Maintenance Planner - User Guide

THE BEST RUN **SAP**

Content

1 Introduction

Maintenance planner is a solution hosted by SAP that helps you plan and maintain systems in your landscape. You can plan complex activities like installing a new system or updating existing systems. All changes can be scheduled to be deployed at a convenient time, to minimize downtime.

Maintenance planner is the successor of Maintenance Optimizer, Landscape Planner and Product System Editor. It simplifies the maintenance process by consolidating critical tasks such as definition of product maintenance dependencies, implementing changes by generating stack configuration, downloading archives, and so on, in one tool.

Intended Audience

This guide is intended for technology consultants, system administrators, and IT architects.

Related Information

2 Before You Start

This section provides information about the prerequisites that you have to fulfill before you start using the maintenance planner. This section also provides information about authorizations and limitations.

2.1 Runtime Prerequisites

Procedure

1. You have Google Chrome, Mozilla Firefox, or Internet Explorer (version 10 and above) browser in your system.
2. Your SAP Solution Manager system has release 7.1 SP05 or above.
3. Your SAP Solution Manager system has release 7.01 SPS23 or above, provided, you have installed SAP Note 1646604 . Note that the SAP Solution Manager 7.0 or 7.01 status is "In customer-specific maintenance".

2.2 Limitations

Please refer to SAP Note 2174410 for the list of maintenance planner limitations that is regularly updated.

2.3 Authorizations

The following authorizations must be fulfilled before you can use Maintenance Planner:

1. Ensure that you have an s-user for the SAP Support Portal.
2. Your user in SAP Solution Manager must be assigned to your s-user for the SAP Service Marketplace. For more information, see SAP Note 1822202

2.4 Uploading Landscape Data Into SAP Support Portal

1. You can get started by completing the activity Connecting LMDB to System Landscape Directory (SLD).
2. If you are updating from a release below SAP Solution Manager 7.1 SP05, ensure that you have migrated system information from transaction SMSY to LMDB. For more information, see Migrating System Information from SMSY to LMDB.

> **i** Note
>
> See this Blog about initial setup activities.

Installation number and system number are known in both the LMDB and SAP Support Portal.

3. Synchronize your technical systems from SAP Solution Manager to SAP Support Portal, in the Technical System Editor in SAP Solution Manager.
   System Information from LMDB is mapped to maintenance planner in the following ways:
   - **Periodic update**: Starting Solution Manager 7.1 SP 9, the landscape data is uploaded every day, or at a regular interval configured on LMDB based on the landscape fetch job. If you are using an earlier version of Solution Manager, applying SAP Note 2002546 is strongly recommended.
   - **Direct upload**: To manually upload the landscape data from Solution Manager to the customer profile, you can choose *Upload to SAP Support Portal* button.

> **i** Note
>
> - With Solution Manager 7.1, you do not have to create product systems on LMDB before you choost *Upload to SAP Support Portal* button. You can create dependencies between your Business Suite Portal Systems directly in maintenance planner. All existing product systems and technical systems declared in LMDB are synchronized to maintenance planner.
> - For dual stack systems, you have to maintain a product system before you upload the system data to the SAP Support Portal.

Scenario: High Security Customers and SAP S/4HANA Adoption
- If your organization prohibits external RFC connections (due to security reasons), because of which you do not have an RFC connecting your SAP Solution Manager system to the SAP Backbone systems.
- Or if you want to move to SAP S/4HANA, you can use the System Info XML. Refer knowledge base article (KBA) 2287046 for the detailed steps.

See also:
- Blog describing the initial setup activities.
- Blog providing an overview of maintenance planner.

3 About Maintenance Planner

This section provides more information about maintenance planner.

3.1 Maintenance Process Architecture

The following figure illustrates the flow of data across SAP Support Portal, Maintenance Planner, and customer landscapes.

Maintenance Process Architecture
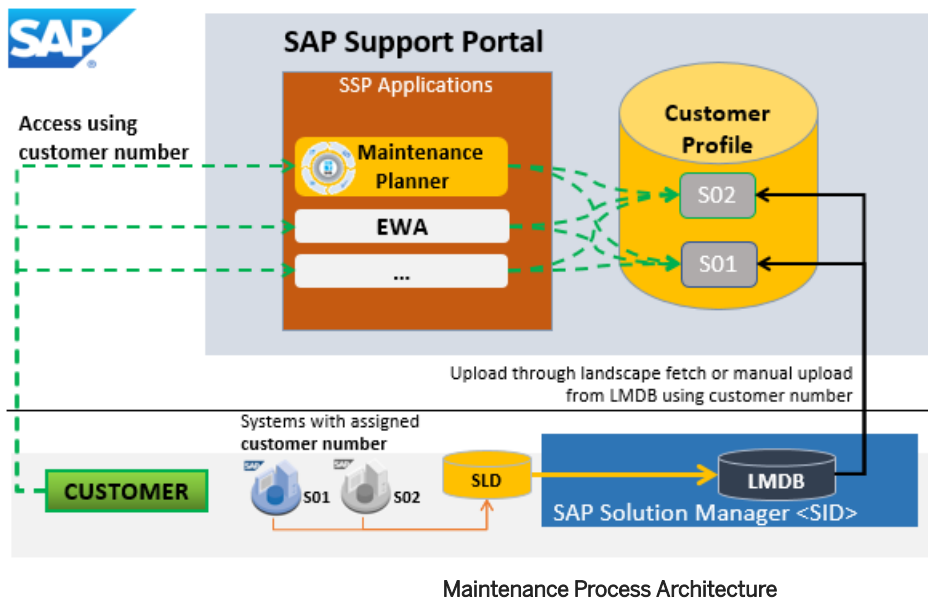
1. Data is sent to the System Landscape Directory (SLD).
2. Data from SLD is synchronized with the Landscape Management Database (LMDB).
3. Data from LMDB is uploaded to SAP Support Portal.
4. The SID of the uploading SAP Solution Manager is stored with the data.

Only an application using the customer number assigned to the technical system can access system data in the customer profile.

3.2 Launching the Maintenance Planner

Maintenance planner is a hosted application on ONE Support Launchpad. To access the tool:

1. Go to https://apps.support.sap.com/sap/support/mp 🔗 or go to ONE Support Launchpad 🔗 link, choose the *Maintenance Planner* tile under the *On Premise* section.
2. Log in with your SAP credentials (S user)
3. One customer number can be assigned to multiple S-users. Use the S-user with the **same** customer number on SAP Solution Manager and SAP Service Marketplace.
   - Ensure that S-users you use for maintenance planner and the RFC connection with the Online Service System (OSS) are mapped to the same customer number.
   - The RFC in the SAP Solution Manager system used to upload the system data to the back-end is configured with the back-end as *SAP-OSS* or as a generated RFC beginning with *<SM_SP_....>*

> **i Note**
>
> You cannot currently use multiple tabs of the same browser instance.

3.3 Introducing Maintenance Planner

With maintenance planner, you can plan a new system installation or an update or upgrade. You can analyze the impact on dependent systems and specify the deployment date.
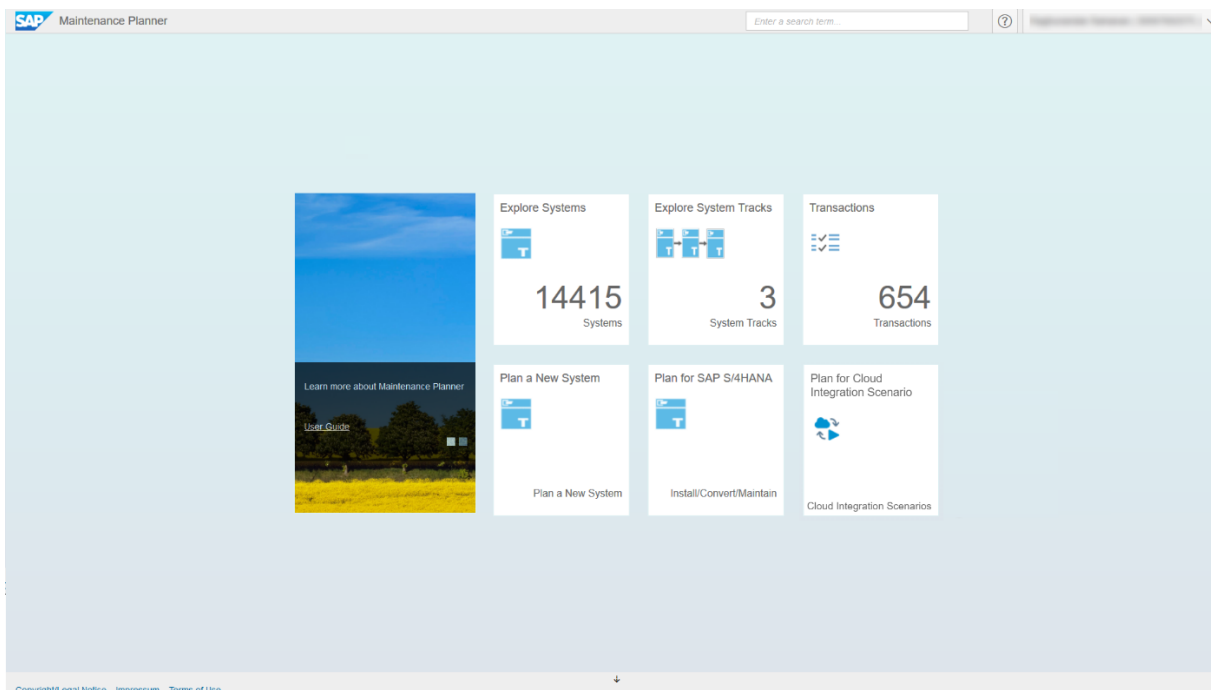
Explore Systems: Determines the systems in your landscape. For more information, see Exploring Systems in Your Landscape [page 13].

Explore System Tracks: System tracks are groups of technical systems. You can update or upgrade a whole track at once. For more information, see Working with System Tracks [page 49].

Transactions: Overview of all the transactions you created, ordered by ID, name, status, and so on.

Plan a New System: Lets you add a new system to your landscape. For more information, see Planning a New System Installation [page 17].

Plan for SAP S/4HANA: Lets you plan a new SAP S/4HANA system or convert an existing SAP ERP system to SAP S/4HANA. For more information, see Planning an SAP S/4HANA System [page 26].

Plan for Cloud Integration Scenario: Lets you plan an integration of various SAP cloud solutions with a a guided workflow. For more information, see Cloud Integration Automation Service for SAP Cloud Integration Scenario [page 56].

The search field lets you find systems, transactions and tracks. You can search by the name or description of the entity and the result is grouped into systems, transactions, and tracks. Choose on the search field to display all systems, transactions and tracks by default.

User Info: You can use the ⌄ (user info drop down) on the top right corner to access the following:

- **Personalize**: This is currently available for the *Explore Systems* view, and lets you show or hide certain attributes of a system.
- **Logout**: Lets you log off maintenance planner.

Help: You can use the ⓘ (help menu) on the top right corner to access the following:

- **FAQ**: Link to a list of frequently asked questions while using maintenance planner
- **User Guide**: Link to maintenance planner product page
- **Release Highlights**: Provides you with the latest information on what's new in maintenance planner

3.4   Technical Advantages of Maintenance Planner

The maintenance planner is an essential administrative tool that helps you complete a major part of your application lifecycle management. Complex maintenance can be planned and scheduled to be deployed at later date. With maintenance planner you can:

- Explore all the systems and system tracks in your landscape.
- Plan a new system installation.
- Plan update or upgrade activities for an existing system.
- Group systems into tracks and perform collective maintenance.
- Analyze dependent systems impacted by your change.
- Identify and evaluate changes to the landscape.
- Plan a new SAP S/4HANA system or convert an existing SAP ERP system to SAP S/4HANA.

3.5 Dependencies Supported in Maintenance Planner

This section lists all the scenarios where dependencies are supported in Maintenance Planner:

Technical stack compatibility calculation in "Define Change" step

During Define Change, the dependencies/prerequisites maintained in SAP product model are used for automatic calculation. Maintenance Planner takes into account the corresponding transitions of the various components based on the change in the application layer/technical layer.

Example scenarios:

SAP Product like SAP ERP is based on an SAP NetWeaver version. For example, SAP enhancement package 8 for SAP ERP 6.0 requires SAP NetWeaver 7.5.

If you are planning to upgrade your Business Suite system to this release, then the required underlying NetWeaver release will be calculated to SAP NetWeaver as ABAP 7.5, in the "Define Change" step.

If you are converting your SAP ERP system to SAP S/4HANA, all the supported add-ons will be implicitly transitioned.

Installation of SAP Fiori Apps with Maintenance Planner

SAP Fiori apps require front-end, back-end and if applicable, SAP HANA components. The required front-end and back-end components are delivered in separate products, and have to be installed in the system landscape.

Through integrated SAP Fiori installation planning procedure, Maintenance Planner addresses the need to install front-end and back-end components delivered in separate products, by calculating all the system requirements for selected SAP Fiori Apps in SAP Fiori Apps Library.

See blog: Simplified Installation of SAP Fiori Apps with Maintenance Planner

Grouping logical systems together using System Tracks

Maintenance Planner lets you group related systems with the same target software level. Using system tracks, you can update or upgrade multiple systems at once. A single Stack XML file can be used for a collective update or upgrade, saving a lot of redundant effort.

For more information see: Working with System Tracks [page 49]

Product Maintenance Dependency

With Product Maintenance Dependency, Maintenance Planner allows you to create dependencies between systems that need to be updated or upgraded together as part of the maintenance process. This saves your effort in manually identifying such dependent systems.

For more information see: Product Maintenance Dependency [page 34]

Upgrade Dependency Analyzer

With Upgrade Dependency Analyzer integrated into Maintenance Planner, you can identify how an upgrade on any one of your systems in the landscape affects another system in your landscape.

For more information see: Integrating Upgrade Dependency Analyzer (UDA) in Maintenance Planner [page 64]

4 Working with Systems

This section provides information on process to update, upgrade, install, or maintain sytems.

4.1 Exploring Systems in Your Landscape

You can use the maintenance planner tool to identify the systems in your landscape.

To view available systems

1. Access maintenance planner.
   - Go to https://apps.support.sap.com/sap/support/mp🡥 and log on with your SAP credentials (S–user).
   - From SAP ONE Support Launchpad🡥 launch the *maintenance planner* tile.
2. Choose *Explore Systems* tile.
   The tool displays all the systems in your landscape. It displays the system ID, type (ABAP, JAVA, Dual Stack, HANA DB, and so on), product, verification status of the technical system. You can filter to find a system.

> → Recommendation
>
> Choose the search icon to search for a system by product name or type.

Personalizing the view
As your landscape grows over time, you may see many systems populated here. You can choose which systems to view and decide on the level of detail using the following features:

- **Personalize**: Choose ⌄ (user menu button) on the top-right corner of the Menu bar, and choose *Personalize*. You can check all the fields you wish to see in the results table.
- **Filter**: You can quickly filter the list by selecting the field name above the table, and choosing the required values.
- **Fields**: If you can't see all the clickable fields, choose ❯ to scroll and view the available options.

> i Note
>
> If you are seeing too few fields, please enable the others through the **Personalize** function.

- **Sort**: Choose ⇅ to sort the result list based on the fields or by display order.

o   **Reset**: Choose ⟲ (reset) to clear filters.

To view a particular system details

Choose a system by clicking on the system ID. The **maintenance planner** opens the maintenance cycle for the system.

The four quadrants indicate the options you have:

o   **Plan**: plan a software change on your system, including planning and downloading files. For more information, see Planning a New System Installation [page 17].

o   **Schedule**: schedule a system deployment of the calculated archives.

o   **Sync**: choose the SAP Solution Manager from which landscape data is to be replicated on Maintenance Planner. This only applies if there are multiple Solution Managers. For more information, see Synchronizing a System [page 47].

> **i** Note
>
> This button is disabled if you have only one SAP Solution Manager mapped to your system.

o   **Verify**: check if the system software description matches the SAP Product Model. In case of issues, correct them. For more information, see Verifying an Erroneous System [page 36].

3.   Choose the system name for more detailed information about the system.

Detailed System Information

Clicking the tabs on the left gives you detailed system information, as follows:

●   **Information**: basic information like the database type, host, and source solution manager

●   **Software**: software product stack for the system. Example: Product Versions, Product Instances, Software Component Versions. If the software product stack consists of any related release and information notes (RINs), the software product stack is displayed as a hyperlink to RIN.
    You can also plan for a new system installation by using an existing system as reference to generate a stack xml for the new system. For more information, see Planning New System Installation by Using Existing System as Reference [page 15].

●   **Software Components**: the stack level of the software components.

●   **Dependencies**: the product maintenance dependencies for the selected system.

●   **Tracks**: all system tracks available.

●   **Additional Software Details**: The tab is available if:

o   The system is an ABAP system.

o   You have maintained the RFC destination from SAP Solution Manager to the technical system. The name of the RFC destination can be found from the *Information* tab.

You can view the switch framework components and activated business functions maintained for the ABAP system.

In addition, you can also view the additional software details without maintaining the RFC destination. That is, if you have uploaded the system using system information XML.

4.1.1 Planning New System Installation by Using Existing System as Reference

Context

Based on your requirements, you want to set up a new system as that of an already existing system. That is, generate an equivalent stack XML of an existing system for your new system.

Recreating an existing stack XML becomes a time-consuming process if it contains add-ons, product instances, or support package stacks added using other tools such as SAINT.

Maintenance planner provides an option that allows you to create a new system using the software details of the existing system as a reference.

Procedure

1. Choose an existing system from the *Explore Systems* tile.

   This selected system acts as your reference system to generate the new stack XML.
2. From the maintenance plan cycle, choose the SID to explore the details of the system.
3. Choose the Software tab and choose the *Plan New System Using xxxx as Reference* button.

   Note that *xxxx* is the SID of the existing or selected system.
4. Enter the new system SID and choose *Plan*.

   The following details are displayed:
   - A *Comparison View* with software details of the planned and reference system.
     The transaction created for the new system. On choosing the *Info* icon, you can view the comparison view of the planned and reference system.

     > **i Note**
     >
     > The *Info* icon is only available for the systems created using *Plan New System Using xxxx as Reference* button.

   - A new system with equivalent stack XML of the reference system is created. The system displays the newly created system in the maintenance plan cycle. When you choose *Plan* from the maintenance cycle, the system directly takes you to the *Download Files* screen of the newly created system.
     Now, if you want to include or change product instances or OS/DB files in your new system, proceed as follows:
     1. From the *Download Files* screen, choose *Back* to go to the *Select Files* screen.
     2. Choose *Reselect OS/DB Files*.
        Make the necessary changes and choose *Confirm Selection*.

> **i Note**
>
> Maintenance planner does the following:
>
> ○ Displays relevant status notifications such as error or warning if the stack XML cannot be generated with all the components installed on the reference system. For more detailed description of the errors or warning notifications received, refer to SAP Note 2488396 .
>
> ○ Calculates the support package of the kernel, which is recommended by SAP at that point in time. With the new support package of the kernel getting mapped to an SAP NetWeaver release, the support package of kernels getting calculated also change.

4.1.2 Adding Systems Using System Information XML

The recommended approach to upload (add) the system in the maintenance planner tool is through SAP Solution Manager. In exceptional cases, the MP tool allows you to add systems by uploading the system information XML generated for a technical system. It enables you to upload system information XMLs for systems.

> **i Note**
>
> To avoid creating duplicates, log on with the S-user that is assigned to your SAP Solution Manager system.

For more information about system information XML, see

- Uploading Landscape Data Into SAP Support Portal [page 7]
- Knowledge base article (KBA) - 2287046 .

Even though uploading system information XML is enabled for you, we do not recommend it for the following reasons:

- Does not provide a holistic view of all the systems present in your landscape
- Does not include crucial SAP Solution Manager functions
- Cannot determine if there is an active SAP Solution Manager

> **i Note**
>
> Uploading system information XML is still valid in some cases where the organization does not allow you to have external connectivity. For example, Defense and Security.

Therefore, the MP tool captures the reason why you are not using the SAP Solution Manager for uploading the system information XML. You are required to answer a few questions before you upload the system information XML.

Procedure

1. Access maintenance planner.
   - ○ Go to https://apps.support.sap.com/sap/support/mp and log on with your SAP credentials (S–user).
   - ○ From SAP ONE Support Launchpad launch the *maintenance planner* tile.
2. Choose *Explore Systems* tile.

3. Choose *Add System* button placed on the top right-hand corner of the view.
   An *Add System* dialog box is displayed with information about adding systems using the automated data replication of SAP Solution Manager.
4. Read the information and provide your confirmation by selecting the *I Accept.* checkbox and choose *Next*.
5. Upload the system information XML of your choice in the following ways:
   ○ Choose the *Browse...* button to upload any system information XML.
   You can proceed further once the system successfully validates the selected system information XML.
6. Choose *Next*. The dialog box displays the following system details:
   ○ *SID*: System ID. If required, you can extend the SID.
   ○ *Host*: Database host
   ○ *Type*: Type of system. For example, ABAP, Java, dual.
7. Choose *Next*. Select the option why you are adding the system using system information XML and provide the reason.

   > **i Note**
   >
   > The reason provided by you is recorded in the system for further analysis.

8. Choose *Upload*. The system is added into the *maintenance planner* tool.

4.2 Planning a New System Installation

Maintenance Planner helps you plan a new system installation on your landscape.

At the end of this procedure you will be able to generate a Stack XML file and delta archives that will contain every detail of the system and the software components. These are used by Software Provisioning Manager for the installation process.

Here is an overview of the maintenance process in the previous and the current scenario:

Process without Maintenance Planner

1. Download initial software load from SMP
2. Install system using SWPM
3. Register system in SAP Solution Manager
4. Choose target product software on *Maintenance Optimizer*
5. Update system using SUM

New process using Maintenance Planner

1. Plan a system change in Maintenance Planner
2. Download the Stack XML and the corresponding stack
3. Download the initial installation archives from SMP, manually
4. Install new system using SWPM
5. Update system using SUM.

4.2.1 How to Install a New ABAP System

Maintenance planner supports installation of ABAP systems.

Context

Please refer this blog🌥️ for the process flow of installing a new system using Maintenance Planner.

Procedure

1. In the *Home* view, choose *Plan a New System* tile. The system maintenance cycle is displayed.
2. Choose *Plan* and provide a System ID (SID). In the *Choose System Type* dialogue box on the left, the default selection is ABAP.

   Optional: At any point doing the installation, you can name the transaction and save it, for easy identification later.
3. Follow the on-screen instructions to complete the 4-stage activity, starting with *Define change*. For example, you can choose the target software level, product, product version, stack level, technical usages, and so on.

   a. *Define change*: Choose one from the available options for the system you have selected. For example:
      - Install an SAP NetWeaver system
      - Install an SAP SCM system
      - Install an SAP SRM system
      - Install an SAP CRM system
      - Install an SAP SOLUTION MANAGER system
      - Install an SAP ERP system
      - Install an SAP SFINANCIALS system
      - Install an SAP BW/4HANA system

      > **i Note**
      >
      > The following installation scenarios are not supported on maintenance planner:
      > - EHP4 FOR SAP ERP 6/0/NW701
      > - EHP3 FOR SAP ERP 6/0/NW701

      Choose the enhancement packages and the support package stack level of the target and choose *Confirm Selection*. Optionally, you can also install additional software components like add-ons. See also, Iterative Planning [page 45].

      The system displays the support package stack along with related release and information note (RIN) number. You can find an info 🛈 button is being displayed on selection of the *Support Package Stack* or next to the *Target Software Details*.

      Using the 🛈 button, you can view the following:

- A list of all product versions to be installed or updated or upgraded on the technical system. The information is displayed in the following manner:
  Product Version – Support Package Stack
- Software component version with corresponding support packages (including possible installation requirement)
- If applicable for your selected support package, a link to the *Innovation Discovery* tool is displayed. The innovations available for you in the tool are dynamically calculated based on the *Product Version – Support Package Stack* selection you made.

> **i Note**
>
> When you are at this step, the system is yet to calculate the software packages to be installed on the system. The list shown on selection of the info **i** button displays possible software components and support packages, which would be installed in the system target state.
>
> If there is a possibility for you to choose an alternative software component version, for example SAP_UI 7.40 or SAP_UI 7.50, this is also displayed on the screen.

b. *Select Files*: Depending on the software components you have selected, choose the files to be installed. A summary of the selected files are displayed. You can change this by clicking the button *Reselect OS/DB Files*.

   Choose *Next*.

> **i Note**
>
> In this step, you can deselect the ABAP support packages calculated additionally by the system. The system validates the deselected ABAP support packages again when you navigate to the next step. In case the deselected ABAP support packages are required to ensure a valid queue, the system reselects those packages. Also, the packages inside the OS_DB node are not considered for validation.

   See also, Iterative Planning [page 45]

c. *Download Files*: **You can download the installation plan by choosing** *Download Stack XML* **and choose** *Push to Download Basket* **to download the archives from SAP Support Portal. You can also download the maintenance plan as a PDF or a text file from** *Additional Downloads* **menu.**

   Maintenance planner supports planning of new installations on a desired stack level. With Maintenance planner, you can plan a target software level and also download the Stack XML and the installation archives in one step.

   Choose *Next* to move to the last stage of the installation process.

d. *Complete*: Choose *Additional Downloads*. You can download the installation plan as a PDF by choosing *Download PDF* or export list of all downloads to a spreadsheet by choosing *Export to Excel*. A link to the initial installation media is towards the end of the PDF.

At this stage you can choose *Set to Complete* button to finalize the maintenance transaction and no further changes are permitted. If you wish to perform additional updates, you can choose*Back* and repeat the above steps iteratively.

4.2.1.1　How to Uninstall ABAP Add-Ons During System Update

Context

During ABAP system update, you could encounter add-ons that you do not require and intend to uninstall these add-ons from your system.

You cannot uninstall all the add-ons. For more information on the list of ABAP you can uninstall, see SAP Note 2011192 .

Maintenance planner provides an option to uninstall add-ons. Since you cannot uninstall all the add-ons, maintenance planner does the following:

- Validates your request to uninstall the add-ons
- Provides a list of add-ons that you can uninstall
- Checks for the dependencies between softwares on the same technical system
- Provides a notification if the add-ons are uninstalled during planning procedure
- Displays relevant SAP Notes associated with the software component versions.

> i Note
>
> - Maintenance planner supports planning of uninstalling add-ons only during system update or upgrade.
> - You can also uninstall add-ons not supported by SAP S/4HANA on premise edition during the conversion planning. For more information, see How to Uninstall Add-Ons Not Supported during SAP S/4HANA Conversion [page 32].

Procedure

1. Load your system that you want to update from *Explore Systems*.
2. In the *Define Change* screen, select the *Uninstall Add-Ons* radio button.

> **i Note**
>
> - The *Uninstall Add-Ons* radio button is available only when there are add-on product versions present in the system that you can uninstall.
> - The undo and redo functionality is not supported for add-on uninstallation.
> - Only when you select the *Plan a Conversion to SAP S/4HANA* option, the system lists the following add-ons:
>   - Not supported by SAP S/4HANA
>   - Need to uninstall to continue with the SAP S/4HANA conversion procedure
> - The uninstall add-ons option allows you to calculate the stack XML accordingly if the add-on product versions consist of add-on software component versions that you can:
>   - Uninstall
>   - Retrofit to the target system

An information message is displayed with software component versions and add-on product version that SUM uninstalls during consumption of stack.XML. It also displays relevant SAP Notes associated with the SCVs.

You can continue with your planning. The system marks the selected add-ons for deletion.

4.2.2 How to Install a New Java System

Maintenance planner supports installation of Java systems.

Context

Please refer this blog for the process flow of installing a new system using maintenance planner.

Procedure

1. In the *Home* view, choose *Plan a New System* tile. The system maintenance cycle is displayed.
2. Click *Plan*.
3. In the *Choose System Type* dialogue box on the left, choose *Java (Install a Java system)*. Provide a System ID (SID).

   Optional: At any point doing the installation, you can name the transaction and save it, for easy identification later.

4. Select a target software level to install and choose *Confirm Selection*.

   ○ **In case of SAP S/4HANA 1511 Java technical system setup**
     If *Adobe Document Services* needs to be installed along with Enterprise Services Repository, then choose *Update NetWeaver* option after choosing *Confirm Selection*. Thereafter, select the same Support Package Stack, and choose the desired instance.

   ○ **In case of Process Orchestration system**
     Choose the following product instances over the SAP NetWeaver installation:
     ○ Adapter Engine (Java EE)
     ○ Advanced Adapter Engine Extnd
     ○ Application Server Java
     ○ BPM and Event Management
     ○ Composition Platform

5. Follow the on-screen instructions to complete the 4-stage activity, starting with *Define change*. For example, you can choose the target software level, product, product version, stack level, technical usages, and so on.

   a. *Define change*: Choose the enhancement packages and the target stack level and choose *Confirm Selection*. Optionally, you can also install additional software components like add-ons. See also, Iterative Planning [page 45].

   > **i Note**
   >
   > Please check the product specific installation or master guide to check if the desired product to be installed is an add-on and on which other SAP NetWeaver product instances it is based. Please select these product instances first before selecting the desired add-on under *Install or Maintain Add-on*.
   >
   > For example, if you would like to install the PI ADAPTERS (Elster/Swift/BCONS), you need to first select the underlying basis instances *Advanced Adapter Engine* or *PI Adapter Engine*, before you can see or select the required adapters in the add-on section.

   The system displays the support package stack along with related release and information note (RIN) number. You can find an info **i** button is being displayed on selection of the *Support Package Stack* or next to the *Target Software Details*.

   Using the **i** button, you can view the following:
   ○ A list of all product versions to be installed or updated or upgraded on the technical system. The information is displayed in the following manner:
     Product Version – Support Package Stack
   ○ Software component version with corresponding support packages (including possible installation requirement)
   ○ If applicable for your selected support package, a link to the *Innovation Discovery* tool is displayed. The innovations available for you in the tool are dynamically calculated based on the *Product Version – Support Package Stack* selection you made.

   > **i Note**
   >
   > When you are at this step, the system is yet to calculate the software packages to be installed on the system. The list shown on selection of the info **i** button displays possible software components and support packages, which would be installed in the system target state.

> If there is a possibility for you to choose an alternative software component version, for example SAP_UI 7.40 or SAP_UI 7.50, this is also displayed on the screen.

b. *Select Files*: Depending on the software components you have selected, choose the files to be installed. A summary of the selected files are displayed. You can change this by clicking the button *Reselect OS/DB Files*.

Choose *Next*.

> **i Note**
>
> The above steps can be repeated to install additional software.

c. *Download Files*: You can download the installation plan by choosing *Download Stack XML* and choose *Push to Download Basket* to download the archives from SAP Support Portal. You can also download the maintenance plan as a PDF or a text file.

Maintenance planner supports planning of new installations on a desired stack level. With maintenance planner, you can plan a target software level and also download the stack XML and the installation archives in one step.

Choose *Next* to move to the last stage of the installation process.

d. *Complete*: Choose *Additional Downloads*. You can download the installation plan as a PDF by choosing *Download PDF* or as a spreadsheet by choosing *Export to Excel*. A link to the initial installation media is towards the end of the PDF.

General Information

System Name: SI2

System Type: JAVA

System ID: SI2[JAVA]

Current Status

SI2

Planned Changes

Process Type: New system Installation

Update Tool: SOFTWARE UPDATE MANAGER 1.0 Support Package Level-14

Upgrade DVD: 7.31 SP01 - NW731_01_JAVA_NEW

DVD Kit-id: ba1a7790-fba1-11e3-86d2-005056a214d6

Download Installation Media from Service Market Place

Overview of Changes:

Target Status

SI2
SAP EHP1 FOR SAP NETWEAVER 7.3
17 (11/2015)

At this stage you can choose the button *Set to Complete* to finalize the maintenance transaction and no further changes are permitted. If you wish to perform additional updates, you can choose *Back* and repeat the above steps iteratively.

4.2.3 Planning a Container-based System

Maintenance Planner helps you plan a container-based system installation on your landscape using SAP Data Hub.

1. Plan a new SAP Data Hub `<Product>` installation:
    1. Go to the Maintenance Planner at https://apps.support.sap.com/sap/support/mp .
    2. Choose ▌▶ *Plan a new system* ❯ *Plan* ▐ .
    3. As *Target Software Level to Install*, select ▌▶ *CONTAINER BASED* ❯ *SAP DATA HUB* ❯ `<Product>` ❯ `<Release>` ❯ `<Support Package Stack>` ▐ and confirm your selection.
    4. Select the SOFTWARE LIFECYCLE PLUGIN `<Release>` package for the operating system platform of your installation host and confirm your selection.
    5. Confirm the pre-selected stack dependent and stack-independent files:
        - `<Product>`
        - SAP DATA HUB - FOUNDATION
        - SOFTWARE LIFECYCLE PLUGIN
2. Choose *Execute Plan* to have the Stack XML file and the SLPLUGIN.SAR archive downloaded to your PC.

4.2.4 How to Consume Stack XML Files Using SWPM

Context

Perform the following steps to consume the Stack XML file using Software Provisioning Manager (SWPM):

Procedure

1. Using the link provided in the maintenance plan, download the installation media files.
2. Download and extract the latest version of Software Provisioning Manager from the *Download Basket*, and follow the recommendations of **SAP Note 1680045** .
3. Initialize SWPM. Use the following command syntax to call SWPM:
    ```
    <path_to_directory_where_you_extracted_SWPM>/sapinst
    SAPINST_STACK_XML=<absolute_path_to_location_of_STACK XML_file>
    ```
    - **UNIX / IBM i**:
       ```
       ./sapinst SAPINST_STACK_XML=/download/Stack_1000001234_20150423.xml
       ```
    - **Windows**:
       ```
       sapinst.exe SAPINST_STACK_XML=C:\tmp\Stack_1000001234_20150423.xml
       ```
4. Follow the instructions in the installation guide:

- ○ Visit help.sap.com
- ○ Search for the product you are updating.
- ○ In the document list that appears, choose the installation guide and follow the necessary steps. For more information, see Implementing the Landscape Change [page 45].

Related Documents:
- ○ About SUM: http://scn.sap.com/community/it-management/alm/software-logistics/blog/2012/11/07/software-update-manager-sum-introducing-the-tool-for-software-maintenance.
- ○ About Software Provisioning Manager: http://scn.sap.com/docs/DOC-8501.

4.2.5 Planning a Minimum Software Change

Context

You want to perform a minimum required system update while planning for the following software changes:

- Applying single component (updating support package of an individual ABAP software component version)
- Updating kernels (Do not use the stack XML for implementation of this plan; only download the archives). For details regarding kernel patching, refer respective SUM guide.
- Updating only Java patches (Do not use the stack XML for implementation of this plan; only download the archives).
  For more information, see Downloading Java Patches without Updating the System [page 44].

  > **i Note**
  > - ○ The Java patches for the unchanged components cannot be included in the stack XML file.
  > - ○ You can install the Java patches using SUM. For more details on how to install Java patches using SUM, see SAP Note 1641062.

- Updating HR packages (Do not use the stack XML for implementation of this plan; only download the archives).

Procedure

1. Choose a system from the *Explore Systems* tile.
2. Choose *Plan*.

   The *Define Change* view displays the current software details, that is, the start state of the system.
3. Select the *Plan a Minimum Software Change* option.

   A dialog box appears providing information on the scenarios where you can perform the minimum required system update while planning. It also provides information whether you can use the generated stack XML for implementation of the plan.

4. Choose *Continue*.

Now, the *Define Change* view displays the target software details, that is, the target state of the system.

In the background, the MP tool automatically applies minimum required system update. On a product level, the target state of the system is same as of the start state of the system. That is, in most cases, the current software status in terms of product version, support package stack, and product instance remains as it is.

> **i Note**
>
> When you choose *Continue* and navigate to the *Define Change* screen, the *Plan a Minimum Software Change* option is not available for the following reasons:
> - If you have already chosen the *Plan a Minimum Software Change* option
> - If the minimum required software update has been applied.

The *Next* button is enabled for further planning options.

4.3 Planning an SAP S/4HANA System

The guided procedure provided in the maintenance planner allows you to simulate an installation of a new SAP S/4HANA system or a conversion of an existing SAP ERP system to SAP S/4HANA system.

Related Information

How to Install a New SAP S/4HANA System [page 27]
How to Convert an Existing System to SAP S/4HANA System [page 28]
How to Uninstall Add-Ons Not Supported during SAP S/4HANA Conversion [page 32]

4.3.1 How to Install a New SAP S/4HANA System

Context

Proceed with the following steps to install a new SAP S/4HANA system:

Procedure

1. Choose *Plan for SAP S/4HANA* tile on the *Home* view. The following 4 stages of planning are displayed on the screen:

   - *Overview*
   - *Select Backend System*
   - *Select Additional Systems*
   - *Summary*

2. On the *Overview* screen, choose *Install a New SAP S/4HANA System*.

   You can find more information regarding the installation in the link, SAP S/4HANA Installation Guide, provided under the "New Installation Details" section.

3. Choose *Next* and enter the following backend details:

   - New system ID (SID) for the backend
   - Target product version
   - Target stack

4. Choose *Next* and enter the additional system details in the following sections:

   - **Frontend Server Selection**
     By default, the Frontend Server Selection option is selected. This implies that the SAP Fiori frontend server for SAP S/4HANA is selected for installation. Now, you can choose one of the following radio buttons and enter the required details:
     - *Existing System*
       Allows you to apply SAP Fiori for SAP S/4HANA add-on on an existing SAP NetWeaver system. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.
     - *Install a New System*
       Allows you to plan for a new system ID for SAP Fiori frontend server for SAP S/4HANA. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.
     - *Co-deployed with Backend*
       Allows you to co-deploy the SAP Fiori for SAP S/4HANA on the backend system selected in step 3. Enter the details for the target product version, target stack, and target product instance.

> **i Note**
>
> ○ The target product instances are automatically displayed once you choose the target stack. By default, the target instances are preselected. Based on your requirement, you can select or unselect the target instances.
>
> ○ If you select the option for co-deployment, the *Select Underlying SAP NetWeaver* and *Target SAP NetWeaver Software Stack* options are disabled.
>
> ○ Dual stack system planning, as part of a new installation planning is not supported on Maintenance Planner

　　○ **JAVA Adapter Selection**
　　Choose the option to update the support package stack of existing SAP S/4HANA Java adapter or install a new SAP S/4HANA Java adapter. You have to enter the relevant details based on your selection of the radio button.

5. Choose *Next*, and you can find the installation procedure details under the *Summary* as follows:

　　○ Success message if the installation is successful
　　○ Link to the OS/DB product availability matrix

6. Choose *Continue Planning* to proceed with the maintenance planning procedure. For more information, see Planning a System Update or Upgrade [page 41].

4.3.2 How to Convert an Existing System to SAP S/4HANA System

Prerequisites

You must check for the following prerequisites:

- The source system must have support package update manager (SPAM) at patch level 59 or higher
- For the SAP Solution Manager, you must have done the following:
　　○ Implement SAP Note 2186164
　　○ Maintain an RFC destination from the SAP Solution Manager to the source system.

Context

Proceed with the following steps to convert an existing system to SAP S/4HANA system:

Procedure

1. On the *Overview* screen, choose *Plan an SAP S/4HANA conversion on an existing system*.

   The *Overview* screen also provides you with the following details under the *System Conversion Details* section:

   - Steps involved in the conversion process
   - OS/DB product availability matrix for SAP S/4HANA
   - More information regarding conversion in the link SAP S/4HANA Product Page. You can search for the conversion guide based on the release version.

2. Choose *Next* and enter the following backend system details:

   - Existing backend server
   - Current version is retrieved from the customer profile and is displayed on the screen
   - Target product version
   - Target support package stack

3. Choose *Next* and enter the additional system details in the following sections:

   When you choose the *Next* button, the Maintenance Planner SAP S/4HANA pre-checks are triggered. If the system encounters any failures during the pre-checks, you are directed to the *Summary* screen. Here, you can check for the results of the pre-checks and also you can download the pdf that is generated.

   - **Frontend Server Selection**
     By default, the Frontend Server Selection option is selected. This implies that the SAP Fiori frontend server for SAP S/4HANA is selected for installation. Now, you can choose one of the following radio buttons and enter the required details:

     - *Existing System*
       Allows you to apply SAP Fiori for SAP S/4HANA add-on on an existing SAP NetWeaver system. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.

     - *Install a New System*
       Allows you to plan for a new system ID for SAP Fiori frontend server for SAP S/4HANA. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.

     - *Co-deployed with Backend*
       Allows you to co-deploy the SAP Fiori for SAP S/4HANA on the backend system selected in step 3. Enter the details for the target product version, target stack, and target product instance.

     > i Note
     >
     > - The target product instances are automatically displayed once you choose the target stack. By default, the target instances are preselected. Based on your requirement, you can select or unselect the target instances.
     > - If you select the option for co-deployment, the *Select Underlying SAP NetWeaver* and *Target SAP NetWeaver Software Stack* options are disabled.

- JAVA Adapter Selection
  Choose the option to update the support package stack of existing SAP S/4HANA Java adapter or install a new SAP S/4HANA Java adapter. You have to enter the relevant details based on your selection of the radio button.

4. Choose *Next*, and you can find the installation procedure details under the *Summary* as follows:

   - Success message if the conversion is successful
   - *Download Result* button - you can generate and download a pdf with the conversion details
   - Link to the OS/DB product availability matrix
   - Maintenance planner pre-checks detail

5. Choose *Continue Planning* to proceed with the maintenance planning procedure. For more information, see Planning a System Update or Upgrade [page 41].

> **i Note**
>
> - Only for the SAP S/4HANA system conversion scenario, you can download the stack XML along with the software archives from the download basket. Maintenance Planner adds in the required software archives to the download basket including the software archives that were earlier part of the DVDs.
> - Note that for some of the database relevant files, for example, ORAClient, HDBClient, you still have to download them separately as done earlier.
> - You can deselect the language archives during the conversion planning process from the *Select Stack File* view.

4.3.3 How to Update or Upgrade SAP S/4HANA System

Context

Proceed with the following steps to update or update an existing system to SAP S/4HANA system:

Procedure

1. On the *Overview* screen, choose *Upgrade of Update SAP S/4HANA system*.

   The *System Upgrade or Update Details* section provides a link to the SAP S/4HANA Guides. You can search for the relevant guide for your reference.

2. Choose *Next* and enter the following backend system details:

   - Existing back-end server
   - Current version is retrieved from the customer profile and is displayed on the screen
   - Target product version
   - Target support package stack

3. Choose *Next* and enter the additional system details in the following sections:

When you choose the *Next* button, the maintenance planner SAP S/4HANA pre-checks are triggered. If the system encounters any failures during the pre-checks, you are directed to the *Summary* screen. Here, you can check for the results of the pre-checks and also you can download the generated PDF.

○ **Frontend Server Selection**
By default, the *Frontend Server Selection* option is selected. This implies that the SAP Fiori frontend server for SAP S/4HANA is selected for installation. Now, you can select any one of the following radio buttons and enter the required details:

○ *Existing System*
Allows you to apply SAP Fiori for SAP S/4HANA add-on on an existing SAP NetWeaver system. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.

○ *Install a New System*
Allows you to plan for a new system ID for SAP Fiori frontend server for SAP S/4HANA. Enter the details for the target product version, target stack, target product instance, underlying SAP NetWeaver system, and target SAP NetWeaver stack.

○ *Co-deployed with Backend*
Allows you to co-deploy the SAP Fiori for SAP S/4HANA on the backend system selected in step 3. Enter the details for the target product version, target stack, and target product instance.

> **i Note**
>
> ○ The target product instances are automatically displayed once you choose the target stack. By default, the target instances are preselected. Based on your requirement, you can select or unselect the target instances.
> ○ If you select the option for co-deployment, the *Select Underlying SAP NetWeaver* and *Target SAP NetWeaver Software Stack* options are disabled.

○ **JAVA Adapter Selection**
Choose the option to update the support package stack of existing SAP S/4HANA Java adapter or install a new SAP S/4HANA Java adapter. You have to enter the relevant details based on your selection of the radio button.

> **i Note**
>
> ○ If the selected target product version is for an upgrade, the system executes the pre-checks. The pre-checks are displayed on the summary screen.
> ○ If the selected target product version is for an update, the system does not execute any pre-checks. No pre-checks are displayed on the summary screen.

4. Choose *Next*, and you can find the installation procedure details under the *Summary* as follows:

○ Success message if the conversion is successful
○ *Download Result* button - you can generate and download a pdf with the conversion details
○ Link to the OS/DB product availability matrix
○ Maintenance planner pre-checks detail

5. Choose *Continue Planning* to proceed with the maintenance planning procedure. For more information, see Planning a System Update or Upgrade [page 41].

> **i Note**
>
> You can deselect the language archives during the conversion planning process from the *Select Stack File* view.

4.3.4 How to Uninstall Add-Ons Not Supported during SAP S/4HANA Conversion

During SAP S/4HANA conversions from SAP ERP systems, there can be scenarios wherein some of the add-ons are not supported and the conversion planning process cannot continue. Maintenance planner does the following prechecks:

- Checks for any add-ons that are not supported in the target system
- Checks if the add-ons that are not supported can be uninstalled.

> **i Note**
>
> - If the unsupported add-ons can be uninstalled, the system prompts you to continue with the conversion planning process. It also prompts you that the Software Update Manager will uninstall these add-ons.
> - If the unsupported add-ons cannot be uninstalled, you cannot continue with the conversion planning process.
> - The add-on uninstallation is supported from SUM support package 17 onwards.
> - The uninstall add-on option allows you to calculate the stack XML accordingly if the add-on product versions consist of add-on software component versions that you can:
>   - Uninstall
>   - Retrofit to the target system

During the conversion planning prechecks, the *maintenance planner* provides a list of add-on product versions that can be uninstalled and that cannot be uninstalled.

For add-on product versions that are not supported by SAP S/4HANA, which need to be uninstalled for conversion to continue, are listed only when you select *Plan a Convervison to SAP S/4HANA* option.

4.4 Planning an SAP BW4/HANA System

Maintenance planner allows you to plan a new system installation of SAP BW/4HANA or convert an existing SAP Business Warehouse system to SAP BW/4HANA.

For more information, see Road to SAP BW4/HANA. (You can also find the roadmap to SAP BW/4HANA document on the maintenance planner home screen.)

4.4.1 How to Install a New SAP BW4/HANA System

Please refer to the procedure for installing a new SAP BW/4HANA system.

4.4.2 How to Convert an Existing SAP NetWeaver System to SAP BW/4HANA System

Prerequisites

The existing SAP NetWeaver system has the following product instances:

- `SAP BW/4HANA STARTER`
- `Application Server ABAP`

> **i Note**
>
> - You can convert only SAP NetWeaver 7.5 based systems, since the `SAP BW/4HANA STARTER` product instance is available in SAP NetWeaver 7.5 releases but not in lower releases.
> - However, you can perform the BW/4HANA conversion add-on pre-checks for lower releases of SAP NetWeaver BW systems following the **steps 1-4** in the procedure below. You would not be able to generate a stack XML for such a start state, as a one-step conversion is not possible.

Context

Proceed with the following steps to convert an existing system to SAP BW4/HANA system:

Procedure

1. In the *Home* view, choose *Explore System*. Choose the SAP NetWeaver system that you want to convert to SAP BW/4HANA.
2. Choose *Plan* in the maintenance planning cycle.
3. In the *Define Change* view, choose *Plan on Conversion to SAP BW/4HANA*.
4. Choose the product version and the support package stack.

> **i Note**
>
> The system performs add-on prechecks. If the system encounters any unsupported add-ons, the system displays an error notification and stops the conversion planning to SAP BW/4HANA.

A *Conversion Information* dialog box appears if the add-on precheck is successful. Choose *Continue*.

5. Choose *Confirm Selection*.
6. Proceed with the on-screen instructions to complete with the other planning steps.
   - *Select Files*: Depending on the software components you have selected, choose the files to be installed. Select OS/DB files. Choose *Next*.
   - *Download Files*: You can download the installation plan by choosing *Download Stack XML* and choose *Push to Download Basket* to download the archives from SAP Support Portal. You can also download the maintenance plan as a PDF or a text file. Choose *Next*.
   - *Complete*: Choose *Additional Downloads*. You can download the maintenance plan as a PDF by selecting *Download PDF*.

4.5   Product Maintenance Dependency

Product maintenance dependency defines which technical systems and product instances need to be updated and upgraded **together** in the maintenance processes.

Currently, the following dependency scenarios are possible:

From	To
JAVA only system	ABAP back end systems
ABAP stand-alone system	Portal systems
	HANA systems
Dual stack system	ABAP back end systems

When you try to add a dependent system, Maintenance Planner proposes all possible maintenance dependencies, based on the product versions. For more information, see Defining a Product Maintenance Dependency [page 35].

> **i Note**
>
> 1. The existing dependencies defined in the Product System Editor (PSE) in SAP Solution Manager will be synchronized in Maintenance Planner.
> 2. No business dependencies are supported yet. For example, an SAP ERM and an SAP CRM cannot be added to the same product maintenance dependency.
> 3. In a Business Suite on HANA scenario, ensure that the Business Suite and HANA systems are connected.

4.5.1 Defining a Product Maintenance Dependency

To define a product maintenance dependency, perform the following steps:

1. From the *Explore Systems* tile, choose a system.
   The maintenance cycle for the selected system appears.
2. Choose the system icon in the middle, to view the detailed system information
3. Choose *Dependencies* tab on the left to view existing dependencies
   A graphic of all the systems directly and indirectly dependent on the selected system, is displayed.

4. Choose the ✎ icon to switch to edit mode, and choose the ⊕ icon to add a dependent system
5. In the *Product Maintenance Dependency* window, provide the following details of the dependent system to be added, and click *OK*:
   System: The name of the system
   Connect To: The system to which you want to define dependency
   Impact: Choose the impact of this dependency based on the following logic:
   Minimal impact
   Changes to one system will require minor or no changes to a related system.
   A typical use case for this would be defining a minimal impact between an ABAP and a Java system in a customer landscape. Changes to the Business suite ABAP system will have minimum impact on the connected Java system.
   Tips: Systems in a minimal impact relationship is referred as **Hub** landscape pattern in Technical System Editor of Solution Manager.
   Maximum impact
   Changes to one system will require a change to a related system
   A typical use case for this would be defining maximum impact between two SAP ERP systems. All related systems must then be updated when one of them is changed.
   Tips: Systems in a maximum impact relationship is referred as **Sidecar** landscape pattern in Technical System Editor of Solution Manager.
6. Save the changes.
   At this point, the changes are saved as a transaction and all dependencies you added will be visible only within this transaction.
   Optional: For the changes to persist in the system, the transaction must be activated on the SAP Support Portal.

Related Information

Activating the Dependency Changes to SAP Support Portal [page 36]

4.5.1.1 Activating the Dependency Changes to SAP Support Portal

This section describes the process of activating the product maintenance dependencies on the SAP Support Portal.

Procedure

1. Load the transaction you have created from the section Defining a Product Maintenance Dependency [page 35]. The maintenance cycle for the transaction is displayed.
2. Choose *Verify*.
3. Follow the on-screen instructions to complete the verification process.
4. Save the changes.
5. Choose the *Activate* button. This saves the transaction updates to the SAP Support Portal, and the dependencies created will be available during future logins.

4.5.2 View and Modify an Existing Maintenance Dependency

To **view** a dependent system, follow steps 1-5 in the section Defining a Product Maintenance Dependency [page 35].

To **remove** a dependent system, follow steps 1-6 in the section Defining a Product Maintenance Dependency [page 35] and choose the ⊗ icon. Save your changes when you have made the changes.

You cannot view the type of existing dependencies. Once the dependency is set, Maintenance Planner uses this information to plan an update or upgrade of these systems.

To **change** a dependency, remove the dependent system and add it again with a new dependency declaration.

> **i Note**
>
> 1. Dependencies from the Product System Editor in SAP Solution Manager are automatically forwarded to Maintenance Planner.
> 2. Once you change the maintenance dependencies on maintenance planner, future sync from LMDB will not override these changes.

4.6 Verifying an Erroneous System

Your system may be marked erroneous if the system description does not comply with the SAP product model. You cannot update or upgrade such a system. Ensure that your system complies with the SAP model.

Related Information

4.6.1 Why is the System Erroneous?

Your system may be erroneous if its description does not comply with the SAP product model.

This can be for one or more of the following reasons:

- The system description shows a different software component than the actual software stack installed on the system.
- The system is modelled incorrectly in Landscape Management Database.
- Overlap of data from two or more SAP Solution Managers to maintenance planner. Read this Blog to know more.
- Product maintenance dependency not verified for this system.
- **Example scenario**:
  - An ERP 6.0 system is associated as a dependent system with an ERP 5.0 system.
  - An ERP 6.0 ABAP backend system is missing a corresponding front end system.
  - The software component version of SAP Basis is 740 but the assigned software product version is EHP1 of SAP NetWeaver 7.3.

> **i Note**
>
> If you have installed ERECRUIT software component on an SAP NetWeaver system, it needs to be modelled as an SAP ERP system for planning in maintenance planner.
>
> If there are no product systems maintained for the technical system in LMDB which has modelled it as an ERP system, it is possible to model the technical system as an SAP ERP system during the verification step of the maintenance planner.

4.6.2 How to Identify an Erroneous System

In the *Home* screen, choose the *Explore Systems* tile.

The tool displays all the systems in your landscape. It also displays the name of the technical system and the system type (ABAP, Java, Dual Stack, HANA DB, and so on).

Tips: Choose the search icon to search for a system by product name or product type.

An erroneous system is indicated in red in the maintenance cycle

An erroneous system is also indicated in red (ERROR) in the table, when you click the *Explore Systems* tile.

4.6.3 How to Verify an Erroneous System

1. Choose an erroneous system.
   The system maintenance cycle is displayed.
2. In the system maintenance cycle, choose *Verify*.
   To verify the system, provide the information required to correct the installed software information or details. You can choose multiple options.
3. Choose *Confirm*.
   A confirmation is displayed. Choose *Next* to proceed.
   If there are dependent systems, you are prompted to verify the dependencies. Provide your input.
4. When you have verified the system dependencies, choose *Next* to verify dependencies.
   The *Verify* button in the maintenance cycle turns green, indicating that the system is now error free. You can proceed with the planning.
   A corrective xml, which can be used by Software Update Manager to correct the system description, is created. You can download the *Correction of Installed Software Information* file by choosing *Download Correction File*.
   For example:
   The name of the correction file is *MP_CISI_9000004639_20150403.xml*, where *9000004639* is the transaction ID and *20150403* is the date the file was generated.

   > **i Note**
   >
   > The above steps are only a simulation of the correction of your system. Actual changes are made to your system when you perform the steps as described in the section Implementing a System Change Using SUM [page 46].

5. You can go back and perform other planning activities before you click *Activate*, so you can perform all your actions within one transaction.

   You can click the maintenance cycle ⟳ icon at the top-left corner of the screen to return to the maintenance cycle.
   The *Stack XML* generated is then a consolidated file containing the following:
   - Planned system changes
   - System corrections
6. You can run the verification job in LMDB again, or remove the product system from LMDB and upload to SAP system portal in the Technical System editor.
7. Choose *Activate*.
   On activation, the changes are saved on SAP Support Portal and users logging in to the system need not perform the verification steps again.

Result: Once you have completed the verification process, your system description complies with the SAP product model.

Tips:

The automatic verification in maintenance planner is always improving. As such, it is a good practice to run through the verification even if the status is displayed as ok (green).

More Information

- About installed software information (ISI), see SAP Note 1877731 .

- About creating the CISI file, see SAP Note 1816146🖉.

4.6.4 How to Implement the Correction to Verify Your System

The above steps make the planned changes to verify an erroneous system. To make the actual changes in the system, perform the steps in the section Implementing a System Change Using SUM [page 46].

> **i Note**
>
> To apply the corrections of the installed system identity into the technical system, you should consume the CISI XML file using the *Software Update Manager*.

Related Information

Implementing the Landscape Change [page 45]
Verifying a System Track [page 51]

4.6.5 Editing Technical System Information of an Erroneous System

Prerequisite

Enable System Edit functionality on Maintenance Planner

Go to the *Personalize* menu > *Verify Systems* tab and check *Enable Edit System* and save your settings.

Purpose

You want to rectify the system marked as erroneous by the maintenance planner.

For more information, see Why is the System Erroneous? [page 37]

Even after successful verification, there are scenarios when you are unable to generate a plan with correct software changes. The reason could be due to missing or incorrect product versions or instances or others.

Maintenance planner allows you to edit the product version and product instance of a technical system, which further undergoes a verification process. As a system admin or system architect, you can manually edit the start state of the technical system.

Procedure

1. From the *Explore Systems* tile, choose a system.
2. Choose *Verify*.
   The *Edit System* view is displayed with the following:
   ○ Current software details of the technical system.
   ○ You can either manually edit the software details under the *Edit Software Details* section or choose Next to continue with automatic verification. The Edit Software Details section consists of product versions, product instances, and support package stack details. You can perform the following:
   ○ *Add Product*
   ○ Provides a list of all the product versions based on the SCVs (at least one of the SCVs) present in the start state of the technical system. You can select your product versions or instances.
     You can validate your selection by choosing the Validate button. The system validates the selection by checking the compatibility with the selected stack level and all the SCVs present in the start state of the technical system. The system displays relevant validation messages.
   ○ *Remove*
     You can remove the product version or product instance.
   ○ *Edit*
     You can edit the product version. By default, the existing product instances and SP level is already selected.
     Choose the *Validate* button to check for the compatibility with the selected stack level and all the SCVs present in the start state of the technical system.
     You choose the *Edit* button to reflect your changes on the *Edit Software Details* view. That is, to reflect your changes in the start state of the technical system.

   > **i Note**
   >
   > Validation is the initial check performed on the selected product instance or support package stack. It checks whether the selected product instance or support package has at least one software component version of the support package installed on the technical system.

3. Choose *Next* to complete the verification process.
   If you activate, the software changes get activated in the customer profile. If you do not activate, it would be a transaction-specific change.

4.7   Planning a System Update or Upgrade

The maintenance planner allows you to plan an update or upgrade on any SAP system in your landscape. It provides all the update or upgrade options available for the system that you choose.

Prerequisites

For you to perform any kind of update or upgrade, the system should be in a *Verified* state, indicating that the system description complies with SAP product modeling. A verified system status is green.

For a system that is not in a *Verified* state, the verification status is red in the maintenance cycle for the system; this needs to be corrected before you proceed. For more information, see Verifying an Erroneous System [page 36].

Procedure to update or upgrade an existing system

1. **Initializing**
   From the *Explore Systems* tile, choose a system.
2. Choose *Plan*
   The system software stack is displayed. This is a hierarchical list containing the base software at the bottom and all the enhancements above it.
   Tips: The verification status has to be green to proceed. For more information, see Verifying an Erroneous System [page 36].
3. **Choosing the software to be installed**
   Choose one of the options for the system you have selected:
   ○ *Install or Maintain an Add-on*
      To install or maintain add-on products without changing the underlying SAP ERP or CRM or SRM or SAP NetWeaver system. For example, FIORI PRICECHECK 1.0.

      > **i Note**
      >
      > For any specified change to the add-on products, maintenance planner does the calculation in the lowest support package level. If you want to update to the latest or higher target support package level, you have run iteratively the support package update on such add-on products. For more information, see Iterative Planning [page 45].

   ○ *Install or Maintain an Enhancement Package*
      To add new extensions or install Support Package Stacks for existing extensions. For example, EHP7 FOR SAP ERP 6.0.
   ○ *Update SAP NetWeaver*
      To either apply a support package stack, update with an enhancement package, or upgrade your SAP NetWeaver system.

> **i** Note
>
> ○ The current software stack is displayed in the left panel as you make your planned changes. The above options are calculated automatically, based on your system landscape. The options available for you may vary.
> ○ If the product version is already installed in the system, a flag icon is displayed against the installed product version.

4. Based on the option you choose, select other parameters such as the target software levels and instances.
5. Choose *Confirm Selection*

> **i** Note
>
> The above steps can be repeated to install additional software. For more information, see .

6. When you have chosen the software components, the target software stack shows the planned action, with the following icons next to the product instances:

   ○ ![icon] - Indicates that the software is to be installed

   ○ ![icon] - Indicates that the software is to be updated

7. Select the OS/DB files based on the option you have chosen.
   The above options are calculated automatically, based on your Java and dual-stack systems:
   ○ Choose *Add Java Patches*
   ○ Select the Java files to be downloaded.
   ○ Click on Validate Dependencies to identify any dependencies for the java patches you selected. In this operation, for all the relevant software component versions installed on the system:
      ○ Direct and indirect patch dependencies are validated.
      ○ Any missing selections of the dependent patches get automatically selected.
   ○ You can include the Java patches separately or include them in the stack XML
   ○ Choose *OK*.
   Result: The Java patches and their dependencies (if any), will be added to the transaction.
   In ERP HR Systems:
   Select the relevant HR files. This option is available on your system if:
   ○ You have a valid RFC connection established between the SAP Solution Manager and the technical system.
   ○ One or more of SAP-HR, EA-HR, HR-CEE, HX-CEE, or HR CLC software components are installed on the system.
8. Choose *Push to Download Basket*
   A maintenance plan is generated as a PDF, and can be downloaded by choosing *Download PDF* from the *Additional Downloads* menu.
   A link to the upgrade media is available towards the end of the PDF.

> **i** Note
>
> This step is applicable only in case of a release upgrade.

9. Choose *Utilities* menu, for the following options:

Options	Description
Generate Side-Effect Report	Maintenance planner generates a side-effect report of SAP Notes, and you can download the report in the form of a spreadsheet. For more information, see Side- Effects of SAP Note 🐾. **i Note** You get a notification if no side-effect SAP Notes are calculated.
Check SAP Security Notes	Maintenance planner allows you to view the associated SAP security notes of the support packages that are calculated in the maintenance transaction.
Add from Download Basket	Maintenance planner allows you to add download objects from your *Download Basket* into the maintenance planner transaction. The prerequisite to use this function is that you should have the required download objects added to your *Download Basket* already. The added objects are not included in the stack XML. These delivery objects are only added to the maintenance planner transaction.

10. You can now download the installation files from your download basket in https://support.sap.com/swdc 🐾, and proceed with the implementation.

> **i Note**
>
> The above steps only simulate the changes to your system. Actual changes will be made to your system when you perform the steps in the section Implementing a System Change Using SUM [page 46].

Related Information

Implementing the Landscape Change [page 45]

4.8 Downloading Java Patches without Updating the System

Context

You use this procedure to download the latest Java patches from Maintenance Planner for the already installed software components versions to your Java system without planning any system updates.

Procedure

1. From *Explore Systems*, load your Java system.
2. Choose *Plan*.
3. In the *Define Change* screen, select the same software stack, support package of the product versions as that of the already installed Java system.

    For example,

You plan to download Java patches for...	You should...
SAP NetWeaver system	Select *Update SAP NetWeaver*, and select the same software stack, support package stack of the product versions of the already installed Java system.
Enhancement package of a business suite product version	Select the same software stack, support package stack of the versions of the already installed Java system.

    You can also plan a minimum software change to the system. For more information, see Planning a Minimum Software Change [page 25]

4. Choose *Confirm Selection*, and choose *Next* to select the files for the plan.
5. In the *Select Files* screen, the stack dependent files are already selected by default. Choose *Confirm Selection Add Java Patches*. An Add Java Patches screen is displayed with the following two options:
    - *For Changed Components*
      By default, the Java patches for the changed components are displayed. You can select the Java patches that you want to download and choose any of the following radio buttons:
        - *Do not include selected Java patches into stack.xml*
        - *Include selected Java patches into stack.xml*
    - *For Unchanged Components*
      The Java patches for unchanged components, that is, for the already installed components are displayed.

- Click on *Validate Dependencies* to identify any dependencies for the java patches you selected. In this operation, for all the relevant software component versions installed on the system:
  - Direct and indirect patch dependencies are validated.
- Any missing selections of the dependent patches get automatically selected.
6. Select *For Unchanged Components* tab and select the Java patches that you want to download.
7. Choose *OK*. In *Download Files* screen, the selected Java patches and their dependencies (if any), are already selected. You can push the selected Java patches to the download basket.

> **i Note**
>
> - The Java patches for the unchanged components cannot be included in the stack XML file.
> - You can install the Java patches using SUM. For more details on how to install Java patches using SUM, see SAP Note 1641062 .

4.9 Iterative Planning

You can repeat the planning process iteratively, any number of times by repeating steps 1 - 5 of the section **Choosing the software to be installed** in Planning a System Update or Upgrade [page 41].

The first iteration can be for an SAP NetWeaver update, and the next one to install the add-ons. When you have completed the iterative planning, you can save the transaction and download the relevant files.

Depending on your system configuration, you may see additional options as follows:

- *Install or Maintain an Add-on* - Lets you iteratively install more add-ons
- *Install or Maintain an Enhancement Package* - Lets you iteratively maintain more add-ons
- *Plan a Maintenance* - This is usually in cases on NetWeaver systems where only an SP level change is possible. You can choose the available SP level.

The stack XML file generated at the end of the planning process contains the metadata of **all** the planned actions, and you do not require a separate file for each installation.

4.10 Implementing the Landscape Change

When you have downloaded the Stack XML and the relevant archives and tools, you can use Software Update Manager (SUM) or Software Provisioning Manager (SWPM) to implement the planned changes.

Ensure that you have the following versions of the tools before you proceed with the implementation:

- Software Update Manager 1.0– SP12 (to deploy the delta archives)
- Software Provisioning Manager 1.0 – SP7 and above (to deploy the initial media)

> **i Note**
>
> To harmonize the processes in Maintenance Optimizer and Maintenance Planner, downloading all corrective software packages of SAP NetWeaver 7.0 and SAP Business Suite 2005 (and beyond) has been made easier. You can do this directly using SAP Download Manager.

4.10.1 Implementing a New System Installation Using SWPM

Perform the following steps to consume the Stack XML file, using Software Provisioning Manager:

1. Using the link in the Maintenance Plan, download the installation media files.
2. Download and extract the latest version of Software Provisioning Manager from the *Download Basket*, and follow the recommendations in SAP Note 1680045 .
3. Initialize SWPM
    Use the following command syntax to call SWPM:
    ```
    <path_to_directory_where_you_extracted_SWPM>/sapinst
    SAPINST_STACK_XML=<absolute_path_to_location_of_STACK XML_file>
    ```
    UNIX / IBM i:
    ```
    ./sapinst SAPINST_STACK_XML=/download/Stack_1000001234_20150423.xml
    ```
    Windows:
    ```
    sapinst.exe SAPINST_STACK_XML=C:\tmp\Stack_1000001234_20150423.xml
    ```
4. Follow the instructions in the relevant installation guide:
    - Visit help.sap.com
    - Search for the product your are updating.
      Based on your requirement, choose the relevant help documentation and follow the instructions.

4.10.2 Implementing a System Change Using SUM

Perform the following steps to implement the planned landscape changes like an update, upgrade, or to verify an erroneous system using Software Update Manager:

1. Visit help.sap.com
2. Search for the product you are updating.
3. In the document list that appears, choose the appropriate guide.
4. Follow the instructions in the guide to complete the update process, using the Stack XML or the correction file, as appropriate.

Perform the following steps on LMDB:

1. Run verification check on the system to which the correction is applied, using *Execute Verification Check (Synchronize)*. You can also remove the product system from LMDB and upload to SAP Support Portal, so that maintenance planner can re-verify the system.
2. Synchronize the system changes using *Upload to SAP Support Portal*.

4.11 Synchronizing a System

> **i Note**
>
> This is applicable only if there are multiple productive SAP Solution Manager Systems in the landscape.

If you have more than one SAP Solution Manager System, you can choose from which landscape data is to be replicated on Maintenance Planner.

In the system maintenance cycle, the *Sync* button is green if there is only one SAP Solution Manager, which is chosen by default. If the *Sync* button is yellow, there are multiple Solution Managers.

Perform the following steps to choose the one from which landscape data is to be replicated on maintenance planner:

1. Choose *Sync*
   The software details of the current system, and all the Solution Managers available, are displayed.
2. Choose a row, and choose *Activate*
   This activates the chosen Solution Manager. All the other entries are marked *Archived*.
   This action triggers a change in the software state, and the system is taken into account for planning. For more information, see Implementing a System Change Using SUM [page 46].
3. You can also delete a Solution Manager by choosing the 🗑 button.
4. Save your changes

> **i Note**
>
> - The *Sync* button turns to green if there is only one SAP Solution Manager after the above steps.
> - If you still have more than one SAP Solution Manager System, the Sync button remains yellow, allowing you to perform steps 1-4 again at any time

Troubleshooting

If you face any issues while performing the system sync, you can access the logs, for more information, using the following steps:

1. Run transaction: `SLG1`
2. Object: `AI_LMDB`
3. Sub object: `SUPPORT_PORTAL_SYNC`
4. Execute

You can also export the log to your local system.

4.12 Deleting a System

You can delete a system from maintenance planner as follows:

1. In the Home screen, choose *Explore Systems* tile.

The tool displays all the systems in your landscape, name, system type ((ABAP, JAVA, Dual Stack, HANA DB, and so on), product, and verification status of the technical system.

2. Choose the systems you wish to delete, and click the *Delete System* button.

   Result: The system is removed from maintenance planner.

> i Note
>
> 1. This action does not remove the system from SAP Solution Manager.
> 2. Deleting a system renders all associated system tracks invalid. Delete all associated system tracks before you delete a system.

Related Information

Deleting a System Track [page 51]

5 Working with System Tracks

This section provides information on functions to plan a system track.

5.1 What is a System Track?

A system track is a logical grouping of related systems, and contains two or more systems in your landscape on the same **target software level**. A system track helps you to update or upgrade all the systems at once.

Example

A system track can follow one of the following patterns of logic:

- Two or more SAP ERP systems, such as Dev, QA, and Production
- Two or more SAP HCM systems connected by a transport route

You can **view** all the system tracks by choosing the *Explore System Tracks* tile in the *Home* screen.

Maintenance planner generates a *Stack XML* file that contains all the metadata for a collective update or upgrade of all the systems in your track, to avoid redundant effort.

5.2 Plan a System Track

You can put two or more systems in a track in the following scenarios:

- They have the same product versions. For example, three SAP ERP systems or four SAP HCM systems.
- They have different SP levels, but should be on the same level.
  You can put systems with the **same** start level in a track with the same target level.
  You can put systems with **different** start levels in a track with the same target level.
  For more information, see, Verifying a System Track [page 51].

> **i Note**
>
> If you wish to retain a system at a different SP level, plan its maintenance independently; do not put it in a system track.

5.3 Creating and Modifying a System Track

To create a system track, perform the following steps:

1. From the *Explore System* tile, choose a system.
   This system is the source system, and can be linked to other systems.
2. Choose the system icon to view the detailed system information.
3. Choose the tab *Tracks*
4. In the tracks view, choose *Create Track*
5. Choose ⊕ on the top-right corner of the source system
6. Enter the details such as source system role, and the target system name and role
   A graphical representation of the link between the source system and the target systems, is displayed. You can then provide a track name and save the system track.

> **i Note**
>
> You can add a system to any number of tracks.

To remove a system from a system track, perform the following steps:

1. Choose ✎ on the top-right corner to switch to edit mode.
2. Choose ⊗ next to the system to be deleted.
3. Save your changes
   At this point, the changes are saved as a transaction and all system track changes will be visible only within this transaction.
   Optional: For the changes to persist in the system, the transaction must be activated on the SAP Support Portal. These steps are described in the following section, Activating System Track Changes to SAP Support Portal [page 50].

5.3.1 Activating System Track Changes to SAP Support Portal

This section describes the process of activating the system track updates on the SAP Support Portal.

1. Load the transaction you have created as described in the section, Creating and Modifying a System Track [page 50].
   The maintenance cycle for the transaction is displayed.
2. Choose *Verify*.
3. Follow the on-screen instructions to complete the verification process.
4. Save the changes.
5. Choose the *Activate* button.
   This saves the transaction updates to the SAP Support Portal, and the system track updates are available during future logins.

5.4   Verifying a System Track

Your system track may be marked erroneous if the systems in the track have a different SP level. You cannot update or upgrade such a track.

In such a case, reconfirm if you want to allow systems in different SP levels to be in the same track.

1. Choose the *Explore System Tracks* tile
   A table containing all system tracks and the verification status is displayed.
   If a track needs verification, it is indicated as Not Verified.
2. Choose the track name
   The maintenance cycle is displayed.
   The *Verify* tab is red, indicating that your system track needs verification.
3. Choose *Verify*
4. Answer the verification question.
   For example: *System X does not have the same software status as the others in the track. Do you really want to add it to the track?*
5. Choose *Yes* and choose *Submit*.
6. Choose *Next* to verify dependencies, if any.
7. Once you see the message *Verification is successful*. Choose *Next* to proceed to the next step, to complete the verification.
8. Choose *Activate*.
   On activation, the changes are saved on SAP Support Portal and users logging in to the system need not perform the verification steps again.
9. The verification is now complete and the verification status turns green in the maintenance cycle.

Related Information

Verifying an Erroneous System [page 36]

5.5   Deleting a System Track

You can delete a system track from Maintenance Planner by performing the following steps:

1. In the Home screen, choose the *Explore System Tracks* tile.
   The tool displays all the system tracks that you have created
2. Select one or more system tracks you wish to delete, and choose the *Delete Track* button.

Result: The system track is removed from maintenance planner.

6 Maintenance Planner-Based SAP Fiori Installation and Upgrade

This section describes the steps to install SAP Fiori applications using maintenance planner.

6.1 Launching Maintenance Planner for SAP Fiori Apps

Context

To get started with maintenance planner for SAP Fiori installation, perform the following steps:

Procedure

1. Log in to the SAP Fiori App Library
2. Choose the SAP Fiori app to install on your system, and read the product features from the app library
3. To proceed with the installation, choose the *IMPLEMENTATION INFORMATION* tab
4. System details such as Front-End Components, Back-End Components and Prerequisite for installation, are displayed.
5. To use maintenance planner to install the above components, choose the maintenance planner link.

   > **i Note**
   >
   > o You can use the *Aggregate* button to view the aggregated installation and configuration information for a selection of apps.
   > o After aggregation, you can choose *Prepare apps for processing with Maintenance Planner* button to proceed further.

6. The maintenance planner launchpad for SAP Fiori installation is displayed.

6.2 System Overview

The *Overview* screen provides the current overall status of the system, and the requirements to proceed with the SAP Fiori app installation.

The *Product Versions* section automatically fetches the current versions of the existing software components.

The *Installation Details* section calculates and fetches the required software components, like product version, product instance, and the requirements, in a tabular format, for the following:

- Back-end Server
- Front-end Server
- HANA XS Server (If applicable)

After reviewing the information, choose the stack for the available product versions, and choose *Next* to proceed.

6.3 Select Systems

In this screen, choose the systems and the software components to install. Following are the fields for the Back-End and Front-End systems in which you provide input to start the installation:

- **Standalone System**: to install a system independently of the back-end system
- **System Name**: the system for the Fiori installation
- **Current Version**: the current version of the selected system.
- **Target Version**: the target version to be installed.
- **Minimal Required Release**: the minimum required release to install.
- **Install a New System**
- **Co-deployed with Back-End**: You can choose the deployment patterns for the systems. This option co-deploys the front-end system with the back-end.: You can install a new system. Provide the System ID (SID) and the target version

When you have made the system selection, choose *Next*: You can install a new system. Provide the System ID to see all the impacted systems.

6.4 Impacted Systems

This screen summarizes the planned changes to the current system and the other impacted systems in the landscape. You can plan further installation before proceeding, by choosing *Install Additional Software*. The target software state of the following systems is displayed:

- **Back-end**

- **Front-end**
- **HANA XS Server**

The following icons indicate the type of action planned:

- - Indicates that the software is to be installed

- - Indicates that the software is to be updated.

Related Information

6.5   Installing Additional Software

This step is optional. You can select the archives for the landscape plan or install additional software. You can install additional software as follows:

1. In the Impacted Systems screen, click the *Install Additional Software* button.
   o **Install or Maintain an Add-on**
      To install or maintain Add-On products without changing the underlying ERP/CRM/SRM or SAP NetWeaver system. For example, FIORI PRICECHECK 1.0.
   o **Install or Maintain an Enhancement Package**
      To add new extensions, or install Support Package stacks for existing extensions. For example, EHP7 FOR SAP ERP 6.0
   o **Update SAP NetWeaver**
      To either apply a support package stack, or update with an enhancement package, or upgrade your SAP NetWeaver system.

   > **i Note**
   >
   > o The above options are calculated automatically, based on your system landscape. The options available may vary.
   > o The current software stack is displayed in the left panel as you make your planned changes.

2. Choose *Confirm Selection*
3. You can repeat the above steps iteratively, to install more software components.
4. Choose *Next* to download the files.

   > **i Note**
   >
   > If the installation fails during the above process, view the logs for details, and attach them if you request SAP Support.

5. Once you have installed the additional software, choose *Next*, to download the relevant files.

6.6   Select and Download Installation Media

1. Download the installation plan by choosing *Download Stack XML*, and choose *Push to Download Basket* to download the archives from SAP Support Portal.
2. Choose *Next* to go to the last stage of the installation process.
3. You can download the maintenance plan as a PDF by choosing *Download PDF*
4. A link to the initial installation media is towards the end of the PDF.

To implement a new system on your landscape, follow the steps in the section Implementing a New System Installation Using SWPM [page 46].

To make changes to, or update, an existing system in your landscape, follow the steps in the section Implementing a System Change Using SUM [page 46].

For more information, see blog describing the detailed process of SAP Fiori Installation.

7 Cloud Integration Automation Service for SAP Cloud Integration Scenario

The *Plan for Cloud Integration Scenario* provides you a guided workflow to integrate SAP cloud solutions. The list of integration scenarios you see are based on the tools suport based on your licensed solutions.

These additional services and content are voluntarily provided by SAP and can be withdrawn, postponed, or suspended at any time. You can use this voluntary service at no additional fee or license cost, if you have:

- an S-User assigned to the customer ID for access to Maintenance Planner and.
- an SAP Cloud Platform Neo account in EU1 region or an SAP Cloud Platform Integration account to subscribe to it.
- system instances of licensed SAP products that are in scope of this service.

See also:

- SAP Note 2608492
- CIAS SAP Help Portal Documentation

7.1 Planning a Cloud Integration Automation Scenario

Use the Plan for Cloud Integration Scenario tile from the home screen to trigger the planning for a Cloud Integration Automation Scenario.
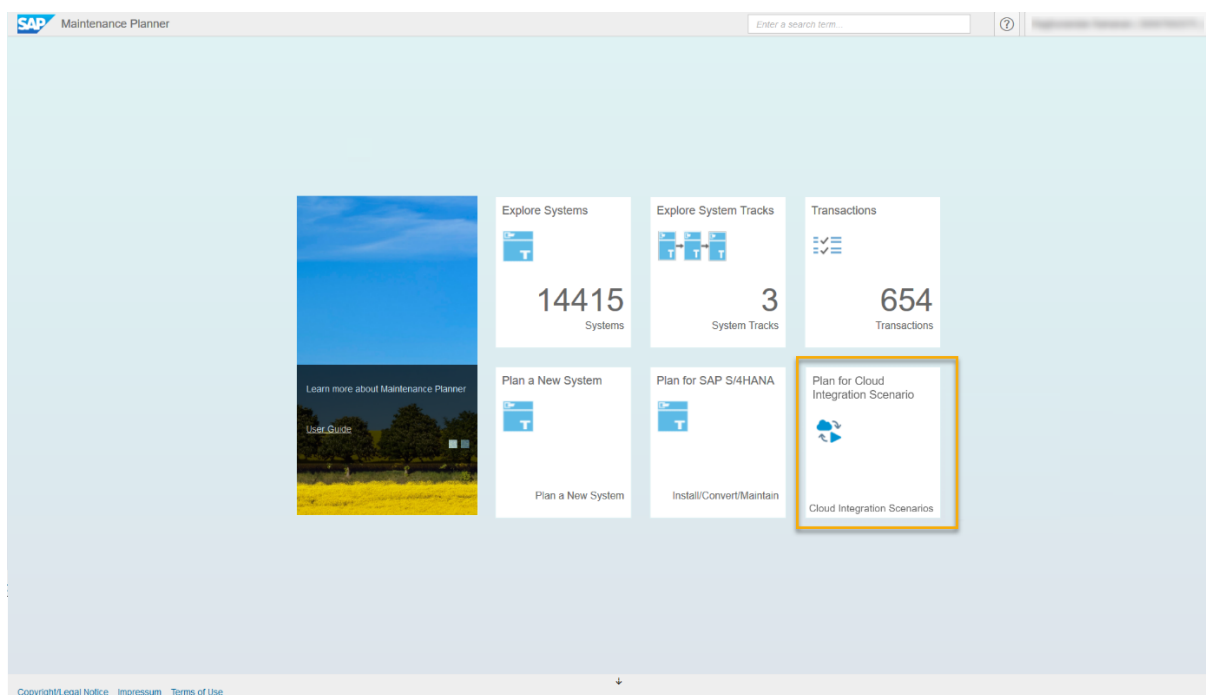
Clicking the tile *Plan for Cloud Integration Scenario* launches the CIAS planning guided procedure.

Continue the planning using the steps described in the Planning a CIAS Scenario section in the CIAS User Guide.

8   Execute Plan

You can now execute a pre-planned system installation. The following section describes the *Execute Plan* functionality.

There are two ways to invoke the Execute Plan workflow.

From Maintenance Planner Home

1. From the Maintenance Planner *Home* view, choose the *Execute Plan* tile.
    This opens the Execute Plan workflow at the first roadmap step - *Prerequisites*
    Search for a transaction, using the *Transaction ID*.
    This will display the host details, and the link to download the SL Plugin.
2. Click *Next*.
    This will take you to the **Deploy** roadmap step.
3. Choose the SL Plugin archive downloaded in the previous step, and click *Upload*.
4. You will see a pop-up requesting you to enter the host system user credentials.
5. To deploy the chosen execution, click *Start Deployment*.

From the Continer-based installation workflow:

Once you have completed the steps listed in the section Planning a Container-based system, proceed with the steps below:

1. Choose *Execute Plan* to have the Stack XML file and the SLPLUGIN.SAR archive downloaded to your PC.
2. Specify the installation host and port number.
    Provide the following parameters:
    o   The protocol for the base URL
    o   The host name of the installation host.
    The port number is derived based on the protocol (1128 for http and 1129 for https).
    Using these parameters, the Maintenance Planner then composes the target URL for the SAP Host Agent running on the installation host.
    If not already done, choose the appropriate links to download the following files to your local PC:
    o   Stack XML
    o   SOFTWARE LIFECYCLE PLUGIN `<Release>`
    You are prompted to enter your S-User.
3. Deploy the SLPLUGIN.SAR and Stack XML file:
    1. Provide the downloaded SLPLUGIN_`<Version>`.SAR file to be uploaded to the installation host, and choose *Start Deployment*.
        You are prompted to enter the credentials for the SAP Host Agent which you configured on the installation host: User `sapadm` and password.
        Result: You have deployed the SL Plugin to your installation host.
        After the SL Plugin has been pushed to the installation host and unpacked by the SAP Host Agent, a root directory named `slplugin` is available in the `/usr/sap/hostctrl/` directory of the SAP Host Agent running on the installation host.
    2. Choose *Add* to upload the stack xml file to your installation host.

You are prompted again to enter the credentials for the SAP Host Agent which you configured on the installation host: User `sapadm` and password.

4. Open the URL to the deployed SL Plugin:

    The URL to the SL Plugin opens in the SL UI on the installation host.

    This URL has the following syntax **`https://<host>:1129/lmsl/slplugin/docs/index.html`**, where `<host>` is the installation host host of your customer cloud and **`1129`** is the port of the SAP Host Agent.

    In your browser window, the welcome screen of the SL Plugin is displayed.

    Choose the installation option you want to execute.

5. Provide your S-User to download the SAP Data Hub `<Product>` product archive:

    You are prompted to enter your S-User with download permissions for the SAP Support Portal.

    The SL Plugin now uses information contained in the stack xml to download the SAP Data Hub `<Product>` software from the SAP Support Portal.

6. Enter the SAP Data Hub `<Product>` parameters:

    Follow the instructions on the Web UI of the SL Plugin and enter the values for theSAP Data Hub `<Product>` input parameters you have prepared.

    Some variables are already prefilled with default values which you can overwrite.

    You can monitor the sequence of steps being executed by the installer by choosing the *TASKLIST* tab on the right hand side of the Web UI.

    1. Provide your S_REPO-User to generate a Technical User:

        You are prompted to enter a "Technical User" with premissions to download the SAP Data Hub `<Product>` software from the Docker Repository. Choose an existing "Technical User" or create a new one.

7. Choose *Next* to execute the installation.

9   Working with Transactions

This section provides information on the transactions created in maintenance planner. A transaction is created whenever you perform an activity such as planning a new system installation or installing an update or upgrade.

> **i Note**
>
> The MP tool captures the user ID in transactions. If you do not wish to retain this information in the MP tool, you can delete the transaction. For more information, see .

9.1   Viewing a Transaction

You can view all the available transactions by choosing the *Transactions* tile on the home screen. This displays a list of all the transactions you created, ordered by:

- **Transaction ID**: A unique 10-digit number identifying the transaction
- **Transaction Name**: At any point doing a maintenance activity, you can give a name to the transaction and save it, for easy identification later.
- **Transaction Status**: Indicates the current state of the transactiond, such as Planning, Scheduled, or Completed
- **Attachments**: Lets you download attachments for this transaction. This could be one or more of the following:
  - Maintenance Plan
  - Stack XML
  - Correction Files
- **Created By**: The user who created this transaction.
- **Creation Date**: The date this transaction was created.
- **Planning Status**
  - *Planning*
  - *Completed*
  - *Scheduled*
- **Implemenation Status**
  - *Implemented*
  - *Confirmation Pending*
  - *Ignored*
  - *Unknown*
    For more information, see .

9.2 Modifying a Transaction

You cannot perform any more operations after you have chosen the *Activate* button which is visible during the last step of a planning activity. Once a transaction is activated, further changes to your system must be made in another activity; a new transaction.

In all other cases, you can choose the Transaction ID to launch the transaction and proceed with further actions.

9.3 Deleting a Transaction

From the *Explore Transactions* screen, choose the transactions you wish to delete, and choose the *Delete Transaction* button.

9.4 Identifying the Statuses of a Transaction

Several transactions are created for the same transaction state for a system. Many transactions are redundant and only a few are used. You are unable to identify the planned transactions and the transactions consumed by Software Update Manager (SUM).

On choosing the *Transactions* tile, the MP tool displays two status columns as follows:

* The Planning Status displaying the status of the planned transactions in the maintenance planner tool. They are as follows:
  * *Planning* - The transaction has been created and is still being planned.
  * *Scheduled* - The transaction has been created and is finalized. It has been scheduled for implementation using the *Schedule* function in the MP tool.
  * *Completed* - The transaction has been created, and the user does not want any further editing of the transaction in the MP tool.
* The *Implementation Status* displaying the status of the transactions as received from the customer profile. They are as follows:
  * *Implemented* – Displayed when the transaction has been consumed by the SUM. The user has set the status as implemented in the MP tool.
  * *Confirmation Pending* – Displayed when the transaction has been consumed by the SUM. You can manually set the status to Implemented. The Confirmation Pending is displayed when there are multiple transactions created for the same software changes.
  * *Ignored* – The user has set some other transaction for the same state as implemented. Therefore, the transaction becomes invalid and is set to ignored.
  * *Unknown* – Displayed initially when you have created the transaction for the first time. The implementation status is unknown until an update has been received from the customer profile.

For Example,

Assume as an IT administrator, you have created five transactions (T1, T2, T3, T4, and T5) with same software changes for system ABC[ABAP]. You can identify the implementation statuses as follows:

- Initially, the implementation status for all the five transactions is *Unknown*.
- Assume the stack.XML of the transaction T1 has been consumed by SUM. The status of the transactions (T1, T2, T3, T4, and T5) changes to *Confirmation Pending* once you receive an update from the customer profile.
- You can now manually edit the implementation status of the transaction T1 and change the status from *Confirmation Pending* to *Implemented*.
- Now, transactions T2, T3, T4, and T5 status is automatically set to *Ignored*.

The above example can be illustrated in the figure as follows:

Status Changes of Transaction (Multiple)
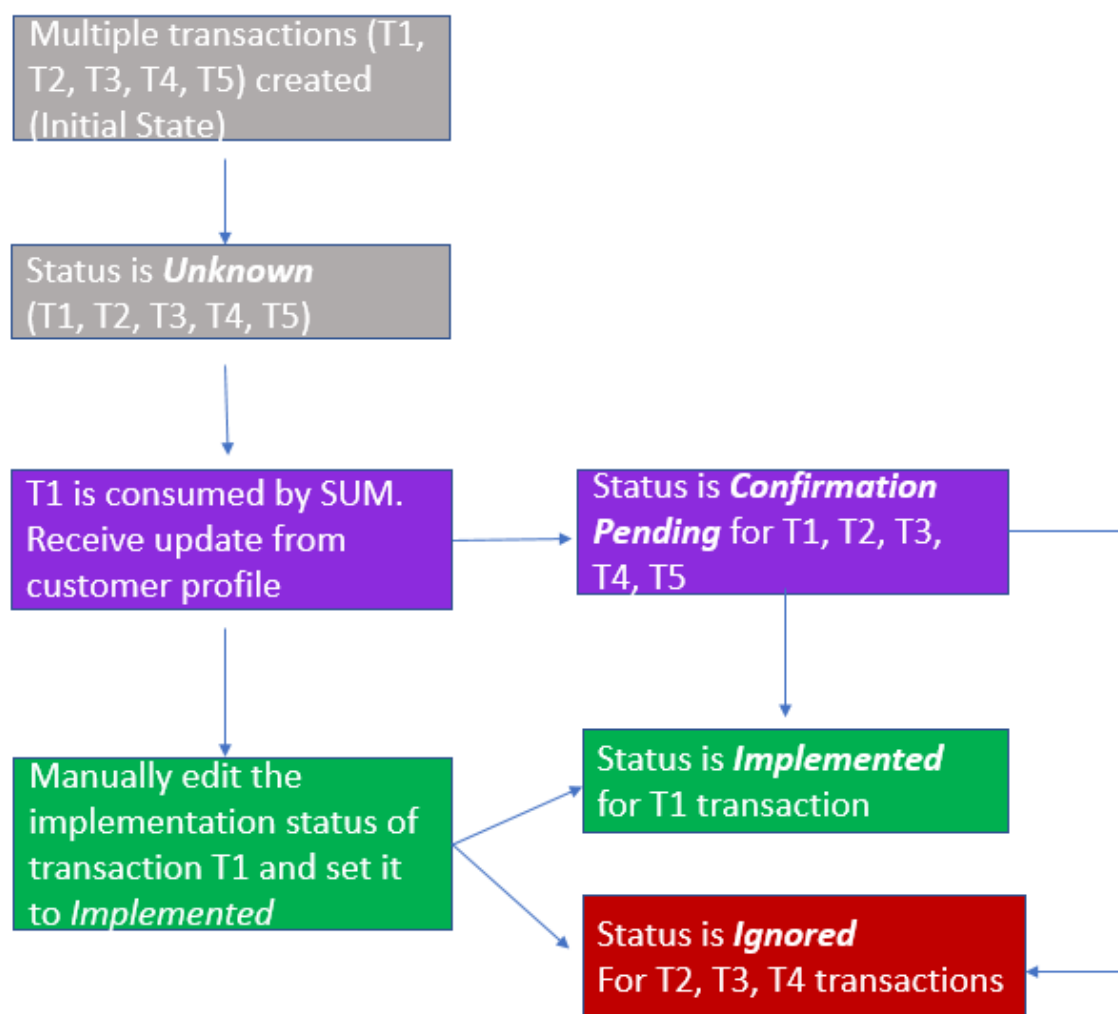
ⓘ Note

- The edit option is only available for the status *Confirmation Pending*. You cannot change the status of *Ignored*, *Implemented*, or *Unknown*.

> - If you have created only one transaction for a system and if the same transaction has been consumed by SUM, then automatically the status is set to *Implemented* from *Unknown*.

How to Edit the Confirmation Pending Status

1. Choose the *Transactions* tile.
2. Choose the *Edit* button of the transaction with implementation status as *Confirmation Pending*. An *Edit Transaction* popup appears.
3. Choose the transaction that you want to set to status *Implemented* and choose *OK*.
   The transaction status has been set to *Implemented* and the rest of the transactions related to the system are set to *Ignored*.

9.5 Generating a Stack XML Copy

Prerequisites

The start state of technical system in the transaction and the technical system for which you want to generate a stack XML copy have the same technical details (software component versions and support package level).

Context

You can copy a stack XML generated for a particular system to another system to generate a stack XML for the same target. You can use this feature if the systems for which you want to copy the stack XML have the same operating system or database.

> **i Note**
>
> 1. Copy stack XML functionality is not available for a transaction created for a track. See also: Maintenance Planner Limitations
> 2. If you are working with systems with different OS/DB or different start status, please use the System Track functionality. See also: Working with System Tracks [page 49]

Procedure

1. Load a transaction or search for a transaction from the *Transaction* tile.
2. Choose the system from the center of the maintenance planning cycle.
3. Choose *Software* tab and choose *Generate Stack XML Copy*.

> **i Note**
>
> The *Generate Stack XML Copy* button is available only if the stack XML is generated for the system in the transaction.

4. In the *Generate Stack XML Copy* dialog box, enter or choose the technical system (SID) for which you want to generate a stack XML copy.

> **i Note**
>
> ○ The SID field list displays only technical system IDs with the status OK, that is, for which system validation is performed.
> ○ The system displays error notification if:
>   ○ The entered technical system (SID) details does not match with the system involved in the transaction.
>   ○ The manually entered SID is invalid.

5. Based on your selection, the system displays the following details:

   ○ Database Host
   ○ Host
   ○ Replication Date
   ○ Custom Number
   ○ Installation Number
   ○ Mapped Systems
   ○ Displays details of the technical system IDs replaced by the new technical system IDs.

6. Choose *Generate Copy* to download the new stack XML in the browser.

> **i Note**
>
> ○ No new transaction is created when you generate a copy of the stack XML.
> ○ The feature is only available for update or upgrade transactions and for transactions generated for technical systems with product maintenance dependency.
> ○ The feature is not available for SAP S/4HANA conversions and does not include transactions for system tracks.

9.6 Integrating Upgrade Dependency Analyzer (UDA) in Maintenance Planner

You use this procedure when you are planning for an upgrade of your system. You want to know if the upgrade of your system affects any other systems that are already installed in your landscape. The upgrade dependency analyzer (UDA) tool is integrated with the Maintenance Planner. You can check for any existing upgrade dependencies in Maintenance Planner between your planned and existing systems in your landscape.

For more information, see blog on UDA.

Procedure

1. Login to Maintenance Planner and load any technical system.
2. Create an upgrade plan for a system.
3. In the Download Files screen under Utilities menu, click Check Upgrade Dependencies.
    A Check Upgrade Dependencies dialog box appears.
4. Add any existing system from your landscape for which you want to analyze the upgrade dependencies.

    > **i Note**
    >
    > o   You can only select a maximum of five systems for analyzing upgrade dependencies.
    > o   The Reset button allows you to clear the added systems.

5. Click Show Details to view components available for upgrade dependency analysis for added systems and targets components of the transaction.

    > **i Note**
    >
    > o   If for an added system there are no components available for upgrade dependency analysis, no components are displayed on the screen.
    > o   If for a transaction there are no target components available for upgrade dependency analysis, you receive a notification as No target components found for selected transaction.

6. Click Check upgrade dependencies.
    The results are available in the Details of upgrade dependencies panel. Click Expand to view the following details:
    o   Status
    o   Target components of the transaction available for analysis
    o   Components of added systems available for analysis
    o   Description

> **i Note**
>
> The check upgrade dependency button is enabled only if there are any components available in the added systems.

10   Data Protection and Privacy

- Logged in S-user will be stored in the Maintenance Planner database against the ERP customer number of the logged in S-user's organization.
- System selected in an MP transaction will be stored in MP database.
- The logs will not store any user related personal data.
- Explicit deletion of User ID or transactional data can be done using Deleting a Transaction [page 61].
- S-users within an organization's ERP customer number can read/edit/delete other S-users transactions, which belong to the same ERP customer number.

11 Support

If you need support:

- Find answers or read blogs on the SAP Community Tag: Software Logistics
- Ask a question on the SAP Community Q&A page
- Find a solution on the SAP Community WIKI for Maintenance Planner - Troubleshooting Guide
- In case of issues, please use the component `BC-UPG-MP` to raise a support ticket for maintenance planner.

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