Landscape Verification 1.0
for SAP Solution Manager

July 2010
## Typographic Conventions

<table>
<thead>
<tr>
<th>Type Style</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Text</td>
<td>Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. Cross-references to other documentation</td>
</tr>
<tr>
<td>Example text</td>
<td>Emphasized words or phrases in body text, titles of graphics and tables</td>
</tr>
<tr>
<td>EXAMPLE TEXT</td>
<td>Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.</td>
</tr>
<tr>
<td>Example text</td>
<td>Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.</td>
</tr>
<tr>
<td>Example text</td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
</tr>
<tr>
<td>&lt;Example text&gt;</td>
<td>Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.</td>
</tr>
<tr>
<td>EXAMPLE TEXT</td>
<td>Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.</td>
</tr>
</tbody>
</table>

## Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Caution</td>
</tr>
<tr>
<td>🔄</td>
<td>Example</td>
</tr>
<tr>
<td>⚤</td>
<td>Note</td>
</tr>
<tr>
<td>🔄</td>
<td>Recommendation</td>
</tr>
<tr>
<td>🔄</td>
<td>Syntax</td>
</tr>
</tbody>
</table>

- **Example**
- **Note**
- **Recommendation**
- **Syntax**
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6.2. Glossary
1. Structure of This Document

This document describes the purpose and operation of landscape verification 1.0 for SAP Solution Manager, an Add-On for improving the quality of your system landscape description in SAP Solution Manager.

The individual sections of this document have the following contents:

- **Section 2** contains a short introduction to landscape verification, its purpose, and how it works.

- **Section 3** contains an introduction to the underlying concepts of landscape verification; the ways in which an application of this type is useful, a brief outline of the architecture, and a summary of the errors in your landscape description that landscape verification can determine.

- **Section 4** contains information about installing landscape verification.

- **Section 5** contains information about operating and configuring landscape verification and a description of the user interface.

- **Section 6** contains an appendix with the long texts of the messages that can be displayed about your system landscape description and a short glossary of the terms used.
2. Introduction to Landscape Verification

The error-free and complete mapping of your system landscape in SAP Solution Manager (transaction SMSY) is of critical importance for your maintenance processes. This is because, as of SAP Business Suite Enhancement Package 4, the Maintenance Optimizer (http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/46/418970cdb45fabe10000000a1553f7/frameset.htm) is a mandatory prerequisite for installation; correct configuration of your system landscape is, in turn, is an important prerequisite for the correct execution of the Maintenance Optimizer.

Experience shows, however, that the landscape data that is available to you in transaction SMSY is not always complete and error-free, particularly if data has been entered manually.

This is where landscape verification 1.0 for SAP Solution Manager is useful. It analyzes the description of your system landscape and, with the help of information from the SAP support system, searches for inconsistencies. Based on the results of these checks, a clear user interface shows an overview of all problems, gaps, and inconsistencies in the description of your system landscape. Each of these errors is described in detail; the descriptions also contain procedures for solving the problem.

In this way, landscape verification supports you in lowering your TCO by increasing the quality of your landscape description and therefore helping to ensure a smooth installation of the SAP Business Suite Enhancement Packages. The most important steps in the context of an installation process of this type are shown below:
3. **Concept of Landscape Verification**

### 3.1. **Motivation**

Many SAP customers operate a large number of SAP applications, which usually consist of many different systems. Many of these applications are therefore distributed across different technical systems and exist as development, test, and production systems.

You therefore need to take into account the following points during maintenance or upgrades of applications of this type:

- To perform an upgrade of all elements of these applications, you need to handle the corresponding groups of technical systems as a unit.
- When upgrading technical systems that are used in more than one application, you need to consider all of the roles of these systems.

To be able to do any of these things, it is vital to have a correct and complete landscape description, which forms the basis for the maintenance of your applications. This landscape description is the system landscape of SAP Solution Manager (transaction SMSY). However, parts of this landscape description are created manually, and can therefore contain errors, which can, in turn, lead to errors when maintaining your applications.

To determine these errors and to provide support in solving them, landscape verification for SAP Solution Manager is available to you. Landscape verification analyzes your landscape description in your SAP Solution Manager, finds errors, and displays information about how to solve them. This means that you can perform your maintenance processes more quickly with fewer errors and lower costs.

### 3.2. **Architecture**

In your system landscape, your managed systems report their data to the System Landscape Directory (SLD), which, in turn, forwards this data to the system landscape of SAP Solution Manager (transaction SMSY).

Landscape verification reads this data and compares it to information in the SAP product catalog from the central SAP support system, and detects errors and inconsistencies through this comparison of the locally-available information and the information available centrally at SAP.
3.3. **Parts of the Landscape Description that Are Checked**

Landscape verification checks the part of your landscape description in SAP Solution Manager that is required for upgrade and maintenance processes. Specifically, only the following elements of the landscape are relevant for the checks:

- Product system
- Technical system
- Product instance

For a definition of these terms, refer to the [Glossary](#) [page 30].

**Relevant Parts of the Landscape Description**
The concept of a landscape pattern is also supported (http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/2b/5fad0d1f8549609efddabca9c7f65d/frameset.htm), that is, a description of the extent to which a technical system is used in only one or in multiple product systems. The following landscape patterns exist:

- Hub
- Sidecar
- Space

3.4. Problems Determined Using Landscape Verification

Landscape verification determines problems in the following areas of your landscape description:

- **Infrastructure** (technical prerequisites), such as the connection to the SAP support system or the connection of your SAP Solution Manager to the System Landscape Directory (SLD)
- **Technical systems**, such as incorrect assignment of product instances on the basis of the installed software component versions
- **Product systems**, such as incorrect or missing assignment to a product version

These problems could, for example, have been caused by the following errors:

- Incomplete or incorrect configuration for data suppliers that report system data to the SLD
- Configuration of the transfer of data from the SLD to SAP Solution Manager (Landscape Fetch) is incomplete, or the transfer is not working correctly
- The assignment of product instances or product systems in your description of the system landscape is incorrect, for example, due to manual entries
- Landscape patterns have been incorrectly set
4. Installing Landscape Verification

Landscape verification 1.0 is an Add-On for SAP Solution Manager 7.0 EhP1 as of Support Package 18. To install landscape verification, first download the relevant archive from the SAP Service Marketplace.

1. The archive is available in the SAP Software Distribution Center of the SAP Service Marketplace (http://service.sap.com/swdc). Log on with your SAP Service Marketplace ID.

2. In the navigation bar, choose Download → Installation and Upgrade → Installation and Upgrade - Entry by Application Group → SAP Technical Components → LV FOR SOLUTION MANAGER → LV 1.0 FOR SAP SOLUTION MANAGER → Installation, and download the archive.

3. The rest of the procedure is described in the documentation for the Add-On Installation Tool (transaction SAINT). The information that is most important for you is available by following the links below:
   - Loading Installation Packages (http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/d18d38e9cf9e67e1000009b38f842/frameset.htm)
   - Installing and Upgrading Add-Ons (http://help.sap.com/saphelp_nw70ehp1/helpdata/en/18/e08d38dfe44765e1000009b38f842/frameset.htm)
5. Operating Landscape Verification

To be able to use landscape verification, your user must have the role `SAP_SMSY_LV_ALL`.

Note that this role is based on the equivalent standard role for SMSY (`SAP_SMSY_ALL`), and you must therefore have implemented this role in your system. In addition to the referenced SMSY role, the role for landscape verification contains only the authorizations to execute transactions `LVSM` and `LVSM_LOAD`.

5.1. Initializing and Configuring Landscape Verification

To make all of the functions of landscape verification available to you, you first need to run a job that checks the entire system landscape that is available to you through the system landscape of SAP Solution Manager (transaction `SMSY`) for possible errors, gaps, or inconsistencies. The job compares, among other things, locally-available product instances with the product instances that are technically possible based on the installed software component versions. This information is determined from the central SAP support system.

Note that the job can have a runtime of several hours.

Starting the Check Job

To start this job, proceed as follows:

1. Start transaction `LVSM_LOAD`.
2. From the menu, choose `Program → Execute in Background`.
3. In the group box `Notification`, if you activate the indicator for the sending of an e-mail, you are informed as soon as the job is complete.

Setting the Configuration Parameters

You can also set a number of configuration parameters in this transaction. You can make the following settings:

- In the group box `Product Instance detection: cleanup of results`, you can determine the circumstances in which check results are overwritten if a new check is performed. By default, this function is set to the indicator `Activate Cleanup`; if this indicator is active, you can use the input field `Delete result older than` to define the age as of which results are to be overwritten by the results of a new check.

- You can ensure that a check is performed for the technical systems in the system landscape of SAP Solution Manager for which there are no check results. This is particularly important if you have added new technical systems to your system landscape.
This function is also activated by default, using the indicator *Execute detection if no detection result is available for a technical system* in the group box *Product Instance detection: update of results*.

You should normally leave this indicator activated. It is only meaningful to deactivate the indicator and execute the job again if you want to delete all check results that have exceeded the retention period specified above.

- You can ensure that you are always informed when a check of your system landscape is complete. An e-mail of this type is sent using SAPconnect (more information: [SAPconnect (BC-SRV-COM)](http://help.sap.com/saphelp_nw70ehp1/helpdata/en/2b/d925bf4b8a11d1894e000e8323c4f/frameset.htm).

This function is also activated by default, using the indicator *Send email notification after Product Instance detection is finished* in the *Notification* group box.

### 5.2. Starting Landscape Verification

To start landscape verification, enter the transaction code **LVSM**. The application is opened in a separate window. If the job has not yet been started when you start transaction **LVSM**, the system displays a corresponding message.

Therefore start this job in good time before your intended first use of landscape verification. In addition to calling transaction **LVSM** and giving an appropriate response to the message mentioned above, you can also start this job by calling the configuration of landscape verification (transaction **LVSM_LOAD**) (more information: [Initializing and Configuring Landscape Verification](#)), a choosing the command *Program → Execute in Background* from the menu.

If the results of this check are incomplete or obsolete, the system displays a corresponding message; this message also contains the expected remaining runtime of the job.

On the main screen of landscape verification, you can switch between two display types by choosing the relevant tab page:

- **System Landscape** (more information: [Displaying the System Landscape](#))

  This display shows an overview of your system landscape; if errors have been determined, these are displayed for each landscape element (product versions, product systems, and technical systems).

- **Errors** (more information: [Displaying the Errors Detected in the System Landscape](#))

  This display shows all errors detected in your system landscape in a flat list.

To display the detected errors, choose the *Verify* button.
In both views, you can see the errors and problems that landscape verification has detected in the description of your system landscape. To display more detailed information for one of these messages, choose the relevant message. A separate window appears, containing a detailed long text that contains the cause and also information about how to correct the problem.

The problems are not corrected within this application, at least in this version 1.0, but rather where the cause of an error is, that is, for example, in transaction SMSY or in the connection of the managed system to the SLD.

If you have corrected the cause of a detected problem, you can repeat the check by starting the application again. The simplest way to do this is by choosing the Refresh button in your browser.

5.3. Displaying the System Landscape

In this display type, the detected errors and inconsistencies are displayed grouped by the elements of your system landscape – product versions, product systems, and technical systems (more information: Glossary [page 30]).

- In the navigation area on the left, there is a two-level hierarchy of product versions and product systems. The nodes All Systems (all technical systems in your system landscape) and Unassigned Technical Systems (technical systems that are not assigned to any product system) are also displayed.

  A status is displayed for each of these entries. If the status is yellow or red, this means that the landscape verification check detected errors or warnings for the selected product version or corresponding product system.

  A red or yellow status is inherited upward in the hierarchy; if the check status of an object is unknown (for example, if not all checks have yet been performed), the corresponding object is indicated with a gray status.

- The detail area on the right consists of two subareas. The upper subarea contains a table with the technical systems that are assigned to the product version or product system selected in the navigation area. The lower subarea displays product instances and any detected messages (errors and warnings) for the technical system selected from the table in the upper subarea.
5.4. Displaying the Errors Detected in the System Landscape

You can also display the messages determined in your system landscape in an overview list. The following information is displayed for each message:

- Status of the message: Red (error) or yellow (warning)
- Object and category to which the message relates (for example, Technical System)
- Short text of the message; if you want to display the long text of the message, which also contains a procedure for correcting the error, choose the short text
## Landscape Verification – Overview of Detected Errors

<table>
<thead>
<tr>
<th>Severity</th>
<th>Object and Category</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Product System A72_519</td>
<td>Product System A72_519 has no active standadde product version</td>
</tr>
<tr>
<td>Yellow</td>
<td>Product System A01</td>
<td>Product System A01 has no active standadde product version</td>
</tr>
<tr>
<td></td>
<td>Product System A01</td>
<td>Product System A01 has no active standadde product version</td>
</tr>
<tr>
<td></td>
<td>Product System B10</td>
<td>Product System B10 has no active standadde product version</td>
</tr>
<tr>
<td></td>
<td>Product System B35</td>
<td>Product System B35 has no active standadde product version</td>
</tr>
<tr>
<td></td>
<td>Product System B1K</td>
<td>Product System B1K has no active standadde product version</td>
</tr>
</tbody>
</table>

**Legend:**
- Red (error)
- Yellow (warning)

Short text of the message; click on the message to display the long text.
6. Appendix

6.1. Message of the landscape verification

The following appendix contains a complete list of the messages for landscape verification, which are displayed during the check of your system landscape if corresponding errors or problems are detected:

6.1.1. Technical system not registered properly in SMSY

Diagnosis
The Landscape verification tool checks, among other things, the completeness of the data that exists in the Solution Manager (transaction SMSY) for technical systems in your system landscape.

In this case, the technical data for a technical system is incomplete - required data is missing. A list below shows the fields for which there is no data. Perhaps you entered the data for the technical system manually and incompletely.

System Response
Since the system landscape forms the basis for working with the SAP Solution Manager, without complete data, many important functions are not available to you for this system, or are only available on a restricted basis.

Procedure
Check the relevant data for this technical system. To do this, follow the procedure below:

1. Start transaction SMSY.
2. Choose the affected technical system from the list of landscape components.
   - If it has the system type ABAP, expand the product system with the same name in the list, and, from the list of product instances, choose the product instance with this name.
   - If it has another system type, expand the list of technical systems, and choose the appropriate technical system from the list.
3. Switch to the Header Data tab page, check the entries, and make the necessary changes by adding the missing entries.

This error primarily occurs if you manually entered the data for a technical system in transaction SMSY. We therefore recommend that, as far as possible, you let the data be determined by the registration of the technical systems with the System Landscape Directory (SLD). In this case, the system data is automatically transferred to the Solution Manager system landscape by a job that runs at regular intervals.

More information about registering ABAP and Java systems:
6.1.2. Product system has no technical system assigned

Diagnosis
A product system is not assigned a technical system in the system landscape of the Solution Manager (transaction SMSY).

System Response
Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your product systems are incorrectly assigned, many important functions are not available to you, or are only available on a restricted basis.

Procedure
Assign one or more technical systems to your product system.


This documentation consists of two sections:
- Creating a technical system
- Assigning the technical system to a product system

In this case, only the section about assigning the technical system to a product system is relevant, since data collectors are used to automatically collected the information about your technical systems in the assigned System Landscape Directory (SLD).

6.1.3. Technical system is not assigned to a product system

Diagnosis
A technical system is not assigned to a product system in the system landscape of the Solution Manager (transaction SMSY).

System Response
Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your technical systems are incorrectly assigned, many important functions are not available to you, or are only available on a restricted basis.

Procedure
Assign your technical system to a product system. If this desired product system does not yet exist, create it.


- Information about assigning a technical system to a product system is also available in the SAP Solution Manager documentation. For this information, refer to Create Technical Systems and Assign them to Product Systems (http://help.sap.com/saphelp_nw70ehp1/helpdata/en/48/b6812896655295e10000000a42189b/frameset.htm).

This documentation consists of two sections:
- Creating a technical system
Landscape Verification 1.0 for SAP Solution Manager

- Assigning the technical system to a product system
  
  In this case, only the section about assigning the technical system to a product system is relevant, since the information about your technical systems is automatically collected in the assigned System Landscape Directory (SLD) using data collectors.

6.1.4. Technical system is a 'SIDECAR', although more than one product system was assigned

Diagnosis

A landscape pattern characterizes the relationship between a technical system and one or more product systems. If you classify technical systems using a landscape pattern, you determine the procedure for this technical system for maintenance processes that you start in the associated product system:

- **Sidecar**
  
  Technical systems that you have assigned the landscape pattern Sidecar are used by exactly one product system with an active product version. During upgrades, the Maintenance Optimizer handles the system as a standalone system, and all possible patches or upgrades are installed for both the application and for the underlying SAP NetWeaver.

- **Hub**
  
  Technical systems that you have assigned to the landscape pattern Hub are used by multiple product systems. During upgrades, the Maintenance Optimizer handles the system as a shared system, and only application updates are installed, while the underlying SAP NetWeaver is upgraded to the minimal required version.

More information about landscape patterns: Landscape Pattern (http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/2b/5fad0d1f8549609efddabca9c7f65d/frameset.htm).

In this case, the landscape pattern Sidecar is assigned to the technical system, although it is assigned to more than one product system.

System Response

An incorrect landscape pattern assignment can lead to problems during upgrades of product systems.

Procedure

Change the assignment of the landscape pattern for the specified technical system in the system landscape of the Solution Manager (transaction SMSY). To do this, proceed as follows:

1. Choose the technical system from the list of landscape components.

   If it has the system type ABAP, expand the product system with the same name in the list, and, from the list of product instances, choose the product instance with this name.
If it has another system type, expand the list of technical systems, and choose the appropriate technical system from the list.

2. Switch to change mode.

3. Switch to the Other Attributes tab page and, for the Landscape Pattern attribute, assign the value HUB.

4. Save your changes.

6.1.5. Technical system is a 'HUB', although only one product system was assigned

Diagnosis

A landscape pattern characterizes the relationship between a technical system and one or more product systems. If you classify technical systems using a landscape pattern, you determine the procedure for this technical system for maintenance processes that you start in the associated product system:

- **Sidecar**
  Technical systems that you have assigned the landscape pattern Sidecar are used by exactly one product system with an active product version. During upgrades, the Maintenance Optimizer handles the system as a standalone system, and all possible patches or upgrades are installed for both the application and for the underlying SAP NetWeaver.

- **Hub**
  Technical systems that you have assigned to the landscape pattern Hub are used by multiple product systems. During upgrades, the Maintenance Optimizer handles the system as a shared system, and only application updates are installed, while the underlying SAP NetWeaver is upgraded to the minimal required version.

More information about landscape patterns: Landscape Pattern (http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/2b/5fad0d1f8549609efddabca9e7f65d/frameset.htm).

In this case, the landscape pattern Hub is assigned to the technical system, although it is assigned to only one product system.

System Response

An incorrect landscape pattern assignment can lead to problems during upgrades of product systems.

Procedure

Change the assignment of the landscape pattern for the specified technical system in the system landscape of the Solution Manager (transaction SMSY). To do this, proceed as follows:

1. Choose the technical system from the list of landscape components.
   
   If it has the system type ABAP, expand the product system with the same name in the list, and, from the list of product instances, choose the product instance with this name.
If it has another system type, expand the list of technical systems, and choose the appropriate technical system from the list.

2. Switch to change mode.
3. Switch to the Other Attributes tab page and, for the Landscape Pattern attribute, assign the value SIDECAR.
4. Save your changes.

### 6.1.6. Product system has no active standalone product version

**Diagnosis**
The landscape verification tool checks, among other things, the assignment of product systems to product versions in the system landscape of the Solution Manager (transaction SMSY).

In this case, it could not determine an assignment for product system to an active standalone product version.

**System Response**
Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your product systems are incorrectly registered, many important functions are not available to you, or are only available on a restricted basis. This is especially true for the use of the Maintenance Optimizer, if you want to perform an upgrade for a product system.

**Procedure**
Make the correct assignment in transaction SMSY, and set the indicator Active for the desired standalone product version.


### 6.1.7. Authorization error when checking RFC connection

**Diagnosis**
The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- **Connection to the SAP support system OSS:** SAPOSS
  
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- **Connection to the System landscape Directory (SLD):** SAPSLDAPI
This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, it was not possible to check the existence and correct functioning of the RFC destination specified in the short text, since your current user does not have sufficient authorization to do so.

**System Response**

Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Ensure that your user has sufficient authorizations. Specifically, the user requires authorization object S_RFC_ADM with activity 03.

### 6.1.8. Internal error when checking RFC connection

**Diagnosis**

The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- **Connection to the SAP support system OSS: SAPOSS**
  
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- **Connection to the System landscape Directory (SLD): SAPSLDAPI**
  
  This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, an internal error occurred when checking that the RFC destination specified in the short text was functioning correctly. It was not possible to determine the actual cause of this error.

**System Response**

Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Contact SAP Support by creating a customer message under application component SV-SMG-LV.

### 6.1.9. RFC connection is not defined

**Diagnosis**
The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- **Connection to the SAP support system OSS: SAPOSS**
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- **Connection to the System landscape Directory (SLD): SAPSLDAPI**
  This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, the RFC destination specified in the short text does not exist in the SAP Solution Manager system. The associated functions are therefore not available to you.

**System Response**

Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Follow the appropriate procedure below, depending on which RFC destination does not exist:

- If the RFC connection SAPOSS does not exist, create it. Use transaction OSS1 to do so; for more information, refer to SAP Note 33135.
- If the RFC destination SAPSLDAPI does not exist, check the connection from SAP Solution Manager to the assigned SLD using the transaction SLDCHECK. More information: [Access To SLD From ABAP Fails](http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e1000000a1550b0/frameset.htm).

### 6.1.10. RFC connection is defined with a wrong connection type

**Diagnosis**

The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- **Connection to the SAP support system OSS: SAPOSS**
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- **Connection to the System landscape Directory (SLD): SAPSLDAPI**
This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, although the RFC destination specified in the short text exists in the SAP Solution Manager system, the destination has the wrong connection type. The correct connection type depends on the RFC destination:

- **SAPOSS** Connection type 3
- **SAPSLDAPI** Connection type T

**System Response**

Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Correct the connection type in accordance with the details above, and repeat the check. You can find more information about the RFC destinations as follows:

- For more information about RFC connection SAPOSS, refer to SAP Note 33135.
- More information about checking the connection from the SAP Solution Manager to the assigned SLD using transaction SLDCHECK: Access To SLD From ABAP Fails (http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e1000000a150b0/frAMESET.htm).

**6.1.11. System failure when calling RFC connection**

**Diagnosis**

The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- **Connection to the SAP support system OSS: SAPOSS**
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- **Connection to the System landscape Directory (SLD): SAPSLDAPI**
  This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, a system error was detected in the SAP Solution Manager system for the RFC destination specified in the short text. A runtime error occurred during the execution of the function module called in the target system.

**System Response**
Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Follow the appropriate procedure below for the RFC destination for which the error occurred:

- If the error occurred for the destination **SAPOSS**, check the destination using transaction SM59. If you cannot solve your problem using the information there, it is possible that the RFC destination is incorrectly configured. Use transaction OSS1 to recreate the RFC destination. For more information about RFC connection **SAPOSS**, refer to SAP Note 33135. For general information about your service connection to SAP, refer to the following link:
  [http://service.sap.com/access-support](http://service.sap.com/access-support)

- If the error occurred for the destination **SAPSLDAPI**, check the connection from SAP Solution Manager to the assigned SLD using the transaction SLDCHECK. More information: Access To SLD From ABAP Fails ([http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e1000000a1550b0/frameset.htm](http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e1000000a1550b0/frameset.htm)).

**6.1.12. Communication failure when calling RFC connection**

**Diagnosis**

The landscape verification tool checks include checking the RFC connections from the SAP Solution Manager system to the SAP support system OSS and the assigned System Landscape Directory (SLD). The relevant RFC destinations have the following naming convention:

- Connection to the SAP support system OSS: **SAPOSS**
  This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

- Connection to the System landscape Directory (SLD): **SAPSLDAPI**
  This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

In this case, a communication error was detected in the SAP Solution Manager system for the RFC destination specified in the short text, that is, it was not possible to create the connection to the target system, or the connection was interrupted during communication.

**System Response**

Since the RFC connection SAPOSS or SAPSLDAPI forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.
Procedure
Follow the appropriate procedure below for the RFC destination for which the error occurred:

- If the error occurred for the destination SAPOSS, check the destination using transaction SM59. If you cannot solve your problem using the information there, it is possible that the RFC destination is incorrectly configured. Use transaction OSS1 to recreate the RFC destination.
  For more information about RFC connection SAPOSS, refer to SAP Note 33135.
  For general information about your service connection to SAP, refer to the following link:
  [http://service.sap.com/access-support](http://service.sap.com/access-support)

- If the error occurred for the destination SAPSLDAPI, check the connection from SAP Solution Manager to the assigned SLD using the transaction SLDCHECK.
  More information: Access To SLD From ABAP Fails ([http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e10000000a1550b0/frameset.htm](http://help.sap.com/saphelp_nw70ehp1/helpdata/en/78/20244134a56532e10000000a1550b0/frameset.htm)).

6.1.13. Automatic data transfer to SMSY is not configured via SLD

Diagnosis
One of the checks that the landscape verification tool performs is to check the RFC connection SAPSLDAPI to the assigned System Landscape Directory (SLD) and the associated configuration settings. This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

To ensure that that the information in the SLD is regularly transferred to the system landscape of the Solution Manager, when setting up transaction SMSY, you normally create a job called LANDSCAPE FETCH to be regularly executed. In this case, this job was not found.

System Response
Since the provision of current data about your system landscape to the system landscape of the SAP Solution Manager forms one of the foundations for working with SAP Solution Manager, it is possible that no current data is available to you for important functions.

Procedure
To schedule this job, start transaction SMSY_SETUP. More information: Set-Up Automatic Data Capture for System Landscape ([http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/31/b175362b9e4c329ef4b0e460a1ea5c/frameset.htm](http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/31/b175362b9e4c329ef4b0e460a1ea5c/frameset.htm)).


Diagnosis
One of the checks that the landscape verification tool performs is to check the RFC connection `SAPSLDAPI` to the assigned System Landscape Directory (SLD) and the associated configuration settings. This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

To ensure that the information in the SLD is regularly transferred to the system landscape of the Solution Manager, when setting up transaction SMSY, you normally create a job called `LANDSCAPE FETCH` to be regularly executed. In this case, an internal error meant that it was not possible to check whether the job is scheduled. It was not possible to determine the actual cause of this error.

**Procedure**

Contact SAP Support by creating a customer message under application component SV-SMG-LV.

### 6.1.15. No periodic landscape fetch job planned

**Diagnosis**

One of the checks that the landscape verification tool performs is to check the RFC connection `SAPSLDAPI` to the assigned System Landscape Directory (SLD) and the associated configuration settings. This RFC connection is used to provide the system landscape of the Solution Manager (transaction SMSY) with information about the systems in your landscape that are registered with your SLD.

To ensure that the information in the SLD is regularly transferred to the system landscape of the Solution Manager, when setting up transaction SMSY, you normally create a job called `LANDSCAPE FETCH` to be regularly executed. In this case, although the job was found, it is not periodically scheduled.

**System Response**

Since the provision of current data about your system landscape to the system landscape of the SAP Solution Manager forms one of the foundations for working with SAP Solution Manager, it is possible that no current data is available to you for important functions.

**Procedure**

To schedule this job, start transaction SMSY_SETUP, and ensure that the indicator Periodic is set. For more information about this, see [Set-Up Automatic Data Capture for System Landscape](http://help.sap.com/saphelp_sm70ehp1_sp23/helpdata/en/31/b175362b9e4c329ef4b0e4601ea5c/frameset.htm).

If you have scheduled the job `LANDSCAPE FETCH` using an external job control tool, you will receive this message even though there is not a problem in this case.

### 6.1.16. No OSS connection defined in the system

**Diagnosis**
The landscape verification tool checks include checking the RFC connection from the SAP Solution Manager system to the SAP support system OSS. This RFC connection is used, among other things, to transfer information about existing SAP products, product versions, associated product instances, and software components to your SAP Solution Manager. You can use this information to check your system landscape.

You can also use the **BAdI BADI_SMBI_DESTINATION_SET** to set this RFC connection. In this case, you have changed the standard implementation for this BAdI in a way that means there is no longer a connection available to the OSS system.

**System Response**

Since the RFC connection to the SAP Support system OSS forms one of the foundations for working with SAP Solution Manager, many important functions will not be available to you, if this destination is not working correctly.

**Procedure**

Use transaction SE18 to check and correct your implementation of the BAdI **BADI_SMBI_DESTINATION_SET**.

For more information about registering ABAP systems, see Configuring the SLD Data Supplier: Default Settings (http://help.sap.com/saphelp_nw70ehp1/helpdata/en/48/b7ba48e2c0356be10000000a421937/frameset.htm).

### 6.1.17. Some software components not covered by configured product instances

**Diagnosis**

Versions of software components were found for the technical system for which no associated product instance was found in the system landscape of the Solution Manager (transaction SMSY).

The following information is therefore displayed in the tables specified below:

- A list of the software component versions that are installed on this system, but for which no associated product instance was found in the system landscape of the Solution Manager.
- A list of the product instances that can be technically assigned to the system based on its software component versions.

**System Response**

Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your system is incorrectly registered, many important functions are not available to you, or are only available on a restricted basis.

**Procedure**

To assign one of the suggested product instances to the technical system, proceed as follows:

1. Start the system landscape of the Solution Manager (transaction SMSY) and navigate to the relevant product system.
The product systems are grouped according to products; make sure that you choose the product system in the correct product sub tree. You can also use the search function by choosing the Other Object... button and enter the system ID of the designated product system.

2. Make sure that the correct product version is assigned as active to the product system. You can change the assignment on the Header Data tab page by choosing the Change Product Assignment button.

3. On the Product Instance Selection tab page, there is a list of all possible product instances for the product version of the relevant product system; the Relevant indicator shows the installed product instances.

4. Check if product instances that are listed in the table below as those that can be technically assigned are actually installed, and set the Relevant indicator for these product instances.

   Keep in mind, that you can only mark one product instance as Relevant if the product instance is running on an ABAP system. If you want to assign more product instances, choose the Also installed indicator.

5. Save your changes, and repeat the check.

6.1.18. Product system contains technically inappropriate product instances

Diagnosis
The product instances of technical system that are assigned to this system in the system landscape of the Solution Manager do not match the product instances that can be technically assigned to the technical system based on its software component versions.

The table specified below therefore lists the product instances that are assigned to the system in the system landscape of the Solution Manager, but which technically cannot be assigned on the basis of the existing software component versions.

System Response
Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your system is incorrectly registered, many important functions are not available to you, or are only available on a restricted basis.

Procedure
To delete the assignment of the incorrect product instances for the technical system, proceed as follows:

1. Start the system landscape of the Solution Manager (transaction SMSY) and navigate to the relevant product system.

2. On the Product Instance Selection tab page, there is a list of all possible product instances for the product version of the relevant product system; the Relevant indicator shows the installed product instances.

3. Switch to change mode and delete the Relevant indicator for the product instances that were displayed in the table below as incorrect.

4. Save your changes, and repeat the check.
6.1.19. Java Stack of Technical system &1 (dual stack) is not available in SMSY

Diagnosis
The Java stack of the dual-stack system does not exist in the system landscape of the Solution Manager (transaction SMSY).

System Response
Since the system landscape forms the basis for working with SAP Solution Manager, many important functions are not available to you for this system, or are only available on a restricted basis.

Procedure
To include the system in the system landscape of the Solution Manager, register it in the System Landscape Directory (SLD); the system data is then automatically transferred to the system landscape of the Solution Manager.

The procedure for registering the Java system in the SLD depends on the release of the Java system:

- For Java systems with a release before SAP NetWeaver 7.1, use the Visual Administrator to register the system in the SLD.
- For Java systems with a release of SAP NetWeaver 7.1, use the NetWeaver Administrator to register the system in the SLD.

6.1.20. Technical system (system type ABAP) is not available in SMSY

Diagnosis
The ABAP system or ABAP stack of the dual-stack system does not exist in the system landscape of the Solution Manager (transaction SMSY).

System Response
Since the system landscape forms the basis for working with SAP Solution Manager, many important functions are not available to you for this system, or are only available on a restricted basis.

Procedure
To include the system in the system landscape of the Solution Manager, register it in the System Landscape Directory (SLD); the system data is then automatically transferred to the system landscape of the Solution Manager.

6.1.21. Product system configured with non-existent product SAP ECC

**Diagnosis**

The landscape verification tool checks, among other things, the assignment of product systems to product versions in the system landscape of the Solution Manager (transaction SMSY).

In this case, an assignment to the SAP product *SAP ECC* was determined for the product system. However, this is not a valid assignment, since *SAP ECC* is not a valid standalone product, but is rather operated in the context of the SAP product *SAP ERP*.

**System Response**

Since the system landscape of the Solution Manager forms the basis for working with SAP Solution Manager, if your product systems are incorrectly registered, many important functions are not available to you, or are only available on a restricted basis. This is especially true for the use of the Maintenance Optimizer, if you want to perform an upgrade for a product system.

**Procedure**

Make the correct assignment in transaction SMSY.


### 6.2. Glossary

**Landscape Pattern**

Describes how systems are used in a landscape.

Examples:

- Hub: technical System used by two or more product systems (for example, a SAP NetWeaver Enterprise Portal (EP) used by the HR and SCM product systems)
- Sidecar: Any technical system that is used in a product system but not running on the ABAP stack.

**Product**

Used in SAP solutions. Generally speaking, a product fulfills business requirements.

- A maintenance period is defined for a product.
- Examples: SAP NetWeaver, SAP ERP. SAP ERP has several usages such as HR or FI.

**Product Instance**

(formerly *Main Instance* in SMSY, *Instance* or *Software Unit* in SLD): Part of a *Product Version* and the smallest element for designing system landscapes. It groups technically-dependent *Software Component Versions*, which have to be installed and operated on a single *Technical System*.
The different product instances of a product version could be installed on different technical systems or on the same technical system.

- One product instance is always installed on one technical system (it cannot span more than one technical system).
- Examples: AS ABAP, AS Java, SAP ECC Server, TREX.

**Product System**

(formerly System)

Group of *Technical Systems*, on which one *Product Version* is installed.

- In one *Product System* there can be only one ABAP-based *Technical System* and zero or more non-ABAP *Technical Systems*
- Example: SAP CRM 7.0

**Product Version**

Actual release of a given product. It bundles together *Software Component Versions* made available at the same time for implementing a well-defined scope of functionality.

- A product has versions (releases) consisting of Software Components.
- Examples: SAP ERP 6.0, SAP NetWeaver 7.0

**Software Component (SC)**

Reusable component of the product from a production view:

- Unit of product upgrade or update / Support Package (one or more SCs). An SC may require other SCs.
- Examples: SAP_BASIS, SAP_HR

**Technical System**

(formerly named System Component for non-ABAP systems)

Runtime environment in which SAP applications are executed. It is identified with a system identifier (SID). It must be manually and explicitly assigned to a *Product System*.

- A technical system could be running on one or more hardware boxes and has one database instance that is shared between the parts of the systems running on different boxes.
- The corresponding SMSY entity is copied automatically from a connected System Landscape Directory (SLD). However, it can be created manually, too.