



FlexNet Manager for SAP Applications 2015 R2 SP1 Installation Guide

Legal Information

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Introduction

FlexNet Manager for SAP Applications is installed on your system using SAP transport requests.

All objects of FlexNet Manager for SAP Applications are within the /LICMAN/ namespace (registered and reserved by SAP). There will be no conflicts with SAP standard developments or your own developments in the customer namespace. The SAP standard is not modified.

You will find a list of the current transports in the file `Transport_Overview.xls` or `Transport_Overview.pdf` on the product CD or the product download.

The product CD or the product download usually contains the following folders and subfolders:

- **0_Documentation**—Contains the product documentation.
- **1_Basis**—Contains the transports for the satellites in subfolders for the relevant SAP Basis release.
- **2_Roles**—Contains the Roles transport in a subfolder for the relevant SAP Basis release.
- **3_AdminModule**—Contains the transport for the SAP Admin module in a subfolder for the SAP Basis release.
- **4_Deletion**—Contains subfolders with the deletion transports. The transports must be executed in the order of the subfolder names (Step_1, Step_2, Step_3).
- **5_Portal**—Contains a SCA (software component archive) file that must be deployed in the SAP enterprise portal to enable data collection from an SAP enterprise portal.

Components Terminology

The FlexNet Manager for SAP Applications documentation uses the following terminology:

- The *SAP Admin module* is a component of FlexNet Manager for SAP Applications which acts as a central access point. The SAP administrator uses this module to perform recommendations processing, package measurements, activity checks, and LAW measurements.
- Usually, the SAP Admin module is installed by importing the *AdminModule* transport into the SAP system that receives services updates which it distributes to the managed satellite systems.
- The *Satellite* transport enables you to collect SAP package data and run activity checks. It must be installed on all SAP systems with SAP packages, if you want to optimize the relevant package licenses and run activity checks.

The *Satellite* transport must be installed to retrieve the module hierarchy. The module hierarchy is used to provide information on modules and sub-modules in the Module Usage report. The data from the Module Usage report can be used to create transaction profiles. For more information, see the *FlexNet Manager for SAP Applications User Guide*. When the *Satellite* transport is installed on a satellite system, the module data including the hierarchy is retrieved automatically.

- All SAP systems that are connected to the system on which the SAP Admin module is installed are referred to as *satellites*. During the processing of license type recommendations, user data changes are sent from the SAP Admin module to the satellite systems.

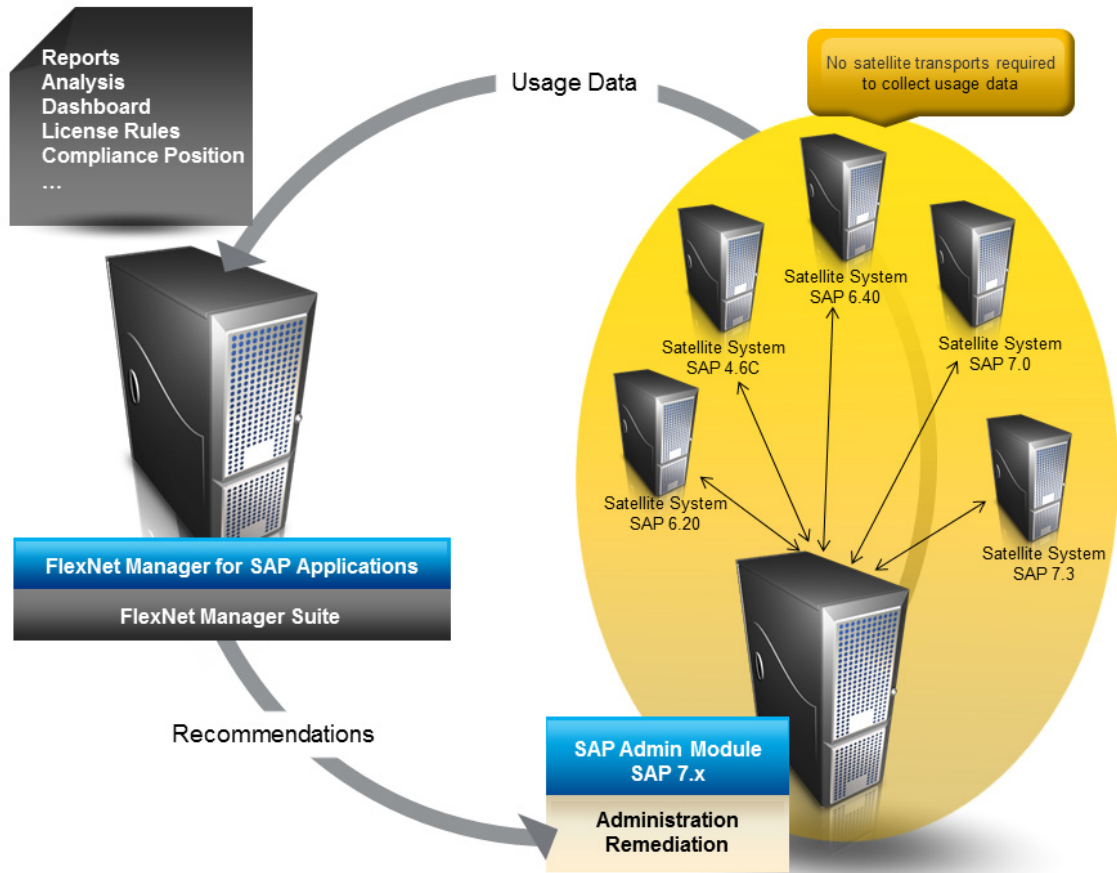


Figure 1: Overview of the components in FlexNet Manager for SAP Applications

For more information about the individual components of FlexNet Manager for SAP Applications, refer to the *FlexNet Manager for SAP Applications User Guide*.

Technical Requirements

SAP Front-end:

- The SAP GUI matching the SAP release must be installed.
- ActiveX must be installed.

SAP Admin module:

- The SAP Admin module can be installed on any SAP system with a SAP Basis release between 7.00 and 7.4.
- It is recommended to install the SAP Admin module on the system that contains the SAP Solution Manager, for the following reasons:

- The SAP Solution Manager system is usually connected to most or all of the SAP systems whose user licenses should be managed by FlexNet Manager for SAP Applications.
- If the SAP Admin module is installed on the SAP Solution Manager system, it does not impact on other productive systems.

FlexNet Manager for SAP Applications satellite(s):

- The FlexNet Manager for SAP Applications satellites require a SAP Basis release between 4.6C and 7.4.

The SAP Inventory Agent can retrieve consumption data from the SAP systems only if the consumption data is available in the transaction ST03N. If ST03N is disabled or does not function properly, the SAP Inventory Agent might not work properly, because the agent uses the same standard SAP functionality as ST03N.

Upgrading from Previous Versions

To upgrade from a previous version of FlexNet Manager for SAP Applications, you need to import the transports for FlexNet Manager for SAP Applications 2015 R2. For information on the import procedure, see [Import of Transports](#) on page 3.

All data originating from the previous version, such as consumption data, license rules, and measurements, will be preserved in their original tables.

Import of Transports

Before Importing

Copy the transport files to a transport directory of your choice, such as, for example, `/usr/sap/trans/cofiles`.

If you install FlexNet Manager for SAP Applications on a Unix system, remove the read-only flag for all K* files after copying to the transport directory. (Example: `chmod 755 K900629.AP2`.) This step is not relevant for Windows systems.

Importing the Transports

For current transport numbers, see the document `Transport_Overview.xls` or `Transport_Overview.pdf`.



Important • If you are installing FlexNet Manager for SAP Applications on a system running SAP Basis 702 or higher, the system might display a warning message with the explanation *The installed release does not match or Does not match component version*. This is because SAP Basis 702 systems or higher compare the support pack level of the target system with that of the objects in the transport that you are trying to import. If the support pack levels do not

match, a warning message might be displayed. This is not a concern for FlexNet Manager for SAP Applications transports, because all objects in FlexNet Manager for SAP Applications transports are in the /LICMAN/ namespace.

To avoid such a warning message, on the **Import Transport Request** dialog, click the **Options** tab and select the **Ignore Invalid Component Version** check box. For more information, refer to the following SAP documentation: SAP Knowledge Base Article 1688610 and SAP Note 1742547.



Task: *To import the transports, perform the following steps:*

1. Install FlexNet Manager for SAP Applications on the master system:
 - a. Determine an SAP system that is running SAP Basis version 7.x and that is assigned as master system.
 - b. Import the **AdminModule** transport for the SAP Basis release into the master system.
 After FlexNet Manager for SAP Applications has been installed, the SAP Admin module will run on this master system.
 - c. Import the appropriate **Roles** transport that matches the SAP Basis release into the master system. The **Roles** transport is client dependent.
2. Install FlexNet Manager for SAP Applications on the satellite systems:
 - a. Import the **Basis/Satellite** transport into all satellite systems that you want to manage using FlexNet Manager for SAP Applications. Ensure that you import the transport that is appropriate for the relevant SAP Basis version of each satellite system.
 - b. Import the **Roles** transport into all satellite systems that you want to manage using FlexNet Manager for SAP Applications. Ensure that you import the transport that is appropriate for the relevant SAP Basis version of each satellite system. The **Roles** transport is client dependent.



Note • *It is not necessary to import the **Basis/Satellite** transport into the master system.*



Figure 2: Transports for FlexNet Manager for SAP Applications in the SAP system landscape

Checks after the Import

Check the import logs generated for the individual import steps for errors (transaction STMS).

Because some transports contain entire dictionary objects, warning messages may be displayed during the import process. Transports with an error message up to the return code level 4 are successful.



Important • If you encounter other errors (RC = 8 or above), contact Flexera Software technical support for assistance.

Authorizations for FlexNet Manager for SAP Applications

Authorization Roles

FlexNet Manager for SAP Applications comes with the following authorization roles:

- **/LICMAN/SATELLITE:** This role contains all required authorizations for the RFC user on the satellite systems. It enables the communication between the SAP Admin module and the satellite systems.
- **/LICMAN/MASTER_ALL:** This role contains all authorizations for the user of FlexNet Manager for SAP Applications on the SAP Admin module. It also includes standard authorizations, for example, for creating the dialog RFC destinations that are used optionally by FlexNet Manager for SAP Applications.
- **/LICMAN/MASTER_READONLY:** This role, which has been derived from /LICMAN/MASTER_ALL, entitles the user only to view data in FlexNet Manager for SAP Applications.
- **/LICMAN/SATELLITE_CHARGEBACK:** This role must be assigned to the RFC user on the satellite system, if the cost center data used for the chargeback report are loaded from this system.
- **/LICMAN/SATELLITE_READONLY:** This role is used by the SAP Inventory Agent (SAPReader.exe) to collect user master data from the SAP systems. This data includes, for example, user information, transactions, CPU and memory consumption, roles, and license types. The data is cached in the FlexNet Manager Suite database and can be used to optimize the license position.

For detailed information about the objects contained in these roles, refer to [Authorization Objects in Standard Authorization Roles](#) on page 24.

The roles /LICMAN/MASTER_ALL and /LICMAN/MASTER_READONLY can be used as templates if certain users should be allowed only to display or maintain specific systems or system groups. To do this, customize the authorizations for the object J_5NL_SYST, using the information provided in the following table.

Table 1 • Customization of authorizations for object J_5NL_SYST

| Field | Description |
|----------------------------|---|
| Installation number | The installation number of the SAP system |
| Client | The client within the SAP system |
| System ID | The 3-digit system ID of the SAP system |

Table 1 • Customization of authorizations for object J_5NL_SYST

| Field | Description |
|---|--------------------------------|
| FlexNet Manager for SAP Applications activities | 02: Update user data |
| | 03: Display data |
| | 11: Invoke LAW |
| | 12: Import SAP package data |
| | 23: Customizing |
| | 30: Import usage data CCMS |
| | 33: Customizing system overall |
| | 43: Display LAW data |
| | 44: Load LAW data |
| | 50: Start USMM |
| | 51: USMM results download |
| | 60: Start consolidation |
| | 61: Display consolidation |
| In order to allow only the display of data, you should give authorization only for the activity 03. | |

Authorization Object J_5NL_UPD

The authorization object J_5NL_UPD checks the authorizations of a user during updates of the user master data. By customizing the object, you can define the fields of the user master data that a user is allowed to update. The object contains only one field called **Field Name**. Use this field to specify the names of the fields from the user master data that can be updated from within FlexNet Manager for SAP Applications.

Authorizations Required by the SAP Inventory Agent

The SAP Inventory Agent requires a small number of authorizations to collect the relevant user and consumption data. These authorizations are included in the role /LICMAN/SATELLITE_READONLY.

For a list of the authorizations in the role /LICMAN/SATELLITE_READONLY, see [Table A-5](#) on page 30.

Each SAP system that should be inventoried by the SAP Inventory Agent requires a user account with all these authorizations. This account is used for all RFC-based communication between the SAP Inventory Agent and the SAP system. To ensure that the account has the required roles, it is recommended to import the **Roles** transport and assign the /LICMAN/SATELLITE_READONLY role (see [Authorization Roles](#) on page 6). However, you can also assign these authorizations manually.

The authorizations in the role /LICMAN/SATELLITE_READONLY only give permission to the SAP Inventory Agent to read data from the SAP systems. The SAP Admin module requires additional authorizations which are available in the /LICMAN/SATELLITE role (see [Importing the Transports](#) on page 3).

Refer to [Authorization Objects in Standard Authorization Roles](#) on page 24 and [Tables Read and Data Collected by the SAP Inventory Agent](#) on page 33 for information about which data is collected by the SAP Inventory Agent.

Setting up the System Landscape

For information on setting up the system landscape in the SAP Admin module, see chapter 7, *Setting up the SAP Admin Module*, in the *FlexNet Manager for SAP Applications User Guide*.

This chapter describes important steps of the setup process, including:

- Importing a system landscape from FlexNet Manager Suite
- Adding and maintaining RFC destinations in the system landscape
- Specifying the CUA central system if your SAP systems are controlled by Central User Administration.

Configuring SAP Systems to Communicate with FlexNet Manager Suite

Communication between FlexNet Manager Suite and FlexNet Manager for SAP Applications is facilitated using web services. Web services support the interaction of different software applications over the World Wide Web infrastructure.

After installation of FlexNet Manager Suite and FlexNet Manager for SAP Applications, you need to configure a web service called *SAPServiceSoap* to enable the applications to communicate with each other.

There are different security levels for the communication, and you can choose the level that you would like to use. The security settings are independent of the functionality of the applications. However, the settings need to be set up properly, otherwise communication is not possible.

The following security levels are available:

- No authentication—Without authentication, communication between FlexNet Manager Suite and FlexNet Manager for SAP Applications is not secure. This security level is not desirable and therefore not described in this document.

- Basic authentication—Authentication is based on the user name and password. See [Communication Using Basic Authentication](#) on page 9 for more information.
- SSL authentication—Authentication is based on the exchange of certificates. This is the most secure level. See [Communication Using SSL Authentication](#) on page 13 for more information.

The SOA Manager

You use the SOA Manager in SAP to configure the web service settings. The web service is client-dependent, and you need to customize it in the SOA Manager (transaction SOAMANAGER) on each client that the **AdminModule** transport will be used on. These settings are not required on the satellite systems. Administrator privileges are required for using the SOA Manager.

In the SOA Manager, the options that need to be selected depend on the SAP Basis release and the support package that is installed. Due to the number of different combinations of SAP Basis release and support package that are possible, not all combinations are documented here. Instead, the following steps only outline the required options based on the SAP Basis release that is installed.

Testing the Web Service Connection

During configuration, the SOA Manager enables you to test the web service connection using the Ping Web Service button. In SAP Basis release 7.3 and newer versions, this test can produce a false negative result. Although the SOA Manager displays an error such as “Web service ping failed (RC=405). Service Ping Error: Method Not Allowed”, the web service connection may be working correctly. Therefore, the ping result should be ignored.

The false error is generated because FlexNet Manager Suite sends a GET message, but the ping expects a HEAD message.

Communication Using Basic Authentication

It is recommended to use basic authentication only when the connection between FlexNet Manager Suite and FlexNet Manager for SAP Applications is secure and can be trusted.

Configuring Communication with Basic Authentication on Systems Running SAP Basis 7.00, 7.01, 7.10, 7.11, 7.30, or 7.31



Task: *To configure communication using basic authentication on a system running SAP Basis 7.00, 7.01, 7.10, 7.11, 7.30, or 7.31:*

1. Start the SOA Manager on the SAP system on which you want to configure the web service using the transaction code SOAMANAGER.
2. On the **SOA Management** page, do the following, depending on which version of SAP Basis your system is running:

- SAP Basis 7.00 or 7.10: Select the **Business Administration** tab and click **Web Service Administration**.
 - SAP Basis 7.01 or 7.11: Select the **Application and Scenario Communication** tab and click **Single Service Administration**.
 - SAP Basis 7.30 or 7.31: Select the **Service Administration** tab and click **Web Service Configuration**.
3. On the next page, on the **Search** tab, locate the **Search by** menu and select **Consumer Proxy** from the list. In the **Search Pattern** field, type ***SAPSERVICE***, and click **Go**.
 4. The search returns the web service SAPServiceSoap. Select it and click **Apply Selection**.
 5. In the **Details of Proxy Definition** section, select the **Configurations** tab. Click **Create Logical Port**.
 6. The **SOA Management** dialog opens. Provide the following information:
 - **Logical Port Name:** Enter a unique name for your logical port.
 - **Logical Port is Default:** Select this check box to ensure that the default logical port is called.



Important • If this check box is not selected, communication between FlexNet Manager Suite and FlexNet Manager for SAP Applications is not possible.

- **Description:** Enter a description.
- **Configuration Type:** Select the radio button **Manual Configuration**.

Click **Apply Settings**.

7. On the **Configuration for Logical Port 'name'** page, on the **Consumer Security** tab, select the **User ID / Password** radio button to enable basic authentication.
Under **User ID/Password**, provide the user name and password that are used in FlexNet Manager Suite.



Important • If the user name and password change in FlexNet Manager Suite, you need to make the same changes in the SOA Manager.

8. On the **Messaging** tab, open the **Message ID Protocol** menu and select **Suppress ID Transfer**.
Accept the default values for all other options on this tab.
9. On the **Transport settings** tab, provide the following information:
 - **URL Access Path:** Enter the URL access path **/SAPService/SAPService.asmx**.
 - **URL Protocol Information:** Select **HTTP**.
 - **Computer Name of Access URL:** Enter the IP address of the relevant FlexNet Manager Suite server.
 - **Port Number of Access URL:** Enter the relevant port number. For basic authentication, the port number is 80.

Accept the default values for all other options on this tab.

10. On the **Operation specific** tab, you need to manually add the SOAP action for every web-service operation.

- a. Add the following web-service operations in the grid on the left. For each operation, specify the appropriate SOAP action in the **SOAP Action** field. The table below lists the operations and corresponding SOAP action.



Note • If you copy the SOAP actions from the table below to paste each action into the **SOAP Action** field, ensure that you copy the entire line.

Table 2 • SOAP actions for the web-service operation

| Web Service Operation | SOAP Action |
|--|--|
| GetAllActiveSapLandscapes | http://www.flexera.com/webservices/GetAllActiveSapLandscapes |
| GetSapLandscapeMembers | http://www.flexera.com/webservices/GetSapLandscapeMembers |
| GetAvailableSapRecommendationSummary | http://www.flexera.com/webservices/GetAvailableSapRecommendationSummary |
| GetSapRecommendationsByLandscapeUID | http://www.flexera.com/webservices/GetSapRecommendationsByLandscapeUID |
| GetSapConsumptionByLicenseRecommendationUID | http://www.flexera.com/webservices/GetSapConsumptionByLicenseRecommendationUID |
| AcknowledgeSapRecommendationsUploaded | http://www.flexera.com/webservices/AcknowledgeSapRecommendationsUploaded |
| AcknowledgeSapRecommendation | http://www.flexera.com/webservices/AcknowledgeSapRecommendation |
| AcknowledgeSapRecommendations | http://www.flexera.com/webservices/AcknowledgeSapRecommendations |

- b. If you configure the SOA Manager on a system that is running SAP Basis 7.3, under **Transport Binding**, clear the check box next to the **SOAP Action** field to ensure that the SOAP action is active for the configuration.

11. Click **Save**.

Configuring Communication with Basic Authentication on Systems Running SAP Basis 7.4



Task: *To configure communication using basic authentication on a system running SAP Basis 7.4:*

1. Start the SOA Manager on the SAP system on which you want to configure the web service using the transaction code SOAMANAGER.
2. On the **SOA Management** page, on the **Service Administration** tab, click **Web Service Configuration**.
3. On the **Web Service Configuration** page, under **Search Criteria**, specify the following search parameters:
 - **Object Type is All**
 - **Consumer Proxy contains *SAPSERVICE***.
4. Click **Search**.

The search returns the web service SAPServiceSoap.

5. In the **Internal Name** column, click the hyperlinked name for the SAP web service.
6. On the next page, on the **Configurations** tab, click the **Edit logical port** button.
7. On the **Consumer Security** tab, select **User ID / Password**.

Under **User ID/Password**, provide the user name and password that are used in FlexNet Manager Suite.



Important • *If the user name and password change in FlexNet Manager Suite, you need to make the same changes in the SOA Manager.*

8. On the **Messaging** tab, open the **Message ID Protocol** menu and select **Suppress ID Transfer**.
Accept the default values for all other options on this tab.
9. On the **Transport settings** tab, provide the following information:
 - **URL Access Path:** Enter the URL access path `/SAPService/SAPService.asmx`.
 - **Computer Name of Access URL:** Enter the IP address of the relevant FlexNet Manager Suite server.
 - **Port Number of Access URL:** Enter the relevant port number. For basic authentication, the port number is 80.
 - **URL Protocol Information:** Select **HTTP**.
 Accept the default values for all other options on this tab.
10. On the **Operation Settings** tab, you need to manually add the SOAP action for every web-service operation.
 - a. Select the **Use non-default value for SOAP Action** check box to ensure that the SOAP action is active for the configuration, and to enable the **SOAP Action** field.

- b. Add the following web-service operations in the grid on the left. For each operation, specify the appropriate SOAP action in the **SOAP Action** field. The table below lists the operations and corresponding SOAP action.



Note • If you copy the SOAP actions from the table below to paste each action into the **SOAP Action** field, ensure that you copy the entire line.

Table 3 • SOAP actions for the web-service operation

| Web Service Operation | SOAP Action |
|--|--|
| GetAllActiveSapLandscapes | http://www.flexera.com/webservices/GetAllActiveSapLandscapes |
| GetSapLandscapeMembers | http://www.flexera.com/webservices/GetSapLandscapeMembers |
| GetAvailableSapRecommendationSummary | http://www.flexera.com/webservices/GetAvailableSapRecommendationSummary |
| GetSapRecommendationsByLandscapeUID | http://www.flexera.com/webservices/GetSapRecommendationsByLandscapeUID |
| GetSapConsumptionByLicenseRecommendationUID | http://www.flexera.com/webservices/GetSapConsumptionByLicenseRecommendationUID |
| AcknowledgeSapRecommendationsUploaded | http://www.flexera.com/webservices/AcknowledgeSapRecommendationsUploaded |
| AcknowledgeSapRecommendation | http://www.flexera.com/webservices/AcknowledgeSapRecommendation |
| AcknowledgeSapRecommendations | http://www.flexera.com/webservices/AcknowledgeSapRecommendations |

11. Click **Save**.

Communication Using SSL Authentication

You can configure the web service to use Secure Sockets Layer (SSL) encryption to protect the sensitive data that is exchanged between FlexNet Manager Suite and FlexNet Manager for SAP Applications.

To use SSL authentication, you need to install a Root Certificate (in [Step 13](#) and [Step 14](#)). Contact the Certificate Authority (CA) for an SSL certificate that is used by the FlexNet Manager Suite server. You can download the Root Certificate in binary format or base64 format.



Important • The SAP system needs to be configured to accept SSL communication. For this, a cryptographic library has to be installed. For more information, see SAP Note 510007.

Configuring Communication with SSL Authentication on Systems Running SAP Basis 7.00, 7.01, 7.10, 7.11, 7.30, or 7.31



Task: *To configure communication using SSL authentication on a system running SAP Basis 7.00, 7.01, 7.10, 7.11, 7.30, or 7.31:*

1. Start the SOA Manager on the SAP system on which you want to configure the web service using the transaction code SOAMANAGER.
2. On the **SOA Management** page, do the following, depending on which version of SAP Basis your system is running:
 - SAP Basis 7.00 or 7.10: Select the **Business Administration** tab and click **Web Service Administration**.
 - SAP Basis 7.01 or 7.11: Select the **Application and Scenario Communication** tab and click **Single Service Administration**.
 - SAP Basis 7.30 or 7.31: Select the **Service Administration** tab and click **Web Service Configuration**.
3. On the next page, on the **Search** tab, locate the **Search by** menu and select **Consumer Proxy** from the list. In the **Search Pattern** field, type ***SAPSERVICE***, and click **Go**.
4. The search returns the web service SAPServiceSoap. Select it and click **Apply Selection**.
5. In the **Details of Proxy Definition** section, select the **Configurations** tab. Click **Create Logical Port**.
6. The **SOA Management** dialog opens. Provide the following information:
 - **Logical Port Name:** Enter a unique name for your logical port.
 - **Logical Port is Default:** Select this check box to ensure that the default logical port is called.



Important • *If this check box is not selected, communication between FlexNet Manager Suite and FlexNet Manager for SAP Applications is not possible.*

- **Description:** Enter a description.
- **Configuration Type:** Select the radio button **Manual Configuration**.

Click **Apply Settings**.

7. On the **Configuration for Logical Port 'name'** page, on the **Consumer Security** tab, select the **User ID / Password** radio button.

Under **User ID/Password**, provide the user name and password that are used in FlexNet Manager Suite.



Important • *If the user name and password change in FlexNet Manager Suite, you need to make the same changes in the SOA Manager.*

8. On the **Messaging** tab, open the **Message ID Protocol** menu and select **Suppress ID Transfer**.

Accept the default values for all other options on this tab.

9. On the **Transport settings** tab, provide the following information:

- **URL Access Path:** Enter the URL access path `/SAPService/SAPService.asmx`.
- **URL Protocol Information:** Select **HTTPS**.
- **Computer Name of Access URL:** Enter the IP address of the relevant FlexNet Manager Suite server.
- **Port Number of Access URL:** Enter the port number **443**.

Accept the default values for all other options on this tab.

10. On the **Operation specific** tab, you need to manually add the SOAP action for every web-service operation.

- a. Add the following web-service operations in the grid on the left. For each operation, specify the appropriate SOAP action in the **SOAP Action** field. The table below lists the operations and corresponding SOAP action.




Note • If you copy the SOAP actions from the table below to paste each action into the **SOAP Action** field, ensure that you copy the entire line.


Table 4 • SOAP actions for the web-service operation

| Web Service Operation | SOAP Action |
|--|---|
| GetAllActiveSapLandscapes | <code>http://www.flexera.com/webservices/GetAllActiveSapLandscapes</code> |
| GetSapLandscapeMembers | <code>http://www.flexera.com/webservices/GetSapLandscapeMembers</code> |
| GetAvailableSapRecommendationSummary | <code>http://www.flexera.com/webservices/GetAvailableSapRecommendationSummary</code> |
| GetSapRecommendationsByLandscapeUID | <code>http://www.flexera.com/webservices/GetSapRecommendationsByLandscapeUID</code> |
| GetSapConsumptionByLicenseRecommendationUID | <code>http://www.flexera.com/webservices/GetSapConsumptionByLicenseRecommendationUID</code> |
| AcknowledgeSapRecommendationsUploaded | <code>http://www.flexera.com/webservices/AcknowledgeSapRecommendationsUploaded</code> |
| AcknowledgeSapRecommendation | <code>http://www.flexera.com/webservices/AcknowledgeSapRecommendation</code> |
| AcknowledgeSapRecommendations | <code>http://www.flexera.com/webservices/AcknowledgeSapRecommendations</code> |

- b. If you configure the SOA Manager on a system that is running SAP Basis 7.3, under **Transport Binding**, clear the check box next to the **SOAP Action** field to ensure that the SOAP action is active for the configuration.

11. Click **Save**.
12. Connect to the SAP system and run transaction STRUST to start the Trust Manager.
13. Click **Import Certificate** .
14. On the **Import Certificate** dialog, select the appropriate Root Certificate.
15. Under **File format**, select the file format of the Root Certificate. Click **OK**.
16. In the system tree on the left pane of the Trust Manager, select **SSL client SSL Client (Anonymous)** and click **Add to Certificate List**.
17. Start the Internet Communication Manager (ICM) using the transaction SMICM. (The ICM sends and receives requests to and from the Internet.)
18. In the **ICM Monitor** screen, open the **Administration** menu and select **ICM > Exit Soft > Global**.

This step resets the ICM Monitor. The new certificate is activated only after the reset.

19. On the toolbar of the **ICM Monitor** screen, click **Services** .
20. On the **ICM Monitor - Service Display** screen, click **Refresh**.

If the **Active Services** grid does not show a line for HTTPS, you need to add it.

 - a. Open the **Service** menu and click **Create**.
 - b. In the **Define New Service** dialog, provide the following information:
 - **New Service Port:** Enter **443**.
 - **Log:** Enter **HTTPS**.
 - **Keep Alive (in Sec.):** Keep the default value or change to a value of your choice.
 - **Max. Processing Time:** Keep the default value or change to a value of your choice.
 - c. Click **OK**.

The **Active Services** grid should now contain an HTTPS service.

Configuring Communication with SSL Authentication on Systems Running SAP Basis 7.4



Task: *To configure communication using SSL authentication on a system running SAP Basis 7.4:*

1. Start the SOA Manager on the SAP system on which you want to configure the web service using the transaction code SOAMANAGER.
2. On the **SOA Management** page, on the **Service Administration** tab, click **Web Service Configuration**.
3. On the **Web Service Configuration** page, under **Search Criteria**, specify the following search parameters:

- **Object Type is All**
- **Consumer Proxy contains *SAPSERVICE***.

4. Click **Search**.

The search returns the web service SAPServiceSoap.

5. In the **Internal Name** column, click the hyperlinked name for the SAP web service.

6. On the next page, on the **Configurations** tab, click the **Edit logical port** button.

7. On the **Consumer Security** tab, select **User ID / Password**.

Under **User ID/Password**, provide the user name and password that are used in FlexNet Manager Suite.



Important • If the user name and password change in FlexNet Manager Suite, you need to make the same changes in the SOA Manager.

8. On the **Messaging** tab, open the **Message ID Protocol** menu and select **Suppress ID Transfer**.

Accept the default values for all other options on this tab.

9. On the **Transport settings** tab, provide the following information:

- **URL Access Path:** Enter the URL access path [/SAPService/SAPService.asmx](#).
- **Computer Name of Access URL:** Enter the IP address of the relevant FlexNet Manager Suite server.
- **Port Number of Access URL:** Enter the relevant port number. For basic authentication, the port number is 80.
- **URL Protocol Information:** Select **HTTPS**.

Accept the default values for all other options on this tab.

10. On the **Operation Settings** tab, you need to manually add the SOAP action for every web-service operation.

- Select the **Use non-default value for SOAP Action** check box to ensure that the SOAP action is active for the configuration, and to enable the **SOAP Action** field.
- Add the following web-service operations in the grid on the left. For each operation, specify the appropriate SOAP action in the **SOAP Action** field. The table below lists the operations and corresponding SOAP action.





Note • If you copy the SOAP actions from the table below to paste each action into the **SOAP Action** field, ensure that you copy the entire line.

Table 5 • SOAP actions for the web-service operation

| Web Service Operation | SOAP Action |
|----------------------------------|--|
| GetAllActiveSapLandscapes | http://www.flexera.com/webservices/GetAllActiveSapLandscapes |
| GetSapLandscapeMembers | http://www.flexera.com/webservices/GetSapLandscapeMembers |

Table 5 • SOAP actions for the web-service operation

| Web Service Operation | SOAP Action |
|--|--|
| GetAvailableSapRecommendationSummary | http://www.flexera.com/webservices/GetAvailableSapRecommendationSummary |
| GetSapRecommendationsByLandscapeUID | http://www.flexera.com/webservices/GetSapRecommendationsByLandscapeUID |
| GetSapConsumptionByLicenseRecommendationUID | http://www.flexera.com/webservices/GetSapConsumptionByLicenseRecommendationUID |
| AcknowledgeSapRecommendationsUploaded | http://www.flexera.com/webservices/AcknowledgeSapRecommendationsUploaded |
| AcknowledgeSapRecommendation | http://www.flexera.com/webservices/AcknowledgeSapRecommendation |
| AcknowledgeSapRecommendations | http://www.flexera.com/webservices/AcknowledgeSapRecommendations |

11. Click **Save**.
12. Connect to the SAP system and run transaction STRUST to start the Trust Manager.
13. Click **Import Certificate** .
14. On the **Import Certificate** dialog, select the appropriate Root Certificate.
15. Under **File format**, select the file format of the Root Certificate. Click **OK**.
16. In the system tree on the left pane of the Trust Manager, select **SSL client SSL Client (Anonymous)** and click **Add to Certificate List**.
17. Start the Internet Communication Manager (ICM) using the transaction SMICM. (The ICM sends and receives requests to and from the Internet.)
18. In the **ICM Monitor** screen, open the **Administration** menu and select **ICM > Exit Soft > Global**.
This step resets the ICM Monitor. The new certificate is activated only after the reset.
19. On the toolbar of the **ICM Monitor** screen, click **Services** .
20. On the **ICM Monitor - Service Display** screen, click **Refresh**.
If the **Active Services** grid does not show a line for HTTPS, you need to add it.
 - a. Open the **Service** menu and click **Create**.
 - b. In the **Define New Service** dialog, provide the following information:
 - **New Service Port:** Enter **443**.
 - **Log:** Enter **HTTPS**.
 - **Keep Alive (in Sec.):** Keep the default value or change to a value of your choice.

- **Max. Processing Time:** Keep the default value or change to a value of your choice.
- c. Click **OK**.

The **Active Services** grid should now contain an HTTPS service.

Communication between the SAP Admin Module and an Inventory Beacon

Inventory beacons are lightweight applications that gather inventory data, stage and package it as appropriate, and forward it to the central inventory server.

For detailed information on installing an inventory beacon, see the FlexNet Manager Suite online help.

Configuring the SAP Admin Module to Communicate with an Inventory Beacon

Communication between an inventory beacon and the SAP Admin module is facilitated using web services, just like the communication between FlexNet Manager Suite and the SAP Admin module. The configuration encompasses exactly the same steps as the procedures described under [Communication Using Basic Authentication](#) on page 9 and [Communication Using SSL Authentication](#) on page 13, with the following exception: In step 9 of each procedure, the IP address of the relevant inventory beacon web server must be provided.

Configuring the Inventory Beacon to use IIS

The SAP Admin module can be configured to connect to the inventory beacon server to retrieve and send SAP-related data, such as, for example, SAP usage data, license recommendations, and the active landscapes. In order to retrieve this data, Microsoft Internet Information Services (IIS) must be installed on the inventory beacon, and the *SAPService* web service must be configured. In addition, the inventory beacon must be configured to use IIS, as follows.



Task: *To configure the inventory beacon to use IIS:*

1. Ensure that IIS is installed on the inventory beacon.
2. On the inventory beacon server, from the Windows **Start** menu, run **FlexNet Beacon**.
3. On the **Local Web Server** tab, click **IIS web server**.
4. Select **Use Basic Authentication** and enter a user name and password.
5. Click **Save**.

6. After you have performed these steps, the *SAPService* web service is configured automatically.

For more information on the beacon web server, see the topic *Local Web Server Page* in the FlexNet Manager Suite online help.

Enabling SAP Enterprise Portal Data Collection

FlexNet Manager for SAP Applications provides the ability to collect and display user master and statistical data from an SAP enterprise portal or any SAP system running a Java stack. To enable this data collection, note the following and ensure that the SAP enterprise portal and CEN (Central Monitoring System/Transaction ST03G) are set up properly:

- Collection of user master data is done by a JSP (Java server page), which is part of a SCA (software component archive) file that is included with the FlexNet Manager for SAP Applications installation files (in the `portal` folder). This SCA file must be deployed in the SAP enterprise portal.
- Statistical data is collected from a CEN. A CCMS agent must be set up at the Java stack, to push statistical data into the CEN. For information about installing a CCMS agent, see the SAP documentation.

No roles are required for Java stack or SAP enterprise portal systems.



Important • In order to access SAP enterprise portal data using the FlexNet Manager for SAP Applications interface, you must insert a new SAP enterprise portal system. Refer to the FlexNet Manager for SAP Applications User Guide for more detailed information.

Testing Connections

The Connection Monitor tests the connections between the SAP Admin module and FlexNet Manager Suite, and between the SAP Admin module and the SAP satellite systems. It enables you to verify whether the installation of transports was successful, if the SOAP actions are correctly defined, and if the users needed for the communication have the correct authorizations.

You access the program in the SAP Admin module by opening the **Administration** menu and clicking **Connection Monitor**.

The **Connection Monitor** screen contains the following sections:

- The **FlexNet Manager Suite connections** grid shows the status of the web-service connections between the SAP Admin module and FlexNet Manager Suite.

Table 6 • The FlexNet Manager Suite connections grid

| Option | Description |
|--------------------|---|
| Status | Indicates that the connection works correctly (green status) or that an error has occurred (red status). |
| Test type | Shows a meaningful description of the test type that was performed. |
| SOAP action | Displays the SOAP action that is associated with the method that was called. |
| Error | <p>Displays the error message that is returned by SAP if calling the web-service method was unsuccessful. In some cases, error messages are truncated due to a limitation in SAP.</p> <p>If your setup uses inventory beacons, the methods AcknowledgeSapRecommendationsUploaded and AcknowledgeSapRecommendation always return an error. This error message is incorrect, and the error does not affect the functionality of FlexNet Manager for SAP Applications.</p> |

- The **Satellite connections** grid shows the status of the connections between the SAP Admin module and the satellite systems. The connections are based on RFC destinations.

Table 7 • The Satellite connections grid

| Option | Description |
|--------------------------|--|
| System | The SAP satellite system whose connection to the SAP Admin module is tested. |
| RFC destination | The satellite system's RFC destination. |
| RFC status | Indicates whether the RFC destination is working correctly. |
| Satellite | Indicates whether the Satellite transport is installed on the system. |
| Satellite version | Displays the number of the FlexNet Manager for SAP Applications release that is installed on the system. |
| RFC user | Displays the user who is used by the RFC destination to access the system. |
| RFC user role | Indicates whether the user used by the RFC destination has the role /LICMAN/SATELLITE assigned. |

Table 7 • The Satellite connections grid

| Option | Description |
|-----------------------|---|
| FNMS user | <p>Displays the name of the user who is used by FlexNet Manager Suite to access the SAP system.</p> <p>If your setup uses inventory beacons, this field is blank. This is because the FNMS user name is not included in the XML file that is created when you register the inventory beacon with FlexNet Manager Suite, and the user name is not transferred to the SAP Admin module when the system landscape is imported or synchronized.</p> |
| FNMS user role | Indicates whether the user used by FlexNet Manager Suite has the role /LICMAN/SATELLITE_READONLY assigned. |
| Error message | Explains why a test could not be completed successfully. |

Uninstalling FlexNet Manager for SAP Applications

FlexNet Manager for SAP Applications is removed using deletion transports. The deletion of all objects of FlexNet Manager for SAP Applications is split into three import steps which have to be executed in the specified order. Before executing a step, the import of the preceding step must be finished.

The transport request files for each step are stored in the folders `step_1`, `step_2`, and `step_3`. These folders also contain the object lists of the transports.

Step 1

In this step, all roles delivered with FlexNet Manager for SAP Applications will be deleted.

Step 2

This step deletes entries in database tables of the development workbench which otherwise—depending on the Basis release and service pack of the importing SAP system—would not be deleted by the deletion transport of [Step 3](#).

The transport in this step contains the report /LICMAN/DELETION_XPRA_WB in the /LICMAN/ namespace. It is automatically executed in the XPRA step after import. For the following database tables, entries in the /LICMAN/ namespace will be deleted:

- DOKHL
- DOKIL
- DOKTL
- FUNCT

- TADIR

Step 3

The deletion transport of this step deletes all workbench objects of FlexNet Manager for SAP Applications. This includes the report that was imported in [Step 2](#).



Authorization Objects in Standard Authorization Roles

The following tables contain detailed information about the authorization objects that are contained in the authorization roles that are included by default in FlexNet Manager for SAP Applications.

Table A-1 • Role /LICMAN/SATELLITE

| Object | Field Name | Value | |
|--------|------------|---|---|
| S_RFC | ACTVT | 16 | |
| | RFC_NAME | /LICMAN/* ARFC ERFC LAW_MODULES_1 RFC1 RFC_METADATA SCSM_COLLECTOR SDIFRUNTIME SDTX STUW SUU6 SYST SYSU | |
| | RFC_TYPE | FUGR | |
| | S_BTCH_ADM | BTCADMIN | Y |

Table A-1 • Role /LICMAN/SATELLITE

| Object | Field Name | Value |
|-------------------|------------|------------|
| S_BTCHJOB | JOBACTION | * |
| | JOBGROUP | * |
| S_TABU_DIS | ACTVT | 03 |
| | DICBERCLS | * |
| S_TOOLS_EX | AUTH | S_TOOLS_EX |
| S_USER_GRP | ACTVT | 02 |
| | | 03 |
| | | 05 |
| | CLASS | * |
| S_PROGRAM | P_ACTION | * |
| | P_GROUP | /LICMAN* |

Table A-2 • Role /LICMAN/MASTER_ALL

| Object | Field Name | Value | |
|--------------|-------------------|--|----------------------|
| S_RFC | ACTVT | 16 | |
| | RFC_NAME | /LICMAN/* ARFC ERFC LAW_MODULES_1 RFC1 SCSM_COLLECTOR SDIF_RUNTIME SDTX STUW SUU6 SYST SYSU | |
| | RFC_TYPE | FUGR | |
| | S_RFC_ADM | ACTVT | 01 02 03 06 |
| | | ICF_VALUE | * |
| | | RFCDEST | * |
| | | RFCTYPE | * |
| | | S_TCODE | TCD |
| | TCD | | /LICMAN/START |
| | S_BTCH_ADM | BTCADMIN | Y |
| | S_GUI | ACTVT | 04 60 61 |

Table A-2 • Role /LICMAN/MASTER_ALL

| Object | Field Name | Value |
|-------------------|---------------|--------------|
| S_TABU_DIS | ACTVT | 03 |
| | DICBERCLS | * |
| S_TOOLS_EX | AUTH | S_TOOLS_EX_A |
| S_PROGRAM | P_ACTION | * |
| | P_GROUP | /LICMAN* |
| S_ALV_LAYO | ACTVT | 23 |
| S_APPL_LOG | ACTVT | 03 |
| | ALG_OBJECT | J_5N_DLC |
| | ALG_SUBOBJECT | J_5N_UPD |
| J_5NL_SYST | J_5NL_ACTV | * |
| | J_5NL_CLNT | * |
| | J_5NL_INST | * |
| | J_5NL_SYST | * |
| J_5NL_UPD | J_5NL_UPDF | * |



Note • The object `S_RFC_ADM` is not part of the role `/LICMAN/MASTER_READONLY`.

Table A-3 • Role `/LICMAN/MASTER_READONLY`

| Object | Field Name | Value | |
|--------------|-------------------|--|---------------|
| S_RFC | ACTVT | 16 | |
| | RFC_NAME | /LICMAN/* ARFC ERFC LAW_MODULES_1 RFC1 SCSM_COLLECTOR SDIF_RUNTIME SDTX STUW SUU6 SYST SYSU | |
| | RFC_TYPE | FUGR | |
| | S_TCODE | TCD | /LICMAN/START |
| | | TCD | /LICMAN/* |
| | S_BTCH_ADM | BTCADMIN | Y |
| | S_GUI | ACTVT | 04 61 |
| | | | |
| | S_TABU_DIS | ACTVT | 03 |
| | | DICBERCLS | * |
| | S_PROGRAM | P_ACTION | * |
| P_GROUP | | /LICMAN* | |

Table A-3 • Role /LICMAN/MASTER_READONLY

| Object | Field Name | Value |
|-------------------|---------------|----------|
| S_APPL_LOG | ACTVT | 03 |
| | ALG_OBJECT | J_5N_DLC |
| | ALG_SUBOBJECT | J_5N_UPD |
| J_5NL_SYST | J_5NL_ACTV | 03 |
| | | 23 |
| | | 43 |
| | J_5NL_CLNT | * |
| | J_5NL_INST | * |
| | J_5NL_SYST | * |
| | | |

Table A-4 • Role /LICMAN/SATELLITE_CHARGEBACK

| Object | Field Name | Value |
|-------------------|------------|-------|
| S_RFC | ACTVT | * |
| | RFC_NAME | 0012 |
| | | KGR2 |
| | RFC_TYPE | FUGR |
| K_CCA | CO_ACTION | 0003 |
| | KSTAR | * |
| | RESPAREA | * |
| K_CSXS | ACTVT | 03 |
| | KOKRS | * |
| | KOSTL | * |
| K_CSXS_SET | ACTVT | 03 |
| | KOKRS | * |



Note • In the role /LICMAN/SATELLITE_READONLY, only the Roles transport for 4.6 systems contains SDIF. In all other releases, in the role /LICMAN/SATELLITE_READONLY, SDIF is replaced by SDIFRUNTIME.

Table A-5 • Role /LICMAN/SATELLITE_READONLY

| Object | Field Name | Value |
|-------------------|------------|----------------|
| S_RFC | ACTVT | 16 |
| | RFC_NAME | RFC1 |
| | | RFC_METADATA |
| | | SRFC |
| | | SDIFRUNTIME |
| | | SDIF |
| | | SDTX |
| | | SCSM_COLLECTOR |
| | | STUW |
| | | SYST |
| SYSU | | |
| | /LICMAN/* | |
| | RFC_TYPE | FUGR |
| S_TABU_DIS | ACTVT | 03 |
| | DICBERCLS | &NC& |
| | | SA |
| | | SC |
| | | SCUS |
| | SS | |
| S_TOOLS_EX | AUTH | S_TOOLS_EX_A |

Additional Information on the Role /LICMAN/SATELLITE_READONLY

S_RFC

S_RFC enables FlexNet Manager Suite to call RFC functions on the SAP systems. The following table specifies the function modules that are called by FlexNet Manager Suite.

Table A-6 • Function modules called by FlexNet Manager Suite

| Function Module | Function Group | Function Description |
|---|----------------|--|
| RFC_SYSTEM_INFO | SRFC | Retrieves system details such as, for example, the SAP Basis release, the hardware key, and the LAW version. You can view these details in FlexNet Manager Suite by pointing to Configuration , clicking System Landscapes , and double-clicking a system landscape. |
| RFC_READ_TABLE | SDTX | Reads data from SAP database tables. SELECT statements cannot be used outside SAP, therefore, this function needs to be called instead. |
| SWNC_COLLECTOR_GET _AGGREGATES | SCSM_COLLECTOR | Returns the consumption data for SAP systems with SAP Basis version 7.0 to 7.4. |
| SAPWL_WORKLOAD_G ET_STATISTIC | STUW | Returns the consumption data for SAP systems with SAP Basis version 4.6 to 6.4. |
| /LICMAN/ BS_SYSTEM_PING | /LICMAN/* | Checks if the satellite transport has been installed on the SAP system. |
| /LICMAN/ BS_GET_SAP_MODULES | /LICMAN/* | Retrieves details about the SAP module. The Module Usage report requires this information. |

The authorization S_RFC can have only the activity (ACTVT) **Execute**. Possible values are 16 or * (both values mean "Execute").

FlexNet Manager Suite calls an additional set of functions. These functions are used by the SAP .NET Connector to enable RFC communication. For more details, see the SAP Note 460089.

Table A-7 • Functions required by FlexNet Manager Suite

| Function | Function Group |
|-----------------------------------|----------------|
| RFCPING | SYST |
| RFC_FUNCTION_SEARCH | RFC1 |
| RFC_GET_FUNCTION_INTERFACE | RFC1 |

Table A-7 • Functions required by FlexNet Manager Suite

| Function | Function Group |
|--------------------------------|---|
| DDIF_FIELDINFO_GET | SDIFRUNTIME for 6.2-7.4 systems or SDIF for 4.6 systems |
| SYSTEM_RESET_RFC_SERVER | SYSU |

Even though the function group RFC_METADATA has no functions associated, it is required to execute the SAP Inventory Agent.

S_TABU_DIS

The authorization S_TABU_DIS is required for the function RFC_READ_TABLE. This function contains an authority check for the table that is being read. The values &NC&, SA, SC, SCUS, and SS are table classes. The tables that are read using RFC_READ_TABLE are part of these table classes.

S_TOOLS_EX

The authorization S_TOOLS_EX is needed to access the consumption data. It is required to call the functions SWNC_COLLECTOR_GET_AGGREGATES and SAPWL_WORKLOAD_GET_STATISTIC. Without it, the user names are encrypted and the data cannot be used.



Tables Read and Data Collected by the SAP Inventory Agent

This appendix describes which data is collected by the SAP Inventory Agent.

Table B-1 • System information

| Table | Field Name | Definition |
|-------|------------|---|
| TUCON | SYM_GRP | Group for measurement data |
| TUCON | SYM_KEY | Key for measurement data |
| TUCON | SYM_VAL | Value for measurement data |
| TUPL | DEFLT_UTYP | ID for the user types of the SAP system |
| TUPL | ACTIVE | General flag |
| T000 | CCCATEGORY | Role of client (production, test, ...) |

Table B-2 • Active servers

| Table Name | Field Name | Definition |
|------------|------------|---|
| DD03L | HOST | Host used for collecting consumption data |
| DD03L | INSTSHORT | Instance used for collecting consumption data |

Table B-3 • Programs, jobs and transaction codes

| Table Name | Field Name | Definition |
|------------|------------|--|
| TRDIR | NAME | ABAP program name |
| TBTC | JOBNAME | Background job name |
| TBTC | PROGNAME | Program name within a step (e.g. report) |
| TSTC | PGMNA | Program name |
| TSTC | TCODE | Transaction code |

Table B-4 • Languages

| Table Name | Field Name | Definition |
|------------|------------|-----------------------------------|
| T002 | SPRAS | Language key |
| T002 | LAISO | Language key according to ISO 639 |

Table B-5 • Users

| Table Name | Field Name | Definition |
|------------|------------|---------------------------------------|
| USR02 | BNAME | User name in user master record |
| USR02 | GLTGV | User valid from date |
| USR02 | GLTGB | User valid to date |
| USR02 | USTYP | User type |
| USR02 | TRDAT | Last logon date |
| USR02 | LTIME | Last logon time |
| USR02 | CLASS | User group in user master maintenance |

Table B-5 • Users

| Table Name | Field Name | Definition |
|------------|------------|--|
| USR02 | ERDAT | Creation date of the user master record |
| USR02 | ACCNT | Account ID |
| USR02 | UFLAG | User lock status |
| USR06 | BNAME | User name in user master record |
| USR06 | LIC_TYPE | ID for the user types of the SAP system |
| USR06 | VONDAT | Substitute "from date" |
| USR06 | BISDAT | Substitute "to date" |
| USR06 | SURCHARGE | System measurement: country surcharge (3 characters) |
| USR06 | SPRAS | Assignment to special version |
| USR06 | MANDT2 | Client |
| USR06 | SYSID | Name of the SAP system |
| USR06 | ANAME | Chargeable user |
| USR21 | BNAME | User name in user master record |
| USR21 | ADDRNUMBER | Address number |
| USR21 | PERSNUMBER | Person number |
| USR21 | KOSTL | Cost Centre |
| ADR6 | ADDRNUMBER | Address number |
| ADR6 | PERSNUMBER | Person number |
| ADR6 | SMTP_ADDR | Email address |
| ADRP | PERSNUMBER | Person number |
| ADRP | NAME_FIRST | First name |
| ADRP | NAME_LAST | Last name |

Table B-5 • Users

| Table Name | Field Name | Definition |
|------------|------------|--|
| ADRC | ADDRNUMBER | Address number |
| ADRC | NAME1 | Company name 1 |
| ADRC | NAME2 | Company name 2 |
| V_ADDR_USR | ADDRNUMBER | Address number |
| V_ADDR_USR | PERSNUMBER | Person number |
| V_ADDR_USR | DEPARTMENT | Department |
| V_ADDR_USR | TEL_NUMBER | First telephone number: dialling code + number |
| V_ADDR_USR | TEL_EXTENS | First telephone number: extension |
| V_ADDR_USR | FUNCTION | Function |
| DEVACCESS | UNAME | Developer user |
| USR41_MLD | BNAME | User name in user master record |
| USR41_MLD | CAL_YEAR | Calendar year |
| USR41_MLD | COUNTER | Number of concurrent logons |
| USR41_MLD | PEAK | Maximum number of concurrent logons |

Table B-6 • License types

| Table Name | Field Name | Definition |
|------------|--------------|--|
| TUTYP | LANGU | Language Key |
| TUTYP | USERTYP | ID for the user types of the SAP system |
| TUTYP | UTYPLONGTEXT | System measurement: Text of length 55 (case sensitive) |
| TUTYP | UTYPTXT | Short test for user types |

Table B-6 • License types

| Table Name | Field Name | Definition |
|------------|------------|---|
| TUTYPA | ACTIVE | Active flag |
| TUTYPA | COUNTRY | Active flag |
| TUTYPA | SONDERVERS | Active flag |
| TUTYPA | SSCR_ALLOW | General flag |
| TUTYPA | USERTYP | ID for the user types of the SAP system |
| LAW_CONT | ACTION | Action for value pair |
| LAW_CONT | CONTAINSU | ID for the user types of the SAP system |
| LAW_CONT | USERTYP | ID for the user types of the SAP system |
| TUZUS | LANGU | Language Key |
| TUZUS | SONDERVERS | Assignment to special version |
| TUZUS | TEXTVERS | Special version |

Table B-7 • Roles

| Table Name | Field Name | Definition |
|------------|------------|--------------------------------------|
| AGR_DEFINE | AGR_NAME | Role name |
| AGR_FLAGS | AGR_NAME | Role name |
| AGR_FLAGS | FLAG_VALUE | Default license type for the role |
| AGR_USERS | AGR_NAME | Role name |
| AGR_USERS | UNAME | User name in master record |
| AGR_USERS | COL_FLAG | Flag: assignment from composite role |
| AGR_USERS | FROM_DAT | Role valid from date |
| AGR_USERS | TO_DAT | Role valid to date |

Table B-7 • Roles

| Table Name | Field Name | Definition |
|------------|------------|-------------------------------|
| AGR_AGRS | AGR_NAME | Composite role |
| AGR_AGRS | CHILD_AGR | Single role in composite role |
| AGR_1251 | AGR_NAME | Role name |
| AGR_1251 | HIGH | Authorization value |
| AGR_1251 | LOW | Authorization value |

Table B-8 • Packages

| Table Name | Field Name | Definition |
|------------|------------|--|
| TUAPPT | SPRSL | Language key |
| TUAPPT | APPLIC | ID for an application for system measurement |
| TUAPPT | APPLICNAME | Name of an application for system measurement |
| TUAPP | APPLIC | ID for an application for system measurement |
| TUAPP | PERIOD | Type (length) of period for system measurement |
| TUUNTT | SPRSL | Language key |
| TUUNTT | UNIT | ID for a unit for system measurement |
| TUUNTT | UNITNAME | Name of a unit for system measurement |

Table B-9 • Package measurements (not applicable for offline POC)

| Table Name | Field Name | Definition |
|----------------|------------|------------------|
| /LICMAN/BSENGI | DATUM | Measurement date |

Table B-9 • Package measurements (not applicable for offline POC)

| Table Name | Field Name | Definition |
|----------------|------------|--|
| /LICMAN/BSENGI | APPLIC | ID for an application for system measurement |
| /LICMAN/BSENGI | UNIT | ID for a unit for system measurement |
| /LICMAN/BSENGI | COUNTER | Counter for system measurement objects |
| /LICMAN/BSENGI | PER_START | Start of measurement period |
| /LICMAN/BSENGI | PER_END | End of measurement period |

Table B-10 • Database schema (read but not collected)

| Table Name | Field Name | Definition |
|------------|------------|------------|
| DD03L | FIELDNAME | Field name |



Functions Executed and Data Collected by the SAP Inventory Agent

This appendix lists the functions that the SAP Inventory Agent executes.

Table C-1 • RFC_SYSTEM_INFO

| Function | Definition |
|------------------|------------------------|
| RFCSAPRL | Release version |
| RFCKERNRL | Kernel release version |
| RFCDBSYS | Database system |
| RFCHOST | Host |
| RFCSYSID | System ID |
| RFCMACH | Machine ID |
| RFCOPSYS | Operating system type |
| RFCIPADDR | IP (v4) address |

Table C-2 • SAPWL_WORKLOAD_GET_STATISTIC (Basis version < 7.0)

| Function | Definition |
|-----------------|--------------|
| MANDT | Client ID |
| ACCOUNT | User account |
| ENTRY_ID | Entry ID |

Table C-2 • SAPWL_WORKLOAD_GET_STATISTIC (Basis version < 7.0)

| Function | Definition |
|----------------|--|
| CPUTI | Total CPU time (across multiple clients) |
| TTYPE | Type of task |
| MEMSUM | Memory consumed |
| COUNTER | Counter |
| PRIVSUM | Private memory consumed |

Table C-3 • SWNC_COLLECTOR_GET_AGGREGATES (Basis version >= 7.0)

| Function | Definition |
|-----------------|--|
| MANDT | Client ID |
| ACCOUNT | User account |
| ENTRY_ID | Entry ID |
| CPUTI | Total CPU time (across multiple clients) |
| TASKTYPE | Type of task |
| MEMSUM | Memory consumed |
| COUNTER | Counter |
| PRIVSUM | Private memory consumed |

Table C-4 • /LICMAN/BS_GET_SAP_MODULES (not applicable for offline POC)

| Function | Definition |
|----------------|--------------|
| ACCTEXT | User account |
| MODULE1 | Module |
| MODULE2 | Sub-module |

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