

PUBLIC

Master Guide / Installation Guide



Master Guide – Enterprise Services Repository

**Planning and Performing Enterprise Services
Repository Installation Based on SAP NetWeaver
Composition Environment 7.1**

Target Audience

- System administrators
- Technology consultants

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Document History



Caution

Before you start the implementation, make sure you have the latest version of this document. You can find the latest version at the following location: <http://sdn.sap.com/irj/sdn/nw-esr>.

Version	Date	Description
1.0	11/5/2007	Initial version

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1 Introduction

This document explains how to implement the Enterprise Services Repository for SAP NetWeaver Composition Environment. For more information about the Enterprise Services Repository, see SAP Community Network (SDN) at <http://www.sdn.sap.com/irj/sdn/nw-esr> (SDN user required).

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2 Planning the Enterprise Services Repository for SAP NetWeaver Composition Environment

Overview

The Enterprise Services Repository for SAP NetWeaver Composition Environment is an add-on product and an important cornerstone to develop applications that comply to an enterprise service-oriented architecture (enterprise SOA). The Enterprise Services Repository (ES Repository) supports a model-driven development that enables a top-down development of enterprise services for both service provisioning and service consuming. By doing so, the ES Repository only supports point-to-point consumption of services in the system landscape of the SAP NetWeaver Composition Environment (SAP NetWeaver CE).

SAP applications that support this approach ship ES Repository content (ESR content) to enable customers the consumption of enterprise services. In particular, a global data type catalogue will be provided which is based on the Core Components Technical Specification standards to ensure a high degree of reusability.

Use Cases

The first step of an enterprise SOA based development comprises the modeling and definition of all necessary service interfaces of an application in the ES Repository. Based on these service interface definitions you can create runtime counterparts by means of a proxy generation in SAP NetWeaver Developer Studio of SAP NetWeaver CE.

There are two main use cases of the ES Repository which follow this approach:

■ Providing enterprise services

This use case comprises all necessary steps to develop a service and to offer it for consumption: The service interface definition in the ES Repository, the service implementation on AS Java and the service publication to the Services Registry of SAP NetWeaver CE.

■ Consuming enterprise services

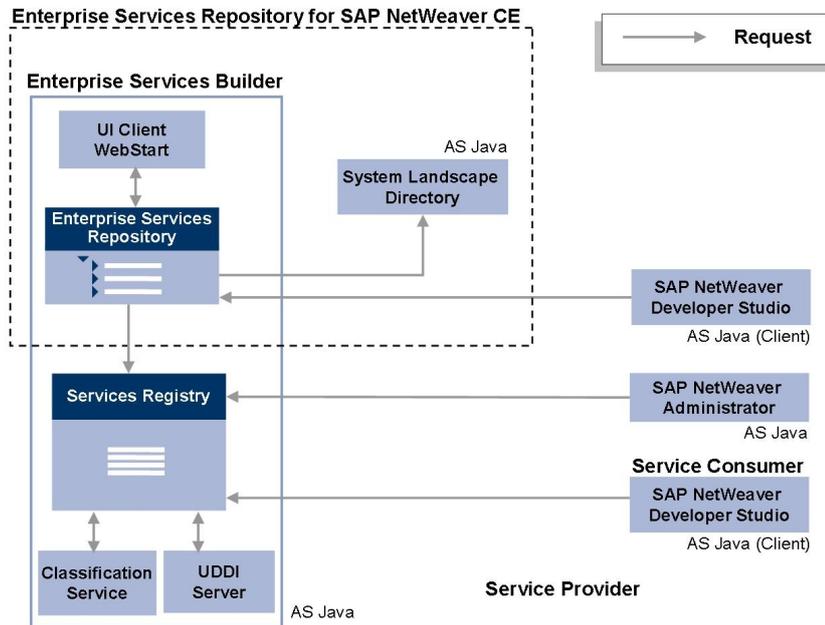
This use case comprises all necessary steps to consume an existing service point-to-point: The service interface definition in the ES Repository, the implementation of the service call on AS Java and the service configuration. You can either consume a service provided by SAP or your own service.

The discovery of services of a service provider is the main use case of the Services Registry of SAP NetWeaver CE. The steps to discover a service that was published from the ES Repository are basically the same.

System Landscape

The following graphic shows the Enterprise Services Repository after its installation as add-on product for SAP NetWeaver CE. When used, the data of the ES Repository can be closely coupled with data in the Services Registry of SAP NetWeaver CE.

Figure 1: System Landscape for Enterprise Services Repository for SAP NetWeaver Composition Environment



- As a prerequisite for development in the ES Repository, the System Landscape Directory is needed where products and software components are maintained. After an installation of the Enterprise Services Repository for SAP NetWeaver CE, you can create your own products and software component versions in the System Landscape Directory.
- You access the ES Repository by means of the Enterprise Services Builder, a WebStart UI client. Before start of development software component versions need to be imported from the System Landscape Directory into the ES Repository.
- You can publish services to the Services Registry either after the definition and the release of a service interface by means of the service interface editor in the ES Repository or after the service configuration in the SAP NetWeaver Administrator.
- In order to provide a service, you access the ES Repository by means of the SAP NetWeaver Developer Studio to get the service interface definition and to implement the service. In order to consume a service point-to-point, you access the Services Registry by means of the SAP NetWeaver Developer Studio and implement the service call.

SAP recommends that you use one Enterprise Services Repository in your system landscape that runs on the same AS Java as the Services Registry of SAP NetWeaver CE.

**Note**

SAP NetWeaver Process Integration 7.1 also offers an ES Repository. SAP recommends that you use that one in case you purchased SAP NetWeaver Process Integration 7.1 in addition to SAP NetWeaver CE 7.1. Existing ESR content of the ES Repository for SAP NetWeaver CE can be transported to the ES Repository of SAP NetWeaver Process Integration 7.1.

More Information

For more information on how to plan and install SAP NetWeaver Composition Environment 7.1, see the documentation *SAP NetWeaver Composition Environment 7.1 Master Guide* at ► <http://www.sdn.sap.com> ► *SAP NetWeaver* ► *Composition Environment* ◀.

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3 Installing the Enterprise Services Repository

This section provides information about the steps that you have to perform to install SAP Enterprise Services Repository (ESR).

Prerequisites

You have installed an SAP NetWeaver Composition Environment system.

SAP Notes for the Installation

Make sure you have read the latest version of **SAP Note [1070101](#)** before you start the installation. This SAP Note contains the most recent information on the installation, as well as corrections to the installation documentation. Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at <http://service.sap.com/notes>.

Hardware and Software Requirements

Before starting the installation, make sure you meet the hardware and software requirements for your operating system (OS) and the ESR system.

Consider the following information:

- For supported operating system releases, see the Product Availability Matrix on SAP Service Marketplace at <http://service.sap.com/pam>.
- Contact your OS vendor for the latest OS patches.

If you want to install an SAP NetWeaver Enterprise Services Repository (ESR), the host must meet the hardware and software requirements as described in the documentation *Installation Guide – SAP NetWeaver Composition Environment 7.1 SP3*, available at ► <http://www.sdn.sap.com> ► *SAP NetWeaver Composition Environment* ◀.

Preparing the Installation DVD

Make sure you have the installation DVD for SAP NetWeaver Enterprise Services Repository available. You can also download the installation DVD from SAP Service Marketplace at:

► <http://service.sap.com/swdc> ► *Download* ► *Installations and Upgrades* ► *Entry by Application Group* ► *SAP NetWeaver* ► *SAP NETWEAVER* ► *ESR FOR SAP NETWEAVER CE 7.1* ◀.

If you download the installation DVD, note that the DVD may be split into several archives. In this case, you have to unpack these archives to one folder after the download.

Installing the ESR System

This procedure tells you how to install an SAP system with SAPinst. SAPinst includes a SAPinst GUI and a GUI server, which both use Java. This section describes an installation where SAPinst, SAPinst GUI, and the GUI server are running on the same host.

Note the following information about SAPinst:

- When you start SAPinst, SAPinst GUI and the GUI server also start. SAPinst GUI connects to the GUI server with a secure SSL connection, and the GUI server connects to SAPinst.
- SAPinst normally creates the installation directory `sapinst_instdir`, where it keeps its log files, and which is located directly in the Program Files directory. If SAPinst is not able to create `sapinst_instdir` there, it tries to create `sapinst_instdir` in the directory defined by the environment variable `TEMP`.



Recommendation

We recommend that you keep all installation directories until the system is completely and correctly installed.

- SAPinst creates a subdirectory for each installation service called `<sapinst_instdir>\<installation_service_directory>`, which is located in `%ProgramFiles%`.
- The SAPinst Self-Extractor extracts the executables to a temporary directory (`TEMP`, `TMP`, `TMPDIR`, or `SystemRoot`). These executables are deleted after SAPinst has stopped running. Directories called `sapinst_exe.xxxxxx.xxxx` sometimes remain in the temporary directory. You can safely delete them. The temporary directory also contains the SAPinst Self-Extractor log file `dev_selfex.out`, which might be useful if an error occurs.



Caution

If SAPinst cannot find a temporary directory, the installation terminates with the error `FC0-00058`.

- If you want to terminate SAPinst and the SAPinst Self-Extractor, choose one of the following options:
 - Right-click the icon for the SAPinst output window located in the Windows tray and choose *Exit*.
 - Click the icon for the SAPinst output window located in the Windows tray and choose **File** **Exit**.

Prerequisites

- Before you start the installation, make sure that no http proxy settings are set in the system. You can check that in the SAP NetWeaver Administrator at **http://<host>:<httpport>/nwa** **SOA Management** **System Global Settings** **HTTP Proxy Settings**.
- You are logged on as a user with administration rights to install the SAPinst tool and the SAP system.

Linux/ AIX: Log on to your host as user `root`.

 Note

When installing from a network share make sure that **everyone** has read access to this share. The installation routine creates users such as `<sid>adm` (for example, `ce1adm`). During the installation SAPinst does a user switch to this user. If the newly created user does not have permissions to the network share where the installation is running from, the installation will fail.

Procedure

1. Insert the SAP Installation Master DVD into your DVD drive or mount it locally.
2. **Windows:** Start SAPinst from the SAP Installation Master DVD by double-clicking `sapinst.exe` from the following path: `<DVD drive>:\DATA_UNITS\IM_WIN_<platform>_<database>`.
Linux/ AIX: Enter the following commands: `cd <Installation Master_DVD>/IM_<OS>_<database> ./sapinst`
SAPinst GUI starts automatically by displaying the *Welcome* screen.
3. Follow the screens and enter the required parameters.

 Note

For more information about the input parameters and information about restrictions for passwords, position the cursor on the required parameter and press **F1**.

After you have entered all requested input parameters, SAPinst displays the *Parameter Summary* screen. This screen shows both the parameters that you entered and those that SAPinst set by default. If required, you can revise the parameters before starting the installation.

4. To start the installation choose *Start*. SAPinst starts the installation and displays the progress of the installation. When the installation has successfully been completed, SAPinst shows the dialog *Execution of <Service_Name> has been completed successfully*.

 Note

The ESR offline documentation is installed automatically. You can access it by choosing **► Start ► All Programs ► SAP NetWeaver Composition Environment ► <CE_SAPSID> ► ESR documentation ◀**.

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4 Post-Installation Activities

Activating Configuration Templates

Configuration templates contain the predefined instance configuration for specific scenarios. They are automatically applied according to the installation option you have selected. The templates are designed to optimize system performance by applying certain configuration to the Java Virtual Machine and the application server, as well as by applying startup filters to AS Java services and applications to start only those relevant for the selected installation options.

You must apply additional configuration steps to enable Enterprise Services Repository (ESR) after you have installed a SAP NetWeaver Composition Environment system. To enable ESR, you must apply the following configuration templates to your system:

Configuration Template	Mode of SAP NetWeaver CE system
CE_Enterprise_Services_Repository_production_full	Productive mode
CE_Enterprise_Services_Repository_development_full	Development mode

For more information about applying configuration templates, see <http://help.sap.com/nwce> ▶ *Administrator's Guide* ▶ *Configuration of SAP NetWeaver CE* ▶ *Initial System Configuration* ▶ *AS Java Configuration* ▶ *Activating a Configuration Template* ◀.



Caution

Make sure that you do not apply a template for a development system to a productive system or vice versa.

Activation of all CE applications after the ESR Installation

After the installation of ESR, only the ESR and CE basis applications and services are running. If you need to activate all CE applications, change the configuration template to one of the following templates, depending on your CE system.

- CE_Complete_Stack_development_full or
- CE_Complete_Stack_production_full



Note

You need to apply the template **before** running the configuration wizard.



For more information about how to change configuration templates, see

► <http://help.sap.com/nwce> ► *Administrator's Guide* ► *Configuration of SAP NetWeaver CE* ► *Initial System Configuration* ► *AS Java Configuration* ► *Activating a Configuration Template* ◀

Running the Configuration Wizard

After SAPinst has finished, run the configuration wizard to apply automated configuration tasks to your system.

For ESR, you need to run the following configuration tasks:

1. *Initial Setup of functional unit SLD*
2. *Configuration of ESR in CE*

For more information about how to start the configuration wizard, see the configuration documentation in the SAP Solution Manager.

Updating SLD Content (Local SLD Only)

If you are using a local SLD, update the SLD content as described in [SAP Note 669669](#).

Installing the Plug-In Documentation (Optional)

Prerequisite

- You have already installed SAP NetWeaver Developer Studio as described in the documentation *Installation Guide – SAP NetWeaver Composition Environment 7.1* available at ► <http://www.sdn.sap.com> ► *SAP NetWeaver* ► *Composition Environment* ◀.
- You have already installed the local CE documentation as described in the documentation *Installation Guide – SAP NetWeaver Composition Environment 7.1* available at ► <http://www.sdn.sap.com> ► *SAP NetWeaver* ► *Composition Environment* ◀.

Procedure

1. Download the plug-in `esr_docu_plugin.zip` from <https://www.sdn.sap.com/irj/sdn/nw-esr>.
2. Unzip the file `esr_docu_plugin.zip`.
You get the file `com.sap.netweaver.developerstudio.xpi.ecf`.
3. Unzip the file `com.sap.netweaver.developerstudio.xpi.ecf` in a temporary directory.
4. Add your temporary directory as local update page in your SAP NetWeaver Developer Studio by choosing ► *Help* ► *Software Updates* ► *Find and Install* ◀.

The ESR documentation is now visible in your SAP NetWeaver Developer Studio by choosing ► *Help* ► *Help Contents* ◀.

Starting the Enterprise Services Repository

You can start the ESR using the following link in a browser:

http://<host_name>:<http_port>/rep

Typographic Conventions

Example	Description
< >	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your <User Name>”.
▶ ▶ ◀	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
<u>Example</u>	Textual cross-references to an internet address, for example, http://www.sap.com
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
<u>123456</u>	Hyperlink to an SAP Note, for example, SAP Note 123456
<i>Example</i>	<ul style="list-style-type: none"> ■ Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. ■ Cross-references to other documentation or published works
Example	<ul style="list-style-type: none"> ■ Output on the screen following a user action, for example, messages ■ Source code or syntax quoted directly from a program ■ File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
EXAMPLE	Keys on the keyboard



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Any Java™ Source Code delivered with this product is only to be used by SAP's Support Services and may not be modified or altered in any way.

Documentation in the SAP Service Marketplace

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