) If you are installing on a non-Microsoft Windows system, type the following command to give execute permission for the utility:

   chmod 755 Gateway-P6Setup.sh
4) Run the following command:
   - For Windows installations, run **Gateway-P6Setup.bat**
   - For Linux and Solaris installations, run **./Gateway-P6Setup.sh**
5) Enter the following information in the **Primavera P6 Data Setup Utility** dialog box:
   a. In the **Authentication Type** field, select *UserName* Token or *SAML 2.0 Token*.
   b. In the **P6 Admin User Name** field, enter the user name of a user who has admin privileges on the P6 deployment.
   c. In the **P6 Admin Password** field, enter the password of the admin user.
   d. If you chose *SAML2.0 Authentication* type, then enter or **Browse** and select the **SAML2.0 Token File**.
   e. In the **P6 WebServices URL** field, enter the URL of the **SyncServiceV1** web service in the following format:

      <protocol>://<hostname>:<port number>/p6ws/services/SyncServiceV1?wsdl
   f. In the **P6 database instance ID**, enter the system ID (SID) from P6 Admin configuration of the P6 database instance.
   g. Select the **Enable Encryption** option if this feature is activated.

h. If a Keystore File has been generated, enter the following information:
   1. Browse and select the **Keystore File**.
   2. Enter the **Keystore Password** for the Keystore File.
   3. Enter the **Certificate Alias** provided by the Certifying Authority.

i. In the **P6 Data XML File Path**, enter or select **Browse** to specify the path to the XML file that you modified with the UDFs or codes which you want to add to P6 EPPM.

   For a P6 EPPM with Sample provider integration, ensure you have installed the Sample provider, and now select the **SampleP6DataSetup.xml** in the **<Primavera_Gateway_Home>/providers/sample/sampleprovider/p6data** folder. Enter the absolute path to the file.

   For a P6 EPPM with Oracle Primavera Cloud integration, select the **PrimaveraCloudP6DataSetup.xml** file in the **<Primavera_Gateway_Home>/providers/primaveracloudprovider/p6data** folder. Enter the absolute path to the file.

   For a P6 EPPM with any third-party enterprise application integration, select the relevant **<third-party provider P6datasetup>XML** file from the **data/p6data** folder. Enter the absolute path to the file.

j. Select **Run**. The UDFs or codes will be imported into the P6 EPPM deployment you selected.

k. Select **Finish** to close the utility.

Adding P6 User-Defined Fields and Codes to Providers

To have additional P6 UDFs and codes available for synchronization and field mapping templates for a selected provider, the UDFs and codes must be included in the:

- MetaData.xml
- P6ExtraMetaData.xml
- PDIExtraMetaData.xml

Adding P6 UDFs and Codes to the Sample Provider

Add UDFs or codes in the P6ExtraMetaData and PDIExtraMetaData files in the **<Primavera_Gateway_Home>/providers/sample/sampleprovider/data/p6** folder.

Adding P6 UDFs and Codes to the Primavera Cloud Provider

Add UDFs or codes in the P6ExtraMetaData and PDIExtraMetaData file in the **<Primavera_Gateway_Home>/providers/primaveracloudprovider/data/p6** folder.

Adding P6 UDFs and Codes to the Unifier Provider

Add UDFs or codes in the PDIExtraMetaData.xml file in the **<Primavera_Gateway_Home>/providers/unifierprovider/data/p6** folder.

Adding P6 UDFs and Codes for Third-party Providers

For all third-party providers, add UDFs or codes in the P6ExtraMetaData.xml and PDIExtraMetaData.xml files located under the **data** folder of the third-party provider. For example, MSP provider.

> **Note**: Ensure that **P6data** folder is listed before the third-party provider folders.Otherwise the third-party provider will fail to load.

Adding Customizations

Use this procedure if a customization includes XML files, jar files, and other files such as Java customizations. If you have installed Gateway on a managed server, see ***Updating the gateway.ear File for On-Premises*** (on page 8) for more details.

> **Note:** If a customization does not include any jar files, and uses Groovy customization, then upload the XML file from the Gateway user interface.

Prerequisites

Ensure the following:

- The **bin** folder of the supported Java JDK is included in the PATH.
- If there are other JDK bin folders in the PATH, it should be listed first.
- Sign in to WebLogic as an administrator and stop the Gateway domain before adding customizations.
- If you are using a non-Microsoft Windows system, type the following command for execute privileges:

  chmod 755 Gateway-Configuration.sh

Procedure

To add customization files in Gateway:

1) Navigate to any of the following folder locations:
   - **<Primavera_Gateway_Home>/gateway/app/utilities** folder

     where

     <Primavera_Gateway_Home> is the installed location of Gateway.
   - **<Gateway Download Folder>/GenericInstaller/GatewayUtility** folder.
2) Run the following command:
   - For Windows installations, run **Gateway-Configuration.bat**
   - For Linux and Solaris installations, run ./**Gateway-Configuration.sh**
3) In the **Primavera Gateway Configuration Utility** dialog box:
   a. Select **Manage Customizations** to update the gateway.ear file and the Gateway database with custom metadata from the customization XML files.

      > **Note:** Select **Next** on each screen to advance to the next step.

   b. In the **Select Gateway ear file (gateway.ear) location** field, enter or select **Browse** to locate the .ear file in the **<Primavera_Gateway_Home>/gateway/app/utilities** folder.
   c. In the **Installed Gateway Customizations** field, select **Add Customization** and navigate to the folder location of the customization file.

d. Enter the following database connection details:
   - **DBA User Name:** Enter the name of the database administrator.
   - **DBA Password**: Enter the password for the database administrator.
   - **Database Host:** Enter the host name of the Oracle database on which you will be updating the Primavera Gateway database.
   - **Database Host Port**: Enter the port number of the Oracle database.
   - **Database Name:** Enter the Gateway database name and select any of the following methods to connect to the database.
   - **SID**: Enter the SID of the Oracle database.
   - **Service:** Enter the service name of the Oracle database.
   - **Schema Owner:** Enter the name of Gateway schema owner. (This name should match the name that was entered when you installed Primavera Gateway.)
   - **Schema Password:** Enter the password for the schema owner.
   - Select **Test Connection**. Modify the applicable fields if the connection fails and repeat as necessary.
   - Select **Update**. The status field displays a success message.

e. Select **Finish** to exit the configuration utility.

4) Redeploy gateway.ear in WebLogic to ensure the changes are reflected in Primavera Gateway. For more details, see ***Updating the gateway.ear File for On-Premises*** (on page 8).

Configuring Gateway Settings

Use the **Settings** page to specify settings for the installed Gateway application. For example, specify the Help location, or the job timeout value in minutes.

> **Note**: The settings available in this dialog box may vary depending on the application connections that have been set up in Gateway.

To configure Gateway application settings:

1) Select ✕ and then select **Settings**.
2) Update the settings as necessary and select **Save** when finished.

   On the **General** tab:

   - **Help URL**: Enter the help system hosted by Oracle as *http://docs.oracle.com/cd/F25735_01/help/en/index.htm.* By default the Help URL displays the most recently delivered version.

     (On-premises only) If you deployed the local Help, then enter the default Help URL location as: *http://<hostname>:<port>/gatewayhelp*. By default, displays the most recent Help version you have deployed locally.
   - **Maximum number of job logs to display**: Enter a value to control the number of logs displayed on the Monitoring page. By default displays 2000 job logs.

- **Auto delete jobs after XX days (0 turns off auto delete)**: Enter the number of days that a job log can be retained before it is auto deleted. Enter 0 (default value) to turn off auto delete.
- **Maximum wait time for the parallel load/convert steps to complete (in minutes):** Enter the number of minutes after which a synchronization job process is to be timed out. The job status of a timed-out synchronization is set to **Failed.** By default, the timeout is set to **30** minutes.
- **Maximum concurrent jobs in a node:** Enter the maximum number of jobs that can be executed concurrently at a node. By default 4 jobs can be executed concurrently.
- **Job polling Interval (in seconds):** Enter the wait time interval in seconds to check the database if there are new jobs to run. By default, the wait interval is set to 2 seconds.
- **Job timeout value (in minutes)**: Enter the wait time interval in minutes to timeout a synchronization job. By default, the timeout is set to **30** minutes.
- **Maximum File Size Limit (in MB)**: Enter the maximum file size limit for uploading files from Gateway user interface or from external applications. The file size limit applies to all providers and all supported file formats: CSV, XML, XLS, and XLSX. By default, the maximum file size limit is set to 50 MB.
- **Maximum job log size for XML format (in MB)**: Enter the maximum file size limit for job log size. Job log files over 10 MB (default) are saved in JSON format by default.
- **Enable Configurable Consent Forms**: Select this check box to display the **Consent Forms** tab on the Configuration page in Gateway. If you enable this option and then proceed to configure and enable specific consent forms, your users will need to give their consent to gain full access to specific features and functions of Gateway. By default, the check box is deselected.
- **Disable Logging For Jobs**: For integrations with Unifier, select this check box to improve performance with large sets of earned value management data. By default, the check box is deselected.
- **Enable Object Logging for Jobs**: Select this check box to disable the display of data at the object level in the **Data Details** tab of the **Monitoring** page, and improve performance.

If you choose to integrate with P6, enter the following information on the **P6** tab:

- **Create new resource code values during synchronization to P6**: Select this check box to enable the creation of new resource code values in the P6 EPPM resource code dictionary if these values do not already exist. By default, the check box is selected.
- **Create new project code values during synchronization to P6**: Select this check box to enable the creation of new project code values in the P6 EPPM project code dictionary if these values do not already exist. By default, the check box is selected.
- **Create new activity code values during synchronization to P6**: Select this check box to enable the creation of new global activity code values in the P6 EPPM activity code dictionary if these values do not already exist. By default, the check box is selected.
- **Include time zone when exporting from P6:** Select this check box to export P6 server time zone information along with P6 date and time fields. By default, this option is **not** selected, except for spread interval data in P6.

> **Note:** This time zone setting applies only for a Primavera Cloud - P6

integration.

Send P6 Spread to Unifier as a file: Select this check box to improve the performance of job runs related to a P6 - Unifier synchronizations that include daily spread fields. The daily spread fields on the P6 side are packaged into a separate zip file and sent direct to Unifier bypassing Gateway, whereas all non-spread fields in the synchronization are sent to Unifier using Gateway. By default, the check box is deselected.

When this check box is deselected, Gateway packages all fields, including the daily spread fields in the synchronization, and sends it to Unifier.

- **Update activity resource assignments when assigned UDF values match**: Enter the UDF code value that is assigned to resource assignments which you want to update during a synchronization. Use this to update the resource assignment with the matching UDF value when the assignment exists multiple times on an activity. By default no UDF value is set.
- **Maximum wait time for the summarizer to complete (in seconds)**: Enter the amount of time in seconds to wait for the summarizer to complete before a warning is given. By default the wait time is set for 120 seconds.

On the **Mail Configuration** tab:

- **SMTP Server**: Enter the SMTP server address of your email server.
- **Port Number**: Enter the port number of your email server.
- **Email Security**: Select the applicable email security type. Choices include, **SSL**, **TLS**, and **None**.
- **Email Address**: Enter the email address for the user who is to be notified for a specific status of synchronization jobs. These statuses include: *Completed*, *Review*, *Cancelled*, *Completed with Errors*, *Completed with Warnings*, and *Failed*.
- **Authorized User**: Enter the user name for this email account.
- **Password**: Enter the password for the authorized user.
- **Bounce Email Address**: Enter an alternate email address to be used if mail fails to be delivered to the first email address.

On the **Server** tab:

- **Server Log Detail Level**: From th list, select the type of detailed information to be included in the server log file. Choices include:
  - **Error** (default): Select this value to display application errors in the log file.
  - **Info**: Select this value to display a brief description in the log file.
  - **Debug**: Select this value to display a general debugging event.
  - **Off**: Select this value to not generate any server log details.

Configuring Online Help

Primavera Gateway provides two configuration options you can use to set up online help:

- ***Hosting Online Help*** (on page 17) (default configuration)
- ***Deploying Help Locally*** (on page 17)

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Hosting Online Help

This is the default configuration for the application online help. The online help is hosted by Oracle, where it is accessed when users select **Help** in the Gateway application. This version is the most up-to-date version of the help.

The hosted version is the default setting in Gateway Configuration Settings.

Deploying Help Locally

If you want to deploy the application help locally, you must download the online help WAR file and deploy it in your environment. The WAR file can be deployed in the same domain as Primavera Gateway or in a separate domain.

After you download and deploy the help locally, you must specify the URL to access the online help in the Configuration Settings of the Gateway application. For information about configuring the Online Help location setting, refer to ***Configuring Gateway Settings*** (on page 13).

To deploy the Gateway help locally:

1) Download the Gateway Help WAR file from: http://docs.oracle.com/cd/F25735_01/help/war/gatewayhelp.war
2) Sign in to the WebLogic Administration Console at: **http://<hostname>:<port>/console**
3) In the **Change Center** pane, select **Lock & Edit**.
4) In the **Domain Structure** pane, select **Deployments**.
5) In the **Summary of Deployments** pane, select the **Control** tab.
6) Select **Install**.
7) In the **Install Application Assistant** pane:
   a. Enter the path of the directory where the online help WAR file is located.
   b. Select the **gatewayhelp.war** option.

      Note: Select **Next** on each screen to advance to the next step.

   c. Select the **Install this deployment as an application** option.

d. Depending on your configuration, select the **Target** as AdminServer or GatewayCluster for a managed server.

8) Review the configuration settings you have chosen, and then select **Finish** to complete the installation.
9) In the **Settings for Primavera** window, select **Save**.
10) Select **Activate Changes**.
11) In the **Summary of Deployments** pane, select **Start** for **gatewayhelp.war**.
12) To test the online help deployment, launch a web browser and enter the URL of the online help deployment using this address:
http://<hostname>:<port>/gatewayhelp/en/user/helpmain.htm.

Downloading Customization SDK

To extend Gateway features outside the Primavera Gateway framework, download **Customization SDK** as follows:

1) Select the ⓘ **Help** menu.
2) Select **Customization SDK** from the list.
3) Save **Customization.zip** to a local folder.
4) Extract the zip contents.
5) Use the Customization SDK to create the following features:
   - External custom steps

     Create, deploy, and maintain external custom steps outside the Gateway framework when Gateway is deployed as a cloud service or on-premises. Use external custom steps in business flows and synchronizations as-needed and on-demand.

     Control or limit the use of external custom steps to specific combinations of source and destination applications.

     For more details how to implement an external custom step, see *gateway_external_custom_step_SDK.HTM* in the SDK download.

     A Sample External Custom Step is also delivered in Gateway. For more details on how to use the Sample External Custom Step in a business flow and a synchronization, see *Readme_Gateway_External_Custom_Step.txt* in the SDK download.
   - External Providers

     Create, deploy, and maintain external providers outside the Primavera Gateway framework to support integrations with new applications. An external provider is a generic provider application that can be called on-demand to support integrations with any new ERP application.

     For more details on how to implement external provider applications, see *gateway_external_provider_SDK.HTM* in the SDK download.

     A Sample External Provider is also delivered in Gateway. For more details on how to use the Sample External Provider in a business flow and a synchronization, see *Readme_Gateway_External_Provider.txt* in the SDK download.

> **Note**: **Customization SDK** is available for Gateway as a cloud service, and on-premises installations on a managed server.

Performing a Gateway Environment Validation Check

After installing or upgrading Gateway, run the Environment Validation Check utility to perform a quick status check on the server environments required to run Gateway as follows:

1) Go to: ..Gateway_Home/validationChecker
2) Edit `validationChecker.properties.`

> **Note**: You can also use the information from the **<gateway installed location>/wlst/gateway_config.properties** to include in `validationChecker.properties`.

3) Update the properties file with Gateway database connection details, Java_Home location, and Gateway application information, and then select **Save**.
4) Run the following executable:

   For Windows 64-bit Installations: Run `EnvironmentCheck.bat`

   For Linux and Solaris 64-bit Installations: Run `/EnvironmentCheck.sh`
5) An `EnvironmentCheck.html` is generated in the validationChecker folder.
6) Open `EnvironmentCheck.html` and review the following information:
   - Versions of JDK, Gateway providers, and the Oracle database
   - Pass or fail status of tablespaces, DB connection, Gateway schema and Gateway application

Uninstalling Primavera Gateway

Uninstall Primavera Gateway as follows:

1) Invoke the Uninstall wizard as follows:
   - For Windows, from the **Start** menu, select **Oracle,-<Gateway Home>, Uninstall Oracle Software**.

     or

     Execute `<Gateway installed folder>/oui/bin/deinstall.cmd`
   - For Linux and Solaris, execute the following commands:

     ```
     cd <GatewayHome>/oui/bin
     ./deinstall.sh
     ```
2) On the **Welcome** screen, select **Next**.

   Note: Select **Next** on each screen to advance to the next step.
3) On the **Deinstallation Summary** screen, select **Deinstall**.
4) On the **Deinstallation Progress** screen select any of the following buttons:
   - Select **View Messages** to review messages during the uninstall process.
   - **Select View Log** to view log messages during the uninstall process.
5) On the **Deinstallation Complete** screen, select **Finish** to exit the wizard.
6) Delete the Gateway domain folder.

   For Admin server, delete the Gateway domain folder from the **<WebLogic_HOME>/user_projects/domains** directory.

   For Managed server, delete the Gateway domain folder from the **<WebLogic_HOME>/user_projects/domains** and **<WebLogic_HOME>/user_projects/applications** directories.
7) Sign in to the Oracle database and drop the Gateway schema user that was created at installation.
8) Delete the Primavera Gateway home folder that was created during installation.

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