Caution
Before you start the implementation, ensure you use the latest version of this document. You can find the latest version at the following location: help.sap.com/epc30.

The following table provides an overview of the most important document changes.

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2016-04-30</td>
<td>Initial installation</td>
</tr>
</tbody>
</table>
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1 Getting Started

You use this guide as a starting point for managing your SAP Enterprise Project Connection application. It contains specific information for various tasks and lists the tools you use to implement them. This guide provides references to the documentation required for these tasks.

⚠️ Caution
This guide does not replace the daily operations handbook that we recommend customers create for their specific production operations.

For the most current information regarding troubleshooting, see SAP Note 2294102.
2 Technical System Landscape

SAP Enterprise Project Connection is part of SAP Product Lifecycle Management (PLM). It offers service-oriented architecture (SOA) based on bidirectional enterprise project data orchestration and integration capabilities between SAP ERP and SAP 4/HANA on-premise applications such as SAP Project System, SAP Plant Maintenance, and SAP Portfolio and Project Management with third-party Enterprise Project Management systems (Oracle Primavera P6 EPPM and Microsoft Project Server).

SAP Enterprise Project Connection comprises the following components:

- **Integrated Services**
  The integration services component is comprised of an integration engine, infrastructure layer, persistence, and connection manager.
  The integration services component is deployed to SAP NetWeaver AS Java. Functionally, this component delivers the services consumed by the user interface as requests for data transfers to and from SAP ERP and SAP S4/HANA on-premise systems are processed.

- **Central Technical Configuration**
  Central Technical Configuration (CTC) is a Java component deployed to SAP NetWeaver AS Java. It is referred to as the SAP Enterprise Project Connection Configuration Wizard, and provides the web-based GUI to enable you to configure connections between SAP ERP and SAP S4/HANA on-premise systems, and external systems, integration solution management, and other maintenance functions.

- **Add-On**
  The SAP Enterprise Project Connection ABAP Add-on component is comprised of user interface transactions and a set of BAPIs designed to support the SAP Enterprise Project Connection data integration with SAP Project Systems and SAP Plant Maintenance.
  The SAP GUI transactions of this component enable users to manage data transfers from SAP Project Systems and SAP Plant Maintenance to third-party Enterprise Project Management systems (Microsoft Project Server and Oracle Primavera P6 EPPM).

- **Sample Integration Solution**
  The SAP Enterprise Project Connection includes Sample Integration Solutions (SIS) to demonstrate the data integration between various third-party Enterprise Project Management systems (Microsoft Project Server and Oracle Primavera P6 EPPM) and SAP Project Systems, SAP Plant Maintenance, and SAP Portfolio and Project Management.
  For more information about the default data mappings and business rules for the Sample Integration Solutions, managing solutions, and other useful information, see SAP Note 2292815.
3 Monitoring SAP Enterprise Project Connection

SAP Enterprise Project Connection produces log files used to maintain, tune, troubleshoot, and debug the system.

Trace and Log Files
The SAP Enterprise Project Connection log files can be viewed from the SAP NetWeaver AS Java Log Viewer. You can filter the SAP Enterprise Project Connection-specific logs with value CA-EPC in the “Category” column. For more information, see SAP Note 2294102, or SAP NetWeaver AS Java documentation.

Debug File Dumps
SAP Enterprise Project Connection can produce XML files throughout the data transfer process that reflects the state of the data at any time during the process.

This option is turned on automatically when SAP Enterprise Project Connection is installed in Development mode and by default, the files are dumped to the log’s folder. When SAP Enterprise Project Connection is installed in Production mode, this option can be toggled off and on, and you can choose to give the logs unique names using a date/timestamp with the Debug Management function in the SAP Enterprise Project Connection Configuration Wizard.
Managing SAP Enterprise Project Connection

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation. You can find additional information about the underlying technology in the SAP Library under SAP NetWeaver AS Java.

Start and Stop

SAP Enterprise Project Connection components can be started or stopped by SAP NetWeaver Operation Management —> Systems —> Start & Stop —> Java Application; filter for *epc* in the “Name” column. The components are listed below and are found in the application list.

The restart order is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Sequence</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>xapps<del>epc</del>datapath-ear</td>
<td>1</td>
<td>SAP NetWeaver AS Java Administrator</td>
</tr>
<tr>
<td>xapps<del>epc</del>ctc-ear</td>
<td>2</td>
<td>SAP NetWeaver AS Java Administrator</td>
</tr>
<tr>
<td>xapps<del>epc</del>ctc-content</td>
<td>3</td>
<td>SAP NetWeaver AS Java Administrator</td>
</tr>
</tbody>
</table>

SAP Enterprise Project Connection Configuration Wizard

The following Configuration Wizard functions enable you to test, troubleshoot, and manage SAP Enterprise Project Connection. For more information on configuration functions, see SAP Note 2297198.

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC schema</td>
<td>Returns the request and response of the desired BAPI.</td>
</tr>
<tr>
<td>Debug management</td>
<td>Toggles debug file output when the installation mode is Production.</td>
</tr>
<tr>
<td>Restart application</td>
<td>Enables SAP Enterprise Project Connection restart of the integration engine component.</td>
</tr>
<tr>
<td>Test destination system connection</td>
<td>Provides Rest call URLs to test available connections.</td>
</tr>
<tr>
<td>Display active integration solution</td>
<td>Provides home folder of currently running integration solution when the installation type is Development.</td>
</tr>
<tr>
<td>Clear database</td>
<td>Clears logged scheduled jobs and transfer results from the database.</td>
</tr>
<tr>
<td>Upload/replace Oracle Primavera CRUD Java rules</td>
<td>Enables upload or replacement of CRUD Java rules.</td>
</tr>
<tr>
<td>Diagnose connection with SAP ERP</td>
<td>Diagnoses configured connections.</td>
</tr>
<tr>
<td>Function</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Upload/Replace Custom Java Library</td>
<td>Manage the custom Java library.</td>
</tr>
<tr>
<td>Concurrent Processing Thread Count</td>
<td>Enable and manage concurrent data integration process.</td>
</tr>
<tr>
<td>Add SMTP email Configuration</td>
<td>Manage SMTP configuration to enable emails to be sent from workflows.</td>
</tr>
<tr>
<td>Character Set Encoding</td>
<td>Modify character set encoding as per the character set used in your data. The default is ISO-8859-1.</td>
</tr>
</tbody>
</table>

### Backup

You should back up your system landscape regularly to protect from loss in the event of hardware or system failure.

SAP NetWeaver AS Java is backed up as part of your landscape backup strategy. If an operating system-level backup of SAP NetWeaver AS Java is performed, the SAP Enterprise Project Connection application is included.

When backing up the SAP Enterprise Project Connection system, you need to back up the SAP Enterprise Project Connection database tables. If your installation type is Development, you need to copy the files under your development <EPC_HOME> directory to another location.

When backing up the SAP Enterprise Project Connection persistent storage (database), include the tables with prefix SEPC from SAP NetWeaver AS Java system database. Consult your database documentation for more details.

The following table lists the resources for your SAP Enterprise Project Connection backup:

<table>
<thead>
<tr>
<th>Item</th>
<th>Backup Data</th>
<th>Frequency</th>
</tr>
</thead>
</table>
| Tables in SAP NetWeaver AS Java system database | sepc_result  
sepc_job  
sepc_env  
sepc_id_gen  
sepc_intg_solu  
sepc_obj_property  
sepc_rsrcJar  
sepc_solu_history | Daily |

### Periodic Tasks

The results reports of SAP Enterprise Project Connection are stored in the SEPC_RESULT database table. To prevent this table from becoming too large, log into the SAP Enterprise Project Connection Configuration Wizard and click Clear Database.

### Role Management

Users of SAP Enterprise Project Connection require certain authorizations. The following list illustrates user activities that need to be considered when assigning authorizations and creating roles:

- Planning and scheduling in Project System
- Planning and scheduling in Plant Maintenance
• Troubleshooting and monitoring results of user transfers
• Scheduling job execution at a later time using a saved variant generated from SAP Enterprise Project Connection filter screens
• User wanting to view scheduled jobs

Internal User Management

The following table provides details on SAP Enterprise Project Connection required internal users, their creation, and their usage:

Table 5

<table>
<thead>
<tr>
<th>User Name</th>
<th>Creation</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC_ADMIN</td>
<td>Manually by you after deploying, but before configuration.</td>
<td>• SAP NetWeaver AS Java system user.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Used to log into the SAP Enterprise Project Connection Configuration Wizard.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Roles are datapath-rest-access (created during deployment in SAP NetWeaver AS Java) and Administrator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Must be a member of a group called Administrators in SAP NetWeaver AS Java. You must create this group if it doesn’t exist.</td>
</tr>
<tr>
<td>EPC_RESTUSER</td>
<td>Automatically by SAP Configuration Wizard.</td>
<td>• SAP NetWeaver AS Java system user</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Authenticates communication between SAP Enterprise Project Connection and third-party softwares.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Role is datapath-rest-access, which is created during deployment in SAP NetWeaver AS Java.</td>
</tr>
<tr>
<td>EPCINTERFACE</td>
<td>Automatically by SAP Configuration Wizard.</td>
<td>• SAP ERP System User.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Roles is EPCINTERFACE_ROLE, which is created by you in the SAP ERP or SAP S/4HANA on-premise system before configuration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Authenticates communication between SAP ERP or SAP S/4HANA on-premise, and SAP Enterprise Project Connection.</td>
</tr>
</tbody>
</table>
5 Software Change Management

SAP Enterprise Project Connection has two installation types, or "modes" - Development and Production. Each mode provides you with different capabilities for building, testing, and running your integration solution. Once the installation mode has been selected in the SAP Enterprise Project Connection Configuration Wizard, it cannot be changed. You cannot switch to the other mode; you must uninstall and reinstall the application.

Ideally, you install the application on three systems; development, test, and production. As you can create and work with as many different integration solutions as needed, this approach allows you greater control in the management of your integration solutions.

You use the SAP Enterprise Project Connection Configuration Wizard to manage your integration solution(s) on the SAP NetWeaver Java AS system.

SAP Enterprise Project Connection contains internally stored sample integration configurations you can run, or use as a basis to create your own. If you upgrade the application to a new version, the internally stored Sample Integration Solution is not changed or updated to any new revision. For more information about the Sample Integration Solutions, as well as training and other useful documentation, see SAP Note 2292815.

Development Mode

In Development mode, SAP Enterprise Project Connection exposes the Sample Integration Solutions on the local file system for you to run or customize. You can create different copies to work with, and switch between your copies. The location of the currently running integration solution is always referred to as the home path, and this is where the application looks for the integration solution. You select the solution you wish to run by using the SAP Enterprise Project Connection Configuration Wizard to change the home path.

You can determine the type of debug files you wish the application to generate as you test your integration solution.

When it is finished, you can create an archived (zipped) integration solution and import it to a production system.

Exporting Integration Solutions

Use this function to export the currently running integration solution as a set of files to another location on the development system. This allows you to make copies as needed.

1. Launch the SAP Enterprise Project Connection Configuration Wizard, and log in as SAP NetWeaver AS Java administrator.
2. On the Configuration Setup page, select Integration Solution Content Management.
3. On the Manage Solutions page, select Export Solution.
4. Click Next.
5. To export the integration solution, on the Export page, enter the name of the location to where you want to export the solution.
6. Click Next.

Changing Home Path

Use this function to switch from the currently running integration solution to another solution by changing the home path.
1. Launch the SAP Enterprise Project Connection Configuration Wizard, and log in as SAP NetWeaver AS Java administrator.

2. On the Configuration Setup page, select Integration Solution Content Management.

3. On the Manage Solutions page, select Change HomePath.

4. Click Next.

5. To change Development home, on the New Home page, enter the name the location on the file system that contains the integration the solution you want to run.

6. Click Next.

Creating Integration Solution Archive

Use this function to create an archived (zip) integration solution to import to your production system running SAP Enterprise Project Connection.

1. Launch the SAP Enterprise Project Connection Configuration Wizard and log in as SAP NetWeaver AS Java administrator.

2. On the Configuration Setup page, select Integration Solution Content Management.

3. On the Manage Solutions page, select Create Solution Archive.

4. Click Next.

5. On the Create Solution Archive page, the Solution Path field is pre-populated with the location of the currently running integration solution.

   In the Zip File Path field, enter the location on the file system to which the solution archive zip will be created.

   **Note**
   
   You must verify that the account used to run SAP NetWeaver AS Java has write access to this folder.

6. Click Next.

Update SAP Sample Integration Solution

Use this function to update the application’s internally stored Sample Integration Solution copy to the latest release. It will not automatically run; you must first activate it. The Sample Integration Solution might between releases or patches. Thorough testing in a test environment is recommended. Refer to SAP Enterprise Project Connection Release Notes.

1. Launch the SAP Enterprise Project Connection Configuration Wizard, and log in as SAP NetWeaver AS Java administrator.

2. On the Configuration Setup page, select Integration Solution Content.

3. On the Manage Solutions page, select Update SAP Sample Solution (SIS) to Latest.

4. Click Next.

5. To update the integration solution, on the next page, click the appropriate (secure or non-secure) link.

6. Click Next.

Production Mode

In Production mode, the integration solution - whether a sample integration solution or your customized solution - is run in-memory. You can run a Sample Integration Solution, or import an archived solution to run. You can select the solution to run by activating it.

Debug logging is turned off by default. If you wish to troubleshoot an integration solution, you can export it as a set of files, and switch on debug logging.
Importing Integration Solutions

Use this function to import an archived integration solution. When you import an integration solution, the application automatically makes an in-memory copy of it for safekeeping.

1. Copy the archived integration solution to the SAP NetWeaver AS Java Enterprise Project Connection production server file system.

   **Note**
   If you are running an SAP NetWeaver AS Java cluster, copy the archive to main server (this is the instance running the Message Service).

2. Launch the SAP Enterprise Project Connection Configuration Wizard, and log in as SAP NetWeaver AS Java administrator.
3. On the Configuration Setup page, select Integration Solution Content Management.
4. On the Manage Solutions page, select Import Solution.
5. Click Next.
6. On the Content page, enter the location to which you copied the archive in step 1.
7. In the Label field, enter a unique name.
8. Click Next.

Activating Integration Solutions

You use this function to activate an integration solution that you have imported. Activating the integration solution makes it the currently running solution.

1. Launch the SAP Enterprise Project Connection Configuration Wizard and log in as SAP NetWeaver AS Java administrator.
2. On the Configuration Setup page, select Integration Solution Content Management.
3. On the Manage Solutions page, select Activate Solution.
4. Click Next.
5. Select the desired integration solution to activate it.
6. Click Next.

Exporting Integration Solutions

Use this function to export the currently running integration solution as a set of files on the file system.

1. Launch the SAP Enterprise Project Connection Configuration Wizard and log in as SAP NetWeaver AS Java administrator.
2. On the Configuration Setup page, select Integration Solution Content Management.
3. On the Manage Solutions page, select Export Solution.
4. Click Next.
5. On the Export page, enter the location to where you want to export the integration solution.
6. Click Next.

Reactivate Production Integration Solution

Use this function to force a refresh of the currently running integration solution that was automatically stored in the application when it was imported.
1. Launch the SAP Enterprise Project Connection Configuration Wizard, and log in as SAP NetWeaver AS Java administrator.
2. On the Configuration Setup page, select Integration Solution Content.
3. On the Manage Solutions page, select Reactivate Production Solution.
4. Click Next.
5. On the Reactivate Production Solution page, check the Reactivate Production Integration Solution checkbox.
6. Click Next.

### Update SAP Sample Integration Solution (SIS) To Latest

<i>Note</i>

This step is recommended only for Development mode unless you are running the Sample Integration Solution in Production mode and you want to update it to the latest version. All changes made to the Sample Integration Solution are documented in that version’s release notes.

SAP Enterprise Project Connection stores an internal copy of the sample integration solution. When you update the application, the sample integration solution is not automatically updated.

1. On the Configuration Setup page, select Integration Solution Content.
2. On the Manage Solutions page, select Update SAP Sample Solution (SIS) to Latest.
3. Click Next.
4. On the next page, click the appropriate (secure or non-secure) link.

Provide the EPC_ADMIN credentials. If the update was successful, an XML message will be displayed to indicate this.
6 Troubleshooting

For the most up to date information regarding troubleshooting, see SAP Note 2294102.

For landscape recommendations for integration with Oracle Primavera P6 EPPM and Microsoft Project Server, see SAP Note 2294103.
7 Support Desk Management

If you want to submit issues or messages regarding SAP Enterprise Project Connection support, use CA-EPC (general messages) in the SAP Service Marketplace.
## Typographic Conventions

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;Example&gt;</code></td>
<td>Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your <code>&lt;User Name&gt;</code>”.</td>
</tr>
<tr>
<td>Example ➤ Example ➤ Example</td>
<td>Arrows separating the parts of a navigation path, for example, menu options.</td>
</tr>
<tr>
<td>Example</td>
<td>Emphasized words or expressions.</td>
</tr>
<tr>
<td><a href="http://www.sap.com">www.sap.com</a></td>
<td>Textual cross-references to an internet address.</td>
</tr>
<tr>
<td>/example</td>
<td>Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web.</td>
</tr>
<tr>
<td>123456</td>
<td>Hyperlink to an SAP Note, for example, SAP Note 123456.</td>
</tr>
</tbody>
</table>
| Example | • Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options.  
• Cross-references to other documentation or published works. |
| Example | • Output on the screen following a user action, for example, messages.  
• Source code or syntax quoted directly from a program.  
• File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| EXAMPLE | Keys on the keyboard. |