

# System Landscape Directory

## - Post-Installation Guide -



**SAP NetWeaver 7.0**  
**Enhancement Package 1**



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## Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help* → *General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

## Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Cross-references to other documentation.
<b>Example text</b>	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
<b>Example text</b>	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

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## Post-Installation Guide: SAP NetWeaver 7.0 Enhancement Package 1 System Landscape Directory

The System Landscape Directory (SLD), a component of SAP NetWeaver, is the central directory of system landscape information that is relevant to your software lifecycle management.



### Note

Bear in mind that the abbreviation SLD is not intended to define a product, since the System Landscape Directory is part of SAP NetWeaver. This abbreviation is only intended to improve readability.

The SLD contains a description of your system landscape (the software components that are actually installed) and a repository of software components that you can theoretically install in your landscape (such as the software components that are available from SAP). Since the data on your system landscape is updated automatically, the SLD always provides you with reliable and up-to-date information. Thus, the SLD is a central information provider for SAP and third-party tools that use this data to deliver the services that you need to keep your landscape up and running.

The SLD is part of the installation of every SAP NetWeaver 7.0 system with usage type Application Server Java (AS Java). If you want to activate the SLD in a system with usage type AS Java, no further installation is required. You only have to perform the configuration of the SLD on the server and the configuration of the SLD security roles as described in this post-installation guide.



### Note

For newer SAP products, you can also perform the initial configuration of SLD during the installation of SAP systems with usage type AS Java. For more information, see *Installation Guide - SAP NetWeaver 7.0* at

<http://service.sap.com/instguidesnw70>.

For each system in your landscape that reports data to the SLD, you have to configure a corresponding SLD data supplier. For more information about the configuration of the SLD data suppliers and the SLD ABAP API, see the *User Manual - SLD of SAP NetWeaver 7.0* at <http://www.sdn.sap.com/irj/sdn/nw-sld>.



### Note

For newer SAP products, you can also perform the configuration of the SLD data suppliers during the installation of SAP systems. For more information, see *Installation Guide - SAP NetWeaver 7.0* at

<http://service.sap.com/instguidesnw70>.



## Post-Installation Checklist

Use the table below as a checklist for the configuration activities you have to perform on the SLD server side before you start working with the SLD.

### Process

#### Activities on the SLD Server Side



#### Activity

##### **Changing the JVM max heap size of all server processes:**

The SLD server requires a JVM max heap size of at least 512 MB. You can set this value using the J2EE Engine Config Tool.

For more information, see [Changing the JVM Max Heap Size](#).

##### **Configuring SLD security roles - assigning SLD security roles and actions to users or user groups:**

1. Configure the SLD security roles using the User Management Administration Console. For more information, see [Configuring SLD Security Roles](#).
2. Start the J2EE Engine Visual Administrator.
3. To apply the standard SLD role mapping, choose ► *Cluster* → *Server* → *Services* → *SLD Data Supplier* ◀.

##### **Configuring the server parameters - starting the SLD server:**



#### Note

If you have already performed the initial configuration of SLD as part of the J2EE Engine system installation, ignore the steps below.

1. In your Web browser, enter the URL of the SLD using the following pattern: `http://<host>:<port>/sld`.
2. Choose ► *Administration* → *Profile* ◀.
3. From the *Section* dropdown box, select *Server Settings* and enter a

## Activities on the SLD Server Side



### Activity

name for the Object Server. Preferably use a prefix that has been reserved on the SAP Service Marketplace as an object server name.

4. If you have multiple server processes, select *ObjectManager* from the *Section* dropdown box and set the `BufferInstances` profile parameter to `false` (the default value is `true`).
5. Start the SLD server.

For more information, see [Configuring Server and Persistence Parameters](#).

### Performing the initial data import:



#### Note

If you have already performed the initial configuration of SLD as part of the J2EE Engine system installation, ignore the steps below.

On the SLD home page, choose ► *Administration* → *Import* ⚡.

For more information, see [Performing the Initial Data Import](#).

### Configuring the SLD Bridge:



#### Note

If you have already performed the initial configuration of SLD as part of the J2EE Engine system installation, ignore the steps below.

1. On the SLD home page, choose ► *Administration* → *Profile* ⚡.
2. From the *Section* dropdown box, select *datasupplier* and enter a gateway host and a name for the gateway service. If you have a standalone installation of J2EE Engine, you must use the Presentation DVD to install a standalone SAP gateway first.

For more information, see [Configuring the SLD Bridge](#).



## Changing the JVM Max Heap Size

Use this procedure to increase the JVM max heap size of a J2EE Engine instance to handle the needs of the SLD.



### Caution

The value of 512 MB only applies to a scenario where the SLD server runs as a single application on the relevant J2EE Engine. If you run multiple applications on the same J2EE Engine, then increase the value accordingly.

### Prerequisites

The *Config* tool must be started.

### Procedure

1. In the *Config* tool, select *Servers General*.
2. In the *Java settings* pane, set the value of the *Max heap size* property to 512.
3. Choose ► *File* → *Apply* ◀.
4. Restart the J2EE Engine.

## Configuring SLD Security Roles

Functions in the SLD are protected from unauthorized access. For this purpose, you can find several AS Java security roles and User Management Engine (UME) actions that are assigned to different SLD functions. Before you can use SLD, you have to map these roles and actions to individual users or user groups.

We recommend that you use user groups and map them to the appropriate UME roles instead of assigning them to individual users. Users that belong to a particular group receive all permissions that are granted to the group.

We recommend that you use the following user groups that correspond to the identically- named UME roles:

<b>UME Role/User Group</b>	<b>Permissions</b>
SAP_SLD_GUEST	Read access to SLD data
SAP_SLD_SUPPORT	Read-only access to all SLD data and UIs, including the Administration area (used for SAP support)
SAP_SLD_CONFIGURATOR	Create, modify, and delete CIM instances of the Landscape Description and Name Reservation subsets (includes all read permissions).
SAP_SLD_DATA_SUPPLIER	Create, modify, and delete CIM instances of the Landscape Description subset as a data supplier without access to the SLD UI.
SAP_SLD_DEVELOPER	Create, modify, and delete CIM instances of the Name Reservation subset (includes all read permissions).
SAP_SLD_ORGANIZER	Create, modify, and delete all types of CIM instances (includes all read permissions).
SAP_SLD_ADMINISTRATOR	Administrative tasks (includes all other roles)

The following table lists the SLD security roles along with their recommended SLD user group and UME role:

<b>UME Role/User Group</b>	<b>J2EE Security Role/UME action</b>
SAP_SLD_GUEST	<i>LcrUser</i>
SAP_SLD_SUPPORT	<i>LcrUserLcrSupport</i>

<b>UME Role/User Group</b>	<b>J2EE Security Role/UME action</b>
	<i>LcrUser</i>
SAP_SLD_CONFIGURATOR	<i>LcrInstanceWriterLD</i> <i>LcrInstanceWriterNR</i>
SAP_SLD_DATA_SUPPLIER	<i>DataSupplierLD (this is not a UME action)</i>
SAP_SLD_DEVELOPER	<i>LcrUser</i> <i>LcrInstanceWriterNR</i> <i>LcrUser</i> <i>LcrInstanceWriterCR</i>
SAP_SLD_ORGANIZER	<i>LcrInstanceWriterLD</i> <i>LcrInstanceWriterNR</i> <i>LcrInstanceWriterAll</i> <i>LcrUser</i> <i>LcrInstanceWriterCR</i> <i>LcrInstanceWriterLD</i> <i>LcrInstanceWriterNR</i> <i>LcrInstanceWriterAll</i>
SAP_SLD_ADMINISTRATOR	<i>LcrClassWriter</i> <i>LcrSupport</i> <i>LcrAdministrator</i> <i>DataSupplierLD</i> <i>LcrContentSync</i>

 Note

You have to create these user groups with the appropriate tool for your user store (J2EE, ABAP or LDAP). If the UME is used with an ABAP-based system as the back-end data source, all these groups except for SAP\_SLD\_DATA\_SUPPLIER and SAP\_SLD\_SUPPORT already exist.

SAP NetWeaver Application Server ABAP (AS ABAP) contains these default user roles.

If you have the authorization to create user groups as a local AS Java administrator, the SLD user groups are created by the standard SLD configuration described below.

If your LDAP user store is configured in a way that no user groups can be created by the local UME, you must first create the user groups listed above.



#### Note

If you want to set up SLD security for test purposes, you can simply use an AS Java administrative user which also has administrative permissions for SLD by default.

### Procedure

1. Log on to the J2EE Engine Visual Administrator as a user with administration rights.
2. Choose ► *Services* → *Data Supplier*. ◀
3. Choose *Assign User Groups to Roles*.

The SLD configuration service performs the default mappings of user groups to J2EE security roles.

### More Information

[Managing Users, Groups, and Roles.](#)

## Launching the SLD

The SLD is a Web application. You can access it from your Web browser.

### Prerequisites

You have a user assigned to a particular security role. For example, to access the Administration area, you require a user assigned to the `LcrAdministrator` role. The standard role mapping provides this security role to the J2EE Engine administrator user. If you do not have a user assigned to a role, contact your system administrator.

### Procedure

1. In your Web browser, enter the URL of the SLD using the following pattern: `http://<host>:<port>/sld` (where *host* is the host name or the IP address of the host and *port* is the HTTP service port). By default, the port number is `<5xx00>`, where `<xx>` is the instance number of the J2EE Engine.
2. Enter your *User ID* and *Password* and choose *Logon*.



## Configuring Server and Persistence Parameters

Use this procedure to configure the SLD server and persistence parameters. The SLD server supports two ways of saving data:

- Database persistence
- File system persistence



### Recommendation

We recommend that you use database persistence. File system persistence is useful for local test purposes only.

### Prerequisites

- You have a user assigned to the `LcrAdministrator` role.
- You have stopped the SLD server.

### Procedure

1. Choose **Administration** → **Profile**.
2. From the *Section* dropdown box, select *Server Settings*.

### Configuring Server Parameters

1. Enter the name of the object server.



### Note

Make sure that the object server name is unique within your system landscape or even globally. The value of the parameter must be the same as an ABAP namespace (without the enclosing slashes) that is reserved on the SAP Service Marketplace at <http://service.sap.com/namespaces>. If you do not have an ABAP namespace, enter the name of the host where your SLD is running.

If the SLD acts as:

- A landscape directory in your system landscape, the name of the host where your SLD is running is sufficient.
- A name server for the SAP NetWeaver Development Infrastructure, the name must be reserved on the SAP Service Marketplace. For more information, see SAP Notes 105132 and 710315.

### Configuring Persistence Parameters

1. To store data in the database, from the *Persistence Type* dropdown box, select *Database*.
2. To store data in the file system, from the *Persistence Type* dropdown box, select *Filesystem*.
3. Choose *Save*.

## Fine Tuning the SLD Server

You can fine tune the SLD server by changing the server parameters. The configuration of the server parameters is called a system profile. When you start the SLD server for the first time, the system profile is automatically uploaded. This system profile contains the default server parameters. However, you can:

- Change the system profile online in the SLD UI
- Download the system profile, change it offline, and upload it back to the SLD server

### Note

The default system profile is located in the `sldprofile.xml` file in the following directory (on Microsoft Windows):

`<Drive>:\usr\sap\<SID>\SYS\global\sld`. You can upload the configuration file to the SLD server directly as an XML or a ZIP file.

### Note

We recommend that you use the default server parameters, except in the following case: If you run the SLD server on more than one J2EE Engine instance or node, set the `BufferInstances` parameter to `false` in the `ObjectManager` section.

### Note

The changes to the system profile take effect only after you restart the SLD server.

## Prerequisites

You have a user assigned to the `LcrAdministrator` role.

## Procedure

### Changing a System Profile

To change the system profile online:

1. Choose **Administration** → **Profile**.

The *Profile* screen appears.

2. Change the server parameters and choose **Save**.

3. If you want to discard the changes you have made, choose *Reset to Defaults*.

The server parameters are reset to the default ones.

### **Downloading and Uploading a System Profile**

To change the system profile offline:

1. Choose ► *Administration* → *Profile* ◀.

The *Profile* screen appears.

2. Choose ► *Download* → *Download Profile* ◀.

3. Choose *Save This File to Disk*, enter a file name and browse to the directory where you want to save the configuration file.

You can change the server parameters offline in the configuration file.

4. To upload the configuration file back to the server, choose ► *Administration* → *Profile* ◀.

5. Choose *Upload*.

The *Profile Upload* screen appears.

6. Browse to the configuration file and then choose *Upload*.



## Performing the Initial Data Import

The SLD server implements the Common Information Model (CIM) of the Distributed Management Task Force (see [www.dmtf.org](http://www.dmtf.org)). The SAP CIM model and SAP component information (`CR_Content.zip`) are automatically imported when the SLD is started for the first time during installation. Use this procedure if you want to import a different CIM model or to import the CR content files after the installation.

The CIM model and CR content files are located in the `<Drive>:\usr\sap\<SID>\SYS\global\sld\model` directory.



### Note

Since the `CR_Content.zip` file contains all SAP components that are available, the content of this file increases over time to include information about new components, for example, new releases and Support Packages. You have to update the content in the SLD from time to time. You can download the most up-to-date files from the SAP Service Marketplace at <http://service.sap.com>. For more information, see SAP Note [669669](#).

### Prerequisites

- The CIM model and CR content files must be either XML files or compressed XML files in ZIP format.
- You have set the heap size for all nodes to 512 MB using the J2EE Engine Config Tool.

### Procedure

1. Choose **Administration** → **Import**.

The *Import* screen appears.

2. To import the `<Drive>:\usr\sap\<SID>\SYS\global\sld\model\CR_Content.zip` file (Microsoft Windows), choose *Import CR Content*, and then choose *Continue Import*.
3. To import a different file, choose *Browse*, navigate to the file you want to import, and then choose *Import Selected File*.



### Note

Objects that already exist in the system are automatically overwritten.



#### Note

If the import is interrupted due to insufficient memory (for instance, the Java VM runs out of memory), you have to increase the heap size of the Java VM and restart the J2EE Engine. To have the complete data, you have to import the `CR_Content.zip` file again. You can ignore the warning about an unsuitable content update.

4. If you do not want to import the content into the current namespace, you can change the namespace.

#### Result

After you have triggered the import, the *Administration* screen appears. The status bar shows the status of the import.

## Configuring the SLD Bridge

To receive data that is automatically reported and sent by the SLD data suppliers that run on individual systems, you have to configure and start the SLD bridge. The SLD bridge converts the system data that is sent by the SLD data suppliers to the SLD server into a CIM-compliant format.

The data between the SLD data suppliers of ABAP-based systems and the SLD bridge is exchanged by means of an RFC connection. Therefore, you have to configure an SAP gateway service. We recommend that you use a local gateway. If you have a standalone installation of J2EE Engine and if no local gateway is available, install a standalone gateway with an instance number from the Presentation DVD. Choose an instance number for the gateway that has not been used on your computer so far.

You can also perform the configuration of the SLD bridge during installation. Use this procedure if you want to change the configuration.

### Procedure

1. Choose ► *Administration* → *Data Suppliers* ◀.
2. If you want the SLD data supplier bridge to forward system data that is received from data suppliers to the default `sld/active` namespace of this SLD server, set the `Update Local Namespaces` parameter for `sld/active` to `true`.
3. Choose ► *Administration* → *Profile*. ◀
4. In the *Section* field, choose *datasupplier*.
5. Enter SAP gateway host and gateway service.

#### Note

The changes to the gateway service take effect only after you restart the SLD server.

#### Note

One SAP gateway server must be linked only to one SLD server as a data receiver. Sharing one SAP gateway server between multiple SLD servers leads to errors.

#### Note

Make sure that you have set up the SLD data suppliers correctly in the systems that have to report system data automatically. For more information, see the *User Manual - System Landscape Directory for SAP NetWeaver 7.0* at <http://www.sdn.sap.com/irj/sdn/nw-sld>.

6. If you want the SLD bridge to send data to multiple SLD servers, choose ► *Administration* → *Data Suppliers* → *Add SLD* ◀.
7. Enter the URL and logon data of the SLD server you want to add and choose *Save*.



## Additional Online Information about SLD

URL	Title
<a href="http://service.sap.com/notes">http://service.sap.com/notes</a>	SAP Note <a href="#">105132</a>
	SAP Note <a href="#">710315</a>
	SAP Note <a href="#">669669</a>
	SAP Note <a href="#">712594</a>
<a href="http://www.sdn.sap.com/irj/sdn/nw-sld">http://www.sdn.sap.com/irj/sdn/nw-sld</a>	<i>Planning Guide - System Landscape Directory</i>
	<i>Post-Installation Guide - SLD of SAP NetWeaver 7.0</i>
	<i>User Manual - SLD of SAP NetWeaver 7.0</i>