# Document History

The following table provides an overview of the most important document changes.

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Dec 2015</td>
<td>First version for SAP Solution Manager 7.2 SPS 1</td>
</tr>
<tr>
<td>1.1</td>
<td>Aug 2016</td>
<td>Updated version for SAP Solution Manager 7.2 SPS 3:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Sizing for SAP Solution Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Links to further information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Paths and references to work centers and views that changed in SAP Solution Manager 7.2, due to the new launchpad concept and restructuring of views and functions.</td>
</tr>
<tr>
<td>1.2</td>
<td>Dec 2016</td>
<td>Updated version for SAP Solution Manager 7.2 SPS 4</td>
</tr>
<tr>
<td>1.3</td>
<td>Sep 2017</td>
<td>Information about archiving corrected</td>
</tr>
</tbody>
</table>
Getting Started

Designing, implementing, and running your SAP applications at peak performance, 24 hours a day, is vital to your business success.

This guide is a starting point for managing your SAP applications, and maintaining and running them optimally. It contains information about various tasks, and the tools that you can use to perform them. This guide also refers to the documentation of these tasks, when you also need other guides, such as the master guide, Technical Infrastructure Guide, and SAP Help Portal.

Target Groups

- Technical Consultants
- System Administrators
- Solution Consultants
- Business Process Owner
- Support Specialist

Important SAP Notes

⚠️ Caution

Make sure you use the latest version of this guide, which you can find on the SAP Help Portal at https://help.sap.com/viewer/p/SAP_Solution_Manager.

Table 2:

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2353022</td>
<td>SAP Solution Manager 7.2 SP05 - basic functions</td>
<td>This SAP Note is a central correction note.</td>
</tr>
<tr>
<td>706705</td>
<td>Solution Manager: Component for Messages</td>
<td>You want to create a customer message related to SAP Solution Manager on the appropriate component.</td>
</tr>
</tbody>
</table>
3  Technical System Landscape

SAP Solution Manager is the central tool for managing your customer solution landscape. It includes applications and scenarios to support the Application Lifecycle Management (ALM) and Run SAP Like a Factory (RSLAF):

- ensuring business continuity
- accelerating innovation
- reducing risk and total cost of operations
- protecting your investment, the key challenge for every IT organization

ALM and RSLF address this challenge with an integrated ITIL-based approach.

Table 3:

<table>
<thead>
<tr>
<th>Document</th>
<th>Note/link</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Solution Manager</td>
<td><a href="https://support.sap.com/solutionmanager">https://support.sap.com/solutionmanager</a></td>
</tr>
<tr>
<td>SAP Solution Manager product documentation</td>
<td><a href="https://help.sap.com/solutionmanager72">https://help.sap.com/solutionmanager72</a></td>
</tr>
<tr>
<td>Run SAP Like a Factory</td>
<td><a href="https://support.sap.com/solutionmanager">https://support.sap.com/solutionmanager</a> Processes</td>
</tr>
<tr>
<td>Ramp-Up Knowledge Transfer</td>
<td><a href="https://service.sap.com/rkt-solman">https://service.sap.com/rkt-solman</a></td>
</tr>
<tr>
<td>Other SAP Solution Manager guides:</td>
<td><a href="https://service.sap.com/instguides">https://service.sap.com/instguides</a></td>
</tr>
<tr>
<td>• Master Guide</td>
<td>SAP Components</td>
</tr>
<tr>
<td>• Installation Information</td>
<td>SAP Solution Manager 7.2</td>
</tr>
<tr>
<td>• Configuration Guide</td>
<td></td>
</tr>
<tr>
<td>• CA Introscope Setup Guide</td>
<td></td>
</tr>
<tr>
<td>• Security Guide</td>
<td></td>
</tr>
<tr>
<td>Further SAP Solution Manager 7.2 upgrade information</td>
<td>SAP Note 2227300</td>
</tr>
<tr>
<td>SAP Solution Manager sizing</td>
<td><a href="http://service.sap.com/quicksizer">http://service.sap.com/quicksizer</a></td>
</tr>
<tr>
<td>SAP Solution Manager Wiki</td>
<td><a href="http://scn.sap.com/docs/DOC-47361">http://scn.sap.com/docs/DOC-47361</a></td>
</tr>
</tbody>
</table>

3.1  SAP Solution Manager: Built-In Software Components

SAP Solution Manager comprises several software components. It is based on an SAP NetWeaver platform, and includes the SAP CRM add-on, so the tasks and procedures for a standard SAP NetWeaver system generally also apply to SAP Solution Manager. For more information, see SAP Note 781448 (Support Package levels for SAP Solution Manager installations/upgrades).
Depending on the business scenarios, other software components can be added to SAP Solution Manager. This guide refers mostly to specific tasks and procedures in SAP Solution Manager.

You can use the software components described in the following sections in your system, depending on the scenarios you actually use.

### 3.1.1 Third-Party Integration

In SAP Solution Manager 7.2 SPS 1, the following third-party tool can be used for specific scenarios:

BMC AppSight for Client Diagnostics: SAP Note 1034902

### 3.2 SAP Solution Manager Complementary Components

#### 3.2.1 Internet Graphics Server (IGS)

The Internet Graphics Server (IGS) generates graphics or charts in several areas, for example in the EarlyWatch Alert reports. The server can be administered in transaction SIGS. You can administer your WebDynpro Java IGS via a web interface.

- Internet Graphics Server (IGS), transaction **SIGS**: http://<IGS host>:<IGS port>
- IGS HTTP administration commands: SAP Note 965201
- IGS administration via ABAP: SAP Note 995471
- IGS troubleshooting: SAP Note 514841

#### 3.2.2 SAP NetWeaver Search and Classification (TREX)

The SAP NetWeaver Search and Classification (TREX) is used for some scenarios.

- Administration of TREX, transaction **TREXADMIN**: [http://help.sap.com/saphelp_nw70/helpdata/en/46/c96a575b590e5be10000000a1553f7/content.htm](http://help.sap.com/saphelp_nw70/helpdata/en/46/c96a575b590e5be10000000a1553f7/content.htm)
- Full-text searches in SAP Solution Manager: SAP Note 1466273
3.2.3 CA Introscope

CA Introscope (previously CA Wily Introscope) is a software component that collects performance and other system-related data, mainly from non-ABAP components in your system landscape. A detailed FAQ document is attached to SAP Note 797147 “Introscope Installation for SAP Customers”. It includes a troubleshooting section. The latest information about CA Introscope can be found in the Wiki.

- Introscope Installation for SAP Customers: SAP Note 797147
- Introscope 9 Release Notes: SAP Note 1565954

3.3 Installation

SAP Solution Manager 7.2 is an SAP system based on Application Server ABAP (AS ABAP) and Application Server Java (AS Java). SAP Solution Manager 7.2 is based on the SAP NetWeaver 7.4 SPS 12.

SAP recommends running SAP Solution Manager on Unicode. All new SAP Solution Manager installations are in Unicode. For customers that have upgraded from previous non-Unicode releases of SAP Solution Manager, SAP recommends migrating to Unicode. If this is not possible, SAP will support SAP Solution Manager on non-Unicode until the customer has converted to Unicode.

- SAP NetWeaver: http://scn.sap.com/community/netweaver
- SAP Solution Manager Installation Guides: http://service.sap.com/instguides
- Unicode: http://service.sap.com/unicode

3.4 SAP Business Warehouse (BW) Client Strategy

SAP BW provides important reporting functions, such as diagnostics, for the SAP Solution Manager applications. There are three ways of integrating BW into the landscape:

- **BW in the productive SAP Solution Manager client**

  In this scenario, BW runs in the same client as the Solution Manager. This simplifies the BW configuration and the connection to SAP Solution Manager. The user administration is easier than in the other two scenarios. Since a lot of BW data and interfaces are integrated directly into the SAP Solution Manager applications, the runtime process is also simplified. Remote access is not required.

 Tip

Set up BW in the production SAP Solution Manager client.

- **BW in a separate client of SAP Solution Manager**
In this scenario, the BW activities take place in a client different from the SAP Solution Manager system client. This scenario provides increased security, because user access can be restricted, but this additional security requires increased administration effort, because users must be maintained separately in BW, and synchronized with those in the SAP Solution Manager client. This variant has no technical advantages.

- **BW in a separate BW system that is not yet used productively**
  In this scenario, the BW activities take place in a different system in the landscape. SAP Solution Manager data is written to the remote BW system by RFC, and SAP Solution Manager reads this data again by remote access. This scenario is only required in rare cases, for example if there are sizing problems.

  **Note**

  If you use a separate BW system, it must have the same BW content version (software component BI-CONT) as SAP Solution Manager. The same applies to the SAP Solution Manager BW content as for the BW content. You can also not update the content independently, it must always correspond to the SAP Solution Manager version, so SAP recommends that you do not use a SAP BW system for SAP Solution Manager BW that is already used for other purposes, for example, for reporting to SAP CRM.

  For more information on release restrictions, see SAP Note [1487626](Where to set up BW for SAP Solution Manager).

### 3.5 Root Cause Analysis (RCA) and Diagnostics

The requirements and limitations of the end-to-end RCA are listed below. It is configured in SAP Solution Manager Configuration (transaction SOLMAN_SETUP), by completing the Mandatory Configuration and Managed Systems Configuration.

- Root Cause Analysis in SAP Solution Manager 7.2: SAP Note [2248724](http://wiki.scn.sap.com/wiki/x/CBkMDg)
- End-to-End Root Cause Analysis Wiki: [http://wiki.scn.sap.com/wiki/x/CBkMDg](http://wiki.scn.sap.com/wiki/x/CBkMDg)

### 3.6 SAP Solution Manager Configuration

After installing SAP Solution Manager, configure it in the SAP Solution Manager Configuration application (transaction SOLMAN_SETUP). For more information, refer to the documentation of the guided procedure steps and activities.

Configuration with SOLMAN_SETUP includes the following scenarios:

- Mandatory Configuration (with System Preparation, Infrastructure Preparation, Basic Preparation)
- Management Systems Configuration
- IT Infrastructure Management
- Requirements Management
- Project Management
Most setup activities are covered by SOLMAN_SETUP. Some additional activities can be done in the customizing of SAP Solution Manager (SPRO).

### Table 4:

<table>
<thead>
<tr>
<th>Document</th>
<th>Note/Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Reference IMG</td>
<td>Transaction <a href="http://service.sap.com/instguides">SPRO → SAP Solution Manager Implementation Guide</a></td>
</tr>
<tr>
<td>SAP Solution Manager 7.2 Configuration Guide</td>
<td><a href="http://service.sap.com/instguides">SAP Components</a></td>
</tr>
<tr>
<td>SAP Solution Manager Setup and Configuration Wiki</td>
<td><a href="http://wiki.scn.sap.com/wiki/x/yoEtCg">SAP Solution Manager Release 7.2 Configuration</a></td>
</tr>
</tbody>
</table>

### 3.7 Managed Systems Configuration

To ensure that all the systems in the system landscape can be managed and set up centrally, the productive SAP Solution Manager system must be connected to them. This is required by applications such as Change Analysis, Quality Gate Management and Change Request Management.

For testing purposes, some managed systems should also be connected to the SAP Solution Manager of the quality or development systems.

The users should only have the authorizations that are assigned to them in the managed systems. Misuse of the communication connection must be prevented. In SAP Solution Manager this is usually ensured by using a trusted RFC with the same user.

To connect systems to SAP Solution Manager, proceed as follows:

In SAP Solution Manager Configuration (transaction SOLMAN_SETUP), choose Managed Systems Configuration.

The technical entities that are known to the landscape management database (LMDB), are displayed on different tabs:

- Technical Systems
- Databases
- Hosts
• **Cloud Services**

Select the entity you want to configure, for example a system on the *Technical Systems* tab.

Check the status of the configuration. For details, check the help tray in the UI.

To setup an entity, select it from the list, choose *Configure...*, and follow the instructions in the guided procedure.

**Technical Scenarios**

SAP Solution Manager automatically recognizes systems of a dual stack and registers the association.

To register Microsoft Internet Information Services (IIS) clusters, set up each IIS separately and create a monitoring scenario in the *SAP Solution Manager Administration*, if required.

<table>
<thead>
<tr>
<th>Table 5:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Document</strong></td>
</tr>
<tr>
<td>SAP Solution Manager 7.1 and 7.2 System Landscape Setup</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**3.7.1 Required Agent Versions**

On a managed system, you need different agents for root cause analysis and technical system monitoring.

- **Diagnostics Agent**
  - You can use any version of the diagnostics agent (installed agent applications will be updated automatically). Certain old versions of the diagnostics agents cannot do certificate-based authentications or agents-on-the-fly, because this requires a newer version of the agent startup framework.
  - A table with Diagnostic Agent characteristics is in the document attached to SAP Note [1365123](http://support.sap.com/swdc).
  - For new installations with SWPM, use the latest available version of the diagnostics agent, as described in SAP Note [1858920](http://support.sap.com/swdc).

- **SAP Host Agent**
  - Install the latest version of SAP Host Agent available in Service Marketplace
  - The installation files are available from [http://support.sap.com/swdc](http://support.sap.com/swdc) | Support Packages and Patches | Browse Our Download Catalog | SAP Technology Components | SAP HOST AGENT |
  - For more information on the latest version of SAP Host Agent, see SAP Note [2130510](http://support.sap.com/swdc).
  - This installation procedure is describes in SAP Note [1031096](http://support.sap.com/swdc).
  - Enable automatic update in the SAP Host Agent, so that you can update it centrally. This is described in SAP Note [1473974](http://support.sap.com/swdc).
3.7.2 SAP Solution Manager and Trusted RFC

Trusted RFC connections are set up between SAP Solution Manager and the connected managed systems, during SAP Solution Manager Configuration (transaction SOLMAN_SETUP), in the Managed Systems Setup. SAP Solution Manager does not manage connections between managed systems.

The trusted RFC connections can be used, and are secure, if the user management for SAP Solution Manager is as restrictive as for all other productive systems. In particular, creating new users and resetting passwords must be strictly controlled. The naming conventions for users must be consistent across systems.

Trusted relations between systems can be configured on different levels:

1. Trusted relationships from a system that offers services to another system (client), within these services. This kind of trusted relationship is usually realized by putting the login data of a service user of the server system, in the client system.
   Examples:
   ○ The login data of a display user (with limited authorization) of the transport management system (TMS) is entered in the RFC destination of the TMS.
   ○ The login data of a service user (with more extensive authorizations) of the central user administration (CUA) is entered in the RFC destination of the CUA.
     The login data of a service user is entered in the RFC connection, as in a normal RFC destination. Using trusted RFC gives you additional security:
     ○ The RFC server system checks the identity of an RFC client system (authorization fields RFC_SYSID and RFC_CLIENT of the authorization object S_RFCACL).
     ○ The authorizations of the service user for the authorization object S_RFCACL allow you to restrict which users (authorization field RFC_USER) in the RFC client system can use the connection, with which applications (authorization field RFC_TCODE).

2. Trusted relationships between systems, where one system accepts the authentication of the other system.
   Examples:
   ○ A Windows client accepts a Kerberos ticket of a Windows domain server, and logs its user in.
   ○ An SAP backend system accepts the SAP Logon Ticket of the SAP Enterprise Portal, and logs on the user in the target system in which the login token is entered.
   ○ An SAP system accepts an SSL client certificate in an https connection, finds the user, and logs it in with user ID.
   ○ An RFC server system accepts the trusted RFC token und logs the user in to the target system, with the same user ID as in the source system.
   The trusted RFC can be used.

If no login data is provided in the RFC destination in case 2d, the option same user is selected. The users of such a trusted RFC connection must have authorization for the authorization object S_RFCACL, with the value Y in the authorization field RFC_EQUSER, and the field RFC_USER empty or with the dummy value ’ (= inverted comma).

The trusted RFC connection has the following security attributes:

- Simple navigation (via Single Sign-On) from RFC client to RFC server.
- A user has his personal authorizations in the SAP Solution Manager system and in the connected managed systems.
- The RFC server system accepts authorization by the RFC client system.
RFC connections between SAP systems can also be secured by secure network communication (SNC), and the authorizations in the RFC client system can be limited by the authorization object S_ICF, to restrict user access rights to RFC connections.

Trusted/trusting systems: SAP Note 128447

3.7.3 System and Landscape Directory (SLD) and Landscape Management Database (LMDB)

Many functions in SAP Solution Manager require up-to-date landscape data. This is especially true for system maintenance, but also for various other applications. Since landscape data is mostly gathered outside the SAP Solution Manager system, the landscape needs to be taken into account. The main landscape management building blocks are the System Landscape Directory (SLD), and the landscape management database (LMDB). This is how to set up landscape data management:

- **SLD**
  The technical system data is gathered by self-registration of technical systems in the SLD, which contains information about software installable from the SAP Service Marketplace, and technical system data, which is mostly sent by data suppliers in the systems.

  **Tip**
  Run one central SLD on an existing Java stack in the landscape, e.g. on an SAP Process Integration system.

  To be compatible with the LMDB, and to allow synchronization, certain minimum support package levels are required, depending on your SAP NetWeaver version for the SLD. See SAP Note 2175739.
  If your central SLD does not fulfill these requirements, you can forward the landscape data to an SLD which does so, and use this for the SAP Solution Manager.

- **LMDB**
  The data from the SLD is synchronized with SAP Solution Manager LMDB. The LMDB is a central, built-in repository for all SAP Solution Manager applications that consume landscape data. All system information in the SLD is synchronized into LMDB, without user interaction. Data can be enriched manually in the LMDB. Applications like diagnostics, Monitoring and Alerting, BI Monitoring and PI Monitoring, use the LMDB data.
  When you have updated or upgraded a managed system, the information on product versions, product instances, and software components is automatically sent to the SLD, and synchronized with the LMDB, in SAP Solution Manager, so the landscape data is automatically up-to-date. If in doubt, check the information for the technical system and the related product system in transaction LMDB.
  If productive SLDs are in use, their landscape information can be forwarded to a central SLD, and then to SAP Solution Manager. This forwarding has to be configured manually for each productive system.

  **Tip**
  Do not maintain the system landscape manually, without an SLD. Best practice is a central SLD in which all systems register themselves, directly or indirectly, by data supplier forwarding. This central SLD can be outside (remote) or inside (local) SAP Solution Manager, depending on the conditions above. Configure the central SLD as the source of the landscape management database (LMDB) in SAP Solution Manager. All SLD data is propagated to LMDB automatically.
Only for landscapes with no productive Java stack outside SAP Solution Manager (as would be used for PI and WebDynpro Java), can you alternatively implement the SLD in the Java stack of SAP Solution Manager, to connect all SLD data suppliers.

**Note**

When you implement or update a scenario, you must update the Component Repository Content (SAP CR Content or SAP software catalog) in the SLD. For more information see SAP Note 669669.

<table>
<thead>
<tr>
<th>Document</th>
<th>Note/Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLD planning guide</td>
<td><a href="http://scn.sap.com/docs/DOC-8042">http://scn.sap.com/docs/DOC-8042</a></td>
</tr>
<tr>
<td>Updating the SAP Component Repository in the SLD</td>
<td>SAP Note 669669</td>
</tr>
</tbody>
</table>

### 3.8 Content Activation for Solution Documentation

SAP Solution Manager 7.2 manages SAP and customer solutions in a new way.

In SAP Solution Manager 7.1, previously used transactions like Project Administration (SOLAR_PROJECT_ADMIN), Business Blueprint (SOLAR01), and Project Configuration (SOLAR02) were set to read-only and are replaced by the Solution Documentation model.

Instead of the dual concept of solutions and projects, the new solution documentation is based on a hierarchical structure which uses a solution as the single, central point of access for all solution documentation content. You manage your solution using the Solution Administration and Solution Documentation tools which are available on the SAP Solution Manager launchpad (transaction SM_WORKCENTER).

To continue using your existing SAP Solution Manager projects from SAP Solution Manager 7.1, you need to activate your existing project content in the solution documentation. There is a comprehensive Solution Documentation Content Activation Guide that contains all activation-relevant information and activation-related activities. If you do not want to use your existing SAP Solution Manager projects from former releases, you do not need to activate them.

- Solution Documentation Content Activation Guide: https://service.sap.com/%7Esapidb/012002523100011391702015E
3.9 Service delivery in SAP Solution Manager

SAP Solution Manager is the SAP service delivery platform. This includes self-services, which can be performed by the customer, and services delivered by SAP, such as EarlyWatch, GoingLive, etc. All services are solution-specific, and can be used for all systems in the solution.

- SAP Support Services - Central preparatory note: SAP Note 91488
- Technical prerequisites for Service Delivery in SAP Solution Manager 7.2: SAP Note 2253047
- Roles for Service and Support in the SAP Solution Manager 7.2: SAP Note 2239880
- The Role of SAP Solution Manager in Remote Service Delivery: SAP Note 1170668

3.10 Multi-Tier Landscape for SAP Solution Manager

You should use at least a two-tier landscape for your SAP Solution Manager. Test new support packages, patches or configuration scenarios in a test system first. If the test is successful, the changes can be installed on the SAP Solution Manager production system. A transport between two SAP Solution Managers is usually not necessary.

Use a three-tier landscape, with transports, if you perform classic customizing or own developments in SAP Solution Manager. In this environment, changes must be developed in the development system, tested in the quality assurance system, and transported into the productive system. The usual scenarios for this case are change request management and service desk.

To be able to use all cross-functionality, such as Change Analysis, Quality Gate Management and Change Request Management, connect all managed systems to at least the SAP Solution Manager production system. For testing, also connect some managed systems to the quality SAP Solution Manager or development SAP Solution Manager.

The Introscope Enterprise Manager (IS EM) can be shared in a multi-tier landscape, or alternatively one dedicated IS EM can be used for each tier. Byte code agents only connect to one IS EM.
3.11 Sizing for SAP Solution Manager

Upgrade Sizing

The master guide (see link below) describes upgrade sizing for an estimate of how hardware resources will change after a transition of SAP Solution Manager 7.1 to 7.2.

Initial Sizing

The Quick Sizer is a free, Web-based tool to make the initial hardware sizing of SAP solutions easier and faster. It has been developed by SAP, in close cooperation with all platform partners. With the Quick Sizer, you can translate business requirements into technical requirements. In the Quick Sizer, you fill in an online questionnaire based on your key business figures to calculate an economically balanced system layout that matches your company’s business needs.

The Quick Sizer calculates CPU, disk, memory and I/O resource categories for both classic and SAP HANA infrastructures, based on business throughput numbers and on the number of users working with the different SAP solutions. The format is independent of the hardware and database. The tool gives you an idea of the system dimensions required to process the expected workload. This is especially useful for initial budget planning. Sizing is an iterative process that continuously brings together customers, hardware vendors, and SAP. Direct links to SAP’s hardware vendors facilitate the tender procedure.

The sizing toolkit contains components (guides, cookbook, and spreadsheet) for an SAP Solution Manager sizing project, and offers the following functions:

- Determining the hardware resources required to implement SAP Solution Manager for a given landscape.
- Determining the corresponding SAP Solution Manager cluster configuration.
- Configuring SAP Solution Manager and CA Enterprise Manager, for performance and scalability.
- Quick Sizer tool (for initial sizing): [https://service.sap.com/quicksizer](https://service.sap.com/quicksizer)
- Detailed scenario description (including upgrade sizing): SAP Solution Manager Master Guide: [https://service.sap.com/%7Esapidb/012002523100009367952015E](https://service.sap.com/%7Esapidb/012002523100009367952015E)
4 Monitoring SAP Solution Manager

Monitoring is an essential task in the management of SAP technology, and is described in this section. Proactive, automated monitoring helps ensure reliable operations in your SAP system environment. SAP provides you with the infrastructure and recommendations to set up your alert monitoring, to recognize critical situations for SAP Solution Manager as quickly as possible.

Proactive, automated monitoring helps ensure reliable operation of your SAP system environment. To ensure the correct functioning of the monitoring and alerting infrastructure, and of other central functions, the SAP Solution Manager system itself must be working without errors and with good performance.

4.1 Monitoring and Alerting Infrastructure

With SAP Solution Manager 7.1, SAP has introduced the new monitoring and alerting infrastructure, an effective and reliable tool for monitoring the whole SAP solution landscape. Beside the SAP Solution Manager itself, there are different technical components which are needed to make this Monitoring and Alerting Infrastructure work for the managed systems. These components include the Introscope Enterprise Manager and Diagnostics agents, the SAP Host Agent and the Introscope Byte Code Adapter. This infrastructure makes it possible to configure the Technical Monitoring, which includes metrics for system, database and host monitoring. It is also useful to integrate the Technical Monitoring of SAP Solution Manager itself into the overall monitoring concept.

- Monitoring and Alerting Infrastructure (MAI): SCN Monitoring and Alerting Infrastructure

4.1.1 SAP Solution Manager Self-Monitoring

Running IT for business-critical applications (such as monitoring or IT Service Management), requires monitoring of the SAP Solution Manager itself. This can be done with the SAP Solution Manager self-monitoring, which is based on the new monitoring infrastructure.

You can configure this in SAP Solution Manager Configuration, under Application Operations Self-Monitoring.

You can access the self-monitoring in the SAP Solution Manager Administration group, under Self-Monitoring. It offers the following views:

- **Self-Monitoring Overview**

- **Self-Monitoring Alert Inbox**
The most important metrics are displayed, with their status and the number of associated alerts, by technical component. From the alerts, you can go directly to analysis tools, like ECE Performance History, Log Viewer and Agent Framework.


### 4.1.1 Self-Monitoring of SAP Solution Manager Infrastructure for Managed Systems

To keep track of the whole monitoring infrastructure, it is also important to check all involved components on the managed systems. The self-monitoring for the managed systems is set up together with the SAP Solution Manager self-monitoring.

You can access the self-monitoring in the SAP Solution Manager Administration, under Self-Monitoring. Information is grouped by the selected technical systems which have been set up and connected to SAP Solution Manager. You can check, for example, the statuses of RFC, monitoring, agents and plug-ins.

### 4.1.2 Connection Monitoring

RFC connections to the managed systems are required for the technical operation of SAP Solution Manager. With connection monitoring, which is also part of the new monitoring and alerting infrastructure, you can check the connections to business-critical systems, in real-time.

You can, for example, monitor the connection performance, and define scenarios of all systems on which certain business scenarios depend. It is also integrated with incident and notification management, and with central exception management. So you can access alerts in the Alert Inbox of Technical Monitoring, display exceptions in the Exception Management Cockpit, and generate notifications or incidents automatically.

You can configure this in SAP Solution Manager Configuration, under Application Operations Integration Monitoring.


### 4.2 SAP EarlyWatch Alert in SAP Solution Manager

SAP EarlyWatch Alert (EWA) is a monitoring service for SAP customers, to monitor SAP systems in the solution landscape. All customers should monitor all connected managed systems, centrally, in SAP Solution Manager, to
have access to all important information from a central location. You can also use SAP Solution Manager to tailor service level reports to your requirements, for example, by using customizable transactions and threshold values to trigger the creation of the reports.

You can receive a regular e-mail with the reports for specific systems or solutions, to monitor the content of the SAP EarlyWatch Alert and service level reports.

You can configure this in SAP Solution Manager Configuration, under Application Operations » EarlyWatch Alert Management.

### 4.3 Other Problem Analysis and Monitoring Tools

#### 4.3.1 System and Application Monitoring

Several SAP Solution Manager components use the application log in transaction SLG1. They are basic SAP Solution Manager functions, but you can also monitor the application log for other applications in SAP Solution Manager. As well as the usual SAP NetWeaver-based log object, the most important log objects for SAP Solution Manager are shown in the following table:

Table 7: Log Objects in SLG1

<table>
<thead>
<tr>
<th>Object</th>
<th>Subobject</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>/TMWFLOW/CMSCV</td>
<td>*</td>
<td>Application log /TMWFLOW/</td>
</tr>
<tr>
<td>AISDK</td>
<td>*</td>
<td>SAP Solution Manager service desk</td>
</tr>
<tr>
<td>AI_LMDB</td>
<td>*</td>
<td>Landscape management</td>
</tr>
<tr>
<td>AGSGEN</td>
<td>*</td>
<td>Generic extractor</td>
</tr>
<tr>
<td>CCDB</td>
<td>*</td>
<td>Configuration and change database</td>
</tr>
<tr>
<td>CRM_SOCM</td>
<td>*</td>
<td>Change Request Management</td>
</tr>
<tr>
<td>DIAGNAV</td>
<td>*</td>
<td>SAP Solution Manager diagnostics navigation</td>
</tr>
<tr>
<td>E2E_ALERTING</td>
<td>*</td>
<td>Monitoring and Alerting Infrastructure</td>
</tr>
<tr>
<td>E2E-CA</td>
<td>*</td>
<td>E2E change analysis</td>
</tr>
<tr>
<td>E2E-DIAG</td>
<td>*</td>
<td>SAP Solution Manager diagnostics</td>
</tr>
<tr>
<td>E2E-EA</td>
<td>*</td>
<td>E2E exception analysis</td>
</tr>
<tr>
<td>E2E-WA</td>
<td>*</td>
<td>E2E workload analysis</td>
</tr>
<tr>
<td>EEM</td>
<td>*</td>
<td>End User Experience Monitoring</td>
</tr>
<tr>
<td>LMDB</td>
<td>*</td>
<td>Landscape management database</td>
</tr>
<tr>
<td>RBE40</td>
<td>*</td>
<td>Solution documentation assistant</td>
</tr>
<tr>
<td>Object</td>
<td>Subobject</td>
<td>Area</td>
</tr>
<tr>
<td>--------</td>
<td>-----------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>SDOK</td>
<td>*</td>
<td>SAP Knowledge Provider</td>
</tr>
<tr>
<td>SOLAR</td>
<td>*</td>
<td>SAP Solution Manager</td>
</tr>
</tbody>
</table>

Reorganizing SAP Solution Manager application logs: SAP Note 1911102

Application Operations Guide - SAP Solution Manager 7.2 SPS 4

Monitoring SAP Solution Manager
SAP provides an infrastructure to help your technical support consultants and system administrators to manage all SAP components effectively, and perform all tasks related to technical administration and operation.

You can find more information about the underlying technology under Technical Operations for SAP NetWeaver at http://help.sap.com/netweaver/SAP NetWeaver 7.4 System Administration and Maintenance Information.

5.1 SAP Solution Manager Administration

The SAP Solution Manager Administration group in the launchpad provides applications in different views, which are described below.

The Landscape API application in the SAP Solution Manager Administration group provides an overview of all components of the following landscape entities: technical systems, technical scenarios, hosts, databases, external services, PPMS data (SAP software catalog, visualization, and network devices).

Under Jump To..., you can start further functions:

- System details from the landscape management database (LMDB). You can go directly to the LMDB editor for technical systems and other entities, where you can check and complete technical system information.
- Maintenance of RFC connections.
  You can manage the following RFC connections for managed systems:
  - READ RFC
  - TMW RFC
  - RFC for Solution Manager applications (login and trusted)
  - Back RFC (with user and trusted)
- Managed Systems Configuration
- Configuration Change Reporting

The applications for system status and details (expand Details column) contain information to verify the modeling of the system landscape defined in SAP Solution Manager, including detailed information about the following:

- System status providers
- System details, such as:
  - Software component versions
  - Clients
  - Product instances
  - Parameters
  - Database

With the Landscape Management tile, you can directly start the landscape management database (LMDB). Here you can display and edit information on all connected technical systems, hosts, and transport domains.
With the Technical Scenarios tile, you can start the overview of technical scenarios. You can display details, edit, create, and delete scenarios.

There are several landscape-independent administration applications in the SAP Solution Manager Administration group, to access infrastructure views.

In the User Administration application you can manage the users in SAP Solution Manager:

- ...
- ...

The Extractors - Administration and the Extractors - Alerting Administration applications give you information about the data extraction, across all managed systems. This includes the following:

- Status information (failed, banned, inconsistent extractors) for extractors and the resource manager
- Configuration of resource caps
- Details configuration of extractors
- Performance data
- Exception from the extractor framework

The Agents application is the central point of maintenance for all diagnostics agents, across all managed systems. It manages the following:

- Access to the agent administration
- Agent role assignment for data collection
- Diagnostics agent performance metrics
- Exceptions from the agent infrastructure

The Self-Monitoring application shows the SAP Solution Manager self-check. It provides information about the status of the managing system and of all managed systems.

The Analyze Reporting application is one of the main infrastructure components of an SAP Solution Manager system. It provides detailed information on the following:

- The overall status of your BW system
- Overall usage data and breakdown of space used per scenario
- Reporting scenario setup
- Detailed log information for each reporting use case, with self-checks for error analysis

The Self-Monitoring application shows the SAP Solution Manager self-diagnosis. ...

The Configuration Change Database application ...

The Rapid Content Delivery application ...

The CA Introscope application allows you to manage your CA Introscope Enterprise Manager (EM) landscape, centrally:

- See the status and versions of the Introscope Enterprise Manager
- Perform central user administration
- Import existing installations
- Install new EM
- Maintain EM configuration parameters
- Performance metrics

The Templates - Root Cause Analysis view includes access to the templates for the following:
Configuration and change reporting stores
Extractors
Work center view configuration
URL framework (this is for troubleshooting and configuration, and it should be handled with care.)

The **Alerting Framework** ( = Alert Inbox ???) application gives you detailed information on the status, configuration, performance, and exceptions, for the main infrastructure elements of the alerting infrastructure:

- Status check for ‘pull’ and ‘push’ data collection
- Traces of the alert calculation engine
- Load balancing configuration
- Detailed performance metrics
- Exceptions of the alerting infrastructure

5.2 Starting and Stopping

When you start the SAP System, you start the system database, the application server, and the processes of which the system consists. In the simplest case, an SAP system consists of only a database and a single application server.

There are different processes, depending on the SAP system and operating system platform.

You can start and stop systems and instances centrally, in the following ways:

- **SAP Management Console** for all platforms (as of SAP NetWeaver 7.0)
- **Technical Administration** in SAP Solution Manager
- **Microsoft Management Console** under Windows


5.3 Backup and Restore

As SAP Solution Manager is based on SAP NetWeaver, all general SAP NetWeaver backup and restore strategy recommendations apply. Depending on the processes you run on the SAP Solution Manager system, you may also need to back up external components, and handle cross-system data dependencies.

The backup and restore strategy for your system landscape should be embedded in overall business requirements, and include your company’s entire process flow, not only SAP systems. The backup and restore strategy must cover disaster recovery processes, such as loss of a data center through fire. You must ensure that backup devices are not also lost, as well as the normal data storage (separation of storage locations).

- SAP recommends that you run the database in archive mode
All actions on the database that modify data are recorded by the database, and written to a transaction log. With regular full backups of your database (offline or online), and a complete set of transaction logs since the last backup, you can restore a crashed database to any point in time before the crash.

- Backup your database every day

Back up the log files several times a day. For more information, see SAP Help Portal, at:


A backup saves business data and keeps the downtime of the system landscape to a minimum during restoration of the infrastructure and business data. The main issues in a backup and recovery process are:

- Develop a backup concept in the implementation phase.

A backup process must ensure logical and physical consistency. Consistency technology allows you to create a consistent image (or consistent copy) of a federated system landscape, without taking the systems offline. There are currently two different types of consistency technologies available:

- Coordinated database suspension
- Consistent split technology on storage level
- Consider a detailed backup and recovery concept, if you have a distributed business system landscape. This concept must account for both the business data in databases, and the runtime infrastructure.
- Do not restrict the backup and recovery concept for your system landscape and system components, to SAP systems. It should include all business requirements, and the entire process flow in your enterprise.
- Consider the following elements, when you plan a backup and recovery strategy for application, software, and configuration files:
  - Operating system
  - Database data files
  - Database software
  - SAP software and file systems
  - Log files (SAP and others)
  - Software of other system components (file systems and configuration files)
- Perform a backup in the following cases:
  - After the initial installation and configuration of the system landscape
  - After changes, such as changes to the configuration, software upgrade of individual components, or replacement of components in the system landscape. This depends on the frequency of such changes. Back up components regularly, to ensure that you can restore and recover them if there is a system failure.

### 5.3.1 Backup Introscope Enterprise Manager

The CA Introscope Enterprise Manager is temporary storage for workload-related data. In the standard setup, this data is transferred to the BI of the SAP Solution Manager once an hour, so a separate backup of this component is usually not needed.

SAP recommendation: No backup strategy is required for CA Wily SmartStor.
However, if you want to backup this component, its directories have to be backed up regularly:

CA Introscope supports only offline backup, with the following procedure

- Shutdown CA Enterprise Manager
- Backup Smartstor (file backup)
  - The directory `../data` contains all agent data
  - The directory `../traces` contains all Wily trace data.
- Restart Enterprise Manager

## 5.4 Periodic Tasks

This chapter describes the automatic tasks that run periodically to keep the application running over time. Such tasks may be required on component level, and are relevant in all scenarios that use the component. The mapping is in the chapter scenario/component matrix, above. Other tasks may be relevant for some business scenarios only. Monitor the performance of these tasks regularly.

Also schedule the standard basis jobs, in transaction SM36 in SAP Solution Manager.

### 5.4.1 Background Processing in SAP Solution Manager

Background processing in SAP Solution Manager does not require regular administration, the administrator just has to ensure that no jobs are aborted. The standard jobs are scheduled automatically in the SAP Solution Manager setup (transaction SOLMAN_SETUP) under Basic Configuration → Schedule Jobs. Some SAP Solution Manager applications may require additional background jobs.

- Background processing in SAP Solution Manager: SAP Note 894279
- Standard jobs, reorganization jobs: SAP Note 16083
- ST: E2E Diagnostics - BI Housekeeping - Information: SAP Note 1480588

## 5.5 User Management

User management is a critical task in SAP Solution Manager, which is a single-client system, so users can only be differentiated by an authorization concept. Work centers which separate functions between different users have been available since 7.01 SP15.

5.5.1 User Administration and Authentication

A lot of RFC read connections are used in SAP Solution Manager. Users must be able to get information from the managed systems and send data to SAP Solution Manager.

The RFC wizard generates the RFC connections and users automatically, in the managed systems and SAP Solution Manager. If managed systems are in a central user administration, this user must be defined previously in the Central User Administration (CUA) system. You can use the generated users with the setup. Some applications expect named RFC connections. If this connection is not available, authorize the RFC connection user manually.

Business partners must be defined in transaction BP (Maintain Business Partners) for some scenarios, such as Service Desk, Change Request Management.

The following table provides an overview of user management tools for SAP and third-party systems:

Table 8:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP User Management Engine (UME) for ABAP Engine (transaction SU01)</td>
<td>CUA for SAP Web Application Server</td>
</tr>
<tr>
<td>Profile Generator (transaction PFCG)</td>
<td>Tool for Web Application Server role administration, especially authorization administration</td>
</tr>
<tr>
<td>Maintain Business Partners (transaction BP)</td>
<td>Maintenance of Business Partners</td>
</tr>
<tr>
<td>SAP User Management Engine Administration Platform</td>
<td>Tool for administration of portal users and roles</td>
</tr>
<tr>
<td>SAP J2EE Engine user management using the Visual Administrator</td>
<td>Tool for administration of J2EE security roles, as explained in the SAP Solution Manager Security Guide</td>
</tr>
</tbody>
</table>

5.5.2 Create Users and Business Partners for End Users

The following lists give an overview of functions that require users in the SAP Solution Manager system and managed systems, and functions that require business partner users in the SAP Solution Manager system:

- **Functions that require users for SAP Solution Manager and Managed Systems**
  - Implementation: If you use Implementation and subsequently Customizing Distribution, to configure your managed systems centrally, trusted RFC connections, which always require users in both systems, are required.
  - Test Suite: When testers test in managed systems. The test suite uses trusted RFC connections, which require users in both systems.
  - Service Desk: for key user, see the example below.
  - System Administration and System Monitoring (and Business Process Operations): If the system administrator needs to check transactions in managed systems via SAP Solution Manager, using a trusted RFC connection, he needs a user.
  - Change Request Management: If the users in the Change Request Management process log on to the managed systems via SAP Solution Manager, they need a user.
  - Root Cause Analysis: The user SAPSUPPORT is created automatically in the SAP Solution Manager system and in the managed systems, during Root Cause Analysis configuration.
• Functions that require business partners based on users in SAP Solution Manager
  ○ Delivery of SAP Services: If you use Issue Management.
  ○ Service Desk: For key user and processors of service desk messages, see the example below.
  ○ Change Request Management
  ○ Job Scheduling Management
  ○ Change Control: For the Maintenance Optimizer tool.
• Create users with transaction SU01
  ○ Enter your user and choose change.
  ○ Enter the required data and save.
• Address Data
  ○ First Name and Last Name
    ○ Function: Digital Signature
  ○ E-Mail
    ○ Function: Business Process Operations
    ○ Function: Solution Directory (Check in/Check out)
    ○ Function: Issue Management
    ○ Function: Service Desk
    ○ Function: E-Learning Management

The user can receive and send e-mails. The e-mail address can be any address known to the mail server.

Create a business partner with transaction BP_GEN:

1. Choose User List Add system.
2. Select a system from which you want to create business partners.
3. Select users.
4. Choose Edit Create Business Partner.
5. Confirm your entries.

Example
You want to create end users for Service Desk functionality. The system landscape consists of SAP Solution Manager and two managed systems, three systems in total. Create all end users known to SAP Solution Manager, as Business Partners, in the SAP Solution Manager system and the managed systems.

1. Create users for all end users in all three systems, as described above.
2. Create business partners for end users, in the SAP Solution Manager system, as described above.

• Create user or business partners automatically
To ensure that users of managed systems can, for example, check the processing status of support messages in SAP Solution Manager, they must be created as users and business partners in SAP Solution Manager. The report AI_SDK_USER_BP_GEN determines new users in the managed systems.
You can perform the following functions with this report:

• List new users, by comparing SAP Solution Manager and managed systems:
  ○ As administrator, check in which managed systems there are new users.
  ○ As SAP partner, find new managed systems for a customer, or new users in a customer’s managed systems.
• If your security policy permits it, you can create or update new users and business partners in SAP Solution Manager automatically.
Create a variant, and schedule the report as a weekly background job. For more information, see the help.

### Table 9: Create Users and Business Partners for End Users

<table>
<thead>
<tr>
<th>Topic</th>
<th>Transaction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Management</td>
<td>SU01</td>
<td>Create Users</td>
</tr>
<tr>
<td>Create Business Partner</td>
<td>BP_GEN</td>
<td>If you change e-mail addresses for users, update the business partners</td>
</tr>
</tbody>
</table>

Create Users of Business Partners Automatically


### 5.5.3 Update Authorizations after Support Package Upgrade

After the new installation, and an update of your SAP Solution Manager system, update your tables with new default field values for authorization objects, in transaction SU25. This is especially relevant for all new authorization objects delivered with an update.

⚠️ **Caution**

When you update your system, you must import new roles and profiles from client 000 into your productive client.

**Procedure**

1. Call transaction **SU25**.
2. Choose *Information about this transaction*. The dialog explains in detail what you need to do.

Tip

Perform at least the first step.

### Table 10:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Transaction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Generator: Upgrade and First Installation</td>
<td>SU25</td>
<td>Update authorizations after support package upgrade</td>
</tr>
</tbody>
</table>
5.5.4 Adapt Work Center Queries

End users and system administrators can adjust work centers to their needs.

- **End User**

- **System Administrator**
  - Configure query settings for all end users, or customize the logon screen for WebDynpro applications.
  - Delete queries from database: Execute program POWL_D01.
  - Refresh active POWL queries: Execute program POWL_WLOAD.

For more information see IMG activity (transaction SPRO), under [Technical Settings > Work Center > Adjust Queries](#).

5.5.5 Create End User Roles

You need to grant authorizations for which SAP does not deliver template roles, in SAP Solution Manager and managed systems. To assign the correct authorization, you can create a dedicated role for them. This section describes how to create your own roles, using the example of critical authorizations of transactions **SU01** (User Management) and **PFCG** (Role Management).

- **Creating a Role in Transaction PFCG**
  1. Choose transaction **PFCG**.
  2. Enter a role name in your namespace, for example **ZSU01_PFCG**, and choose **Single Role**.
  3. Enter a description for your role, for example ‘Full authorization for **SU01** and **PFCG**’.
  4. Go to the tab menu and enter the transactions **SU01** and **PFCG**.
     - The authorization objects required in role creation are maintained in transactions. When you enter a transaction in the menu tab in your role, the system traces all authorization objects required for this transaction.
  5. Save your role. You are asked for a transport request.

- **Maintaining Authorization Objects**
  Default authorization objects delivered by SAP contain only minimal authorization. To grant full authorization to authorization objects, edit them:
  1. Choose the **Authorizations** tab in transaction **PFCG**.
  2. Choose **Change**.
  3. Maintain all activity values per authorization object, according to your needs, for instance, if you want to grant full authorization, choose all activities.

⚠️ **Caution**

All authorization objects need to have a green traffic light. If you are not sure about the function of the authorization object, double-click the green line. The system opens the documentation for this object in a separate window.
4. Generate the profile.
5. To assign this profile to a user, choose the User tab, add your user in the table, and perform the user comparison.
6. Save.

5.5.6 Assign Roles to Users

After you have generated profiles from roles, assign the role to your users, in one of the following ways:

- In transaction SU01:
  1. Enter the user and choose Edit.
  2. Choose the Roles tab.
  3. Enter your role.
  4. Save.
- In transaction PFCG:
  1. Enter your role and choose Edit.
  2. Choose the Users tab.
  3. Enter the user name.
  5. Save.

See also SAP Note 1272331 (PFCG: Status of user comparison).

5.6 Decommissioning Systems That Are No Longer Used in SAP Solution Manager

Since SAP Solution Manager 7.1 SP11, there is a new guided procedure to decommission systems.

In the SAP Solution Manager Configuration application, choose Managed Systems Configuration, and select the technical system to be deleted. Choose Advanced Options Decommissioning and follow the guided procedure.

The existing BW housekeeping will automatically remove orphan data related to the decommissioned system, after the decommissioning.

For more information, see the embedded help texts.
High Availability

There are no general high availability (HA) requirements for SAP Solution Manager. With HA applications, you can maximize downtime security and minimize downtimes, by controlling the growth of redundant data and implementing control logic for redundant systems.

At SAP, HA is always focused on business applications and their components. SAP relies on the HA applications of partner products for components which are required as infrastructure, such as the operating system, database, and hardware.

Collaborative business can give you a competitive advantage. This means integrating existing heterogeneous system landscapes to include business partners, customers, and suppliers. You may also have requirements of your own, depending on the availability requirements of the existing IT management processes.

For more information, see [http://scn.sap.com/docs/DOC-7848](http://scn.sap.com/docs/DOC-7848).
7 Archiving and Data Deletion in SAP Solution Manager

7.1 Archiving Functionality in Core SAP Solution Manager

SAP Solution Manager 7.2 has only limited archiving functionality. The following objects, which usually do not contain a lot of data, cannot be archived with default SAP archiving mechanisms:

- SAP Solution Manager solution documentation and solution administration
- CRM transactions, such as service tickets, change requests, change documents and issues.
- Monitoring data in central performance history database
- Test packages and test cases
- Documents in SAP Solution Manager

Service Reports in Solutions

Service sessions such as SAP EarlyWatch Alert reports, service level reports, and the documents attached to them, can be archived in SAP ArchiveLink. SAP Note 546685 explains the functionality and setup in detail. SAP Note 1092503 describes how to automate archiving. You can archive documents from the following areas:

- Service reporting
- System availability reporting
- System administration reporting
- Change management reporting
- Service desk reporting
- Issue and top issue reporting
- Expert-on-demand reporting

7.2 Alternative Storage and Deletion Strategies

Although generic archiving is not supported by most scenarios in SAP Solution Manager, there are several functions to reduce the amount of data in the database. A customer can save the objects by other methods (put objects in transport requests using migration functions, store reports on separate file server, use SAP content server for knowledge warehouse documents, or back up the whole system before data deletion).

- Solutions
  You can delete solutions in solution administration.
- Test Suite
Test plans and test packages can be deleted in the Test Plan Management application. Deletion of a test plan or test package, and removal of an assigned tester, will delete corresponding test execution results. Test results can be consolidated and extracted in a test report, which can be stored as an MS Word document. Defects (service tickets created during tests) cannot be archived or deleted – see Archiving Functionality in Core SAP Solution Manager [page 32]. eCATT objects (system data container, test data container, test scripts, test configurations) are repository objects, and can therefore be saved or stored with transport mechanisms. They can be downloaded as XML files. They can be deleted in the Test Repository applications, or in transaction SECATT. eCATT logs can be archived. For more information, see the Archiving Logs at http://help.sap.com.

- **Business partners**
  Obscure business partners can be deleted with transaction BUPA_DEL, but only if they have not been used in a service transaction.

- **Data extracted to Business Intelligence (BI)**
  If data from SAP Solution Manager has been extracted for BI (reporting on EWA raw data, CPH monitoring data, LMDB data, root cause analysis data, and Business Process Monitoring data), the BI aggregation and deletion mechanisms can be used to reduce the amount of data in the BI database.

### 7.3 SAP Notes for Additional Information

- Basis message: Deletion flag status: SAP Note 544295
- EarlyWatch Alert Archiving: SAP Note 2075483
- Archiving in Solution Manager (Operation): SAP Note 546685
- Report to delete the basis notifications with deletion flag: SAP Note 566225
- SAP Solution Manager - reduce data volumes: SAP Note 638785
- Deleting a service process with support message: SAP Note 845433
8 Software Change Management

Software change management standardizes and automates software distribution, maintenance, and testing procedures for complex software landscapes, and multiple software development platforms. These functions support your project, development, and application support teams.

The goal of software change management is consistent, solution-wide change management that allows for specific maintenance procedures, global rollouts (including localizations), and open integration with third-party products.

This section provides additional information about the most important software components.

After installing, upgrading, or updating SAP Solution Manager, check the basic configuration in transaction SOLMAN SETUP. After you have implemented a new support package or support package stack, check your configuration settings for new and updated configuration tasks. This is especially important for the basic settings. For instance, with every newly-delivered WebDynpro application, its ICF service needs to be activated.

8.1 Agents Consideration

Before you update any software in SAP Solution Manager, the SMD agent connectivity layer must be set to maintenance mode, in the Agents application.

All agents will be in “sleep” mode, waiting to reconnect when SAP Solution Manager returns to normal operation mode. Agent contents (runtime and agent application: agelets) are automatically updated to the latest version after an upgrade or update of the SAP Solution Manager to which they are connected.

8.2 Support Packages and Patch Implementation

Note

ST software component support packages require certain SAP_BASIS and BBPCRM support packages. Support package stacks combine compatible support packages for SAP Solution Manager software components. Always update complete SAP Solution Manager support package stacks.

You can download them either from the SAP Software Download Center at https://support.sap.com/swdc Support Packages and Patches, or by calculation with the Maintenance Planner (http://help.sap.com/maintenanceplanner).

SAP Solution Manager has several software components which have their own release strategies. For more information, see the following SAP Notes:
• Release strategy for SAP Solution Manager (ST): SAP Note 394616
• Release strategy for add-on ST-PI: SAP Note 539977
• Release strategy for Solution Manager Service Tools (ST-SER): SAP Note 569116
• Installing and updating content for SAP Solution Manager: SAP Note 608277
• Release strategy for Implementation Content (ST-ICO): SAP Note 631042
• SAP Solution Manager usage data: SAP Note 939897
• SAP Solution Manager 7.x Extension Add-Ons: SAP Note 1109650
• Authorizations in SAP Solution Manager system: SAP Note 1562694

8.3 SAP Solution Manager Upgrade and Maintenance

You can upgrade or update SAP Solution Manager with the Software Update Manager (SUM), which is in the Software Logistics Toolset (SL Toolset).

There are different procedures for upgrading to, and updating, SAP Solution Manager 7.2:

**Upgrading from SAP Solution Manager 7.1 to 7.2:**

1. Perform the pre-processing in 7.1:
   
   
   - [Technical Administration] [Guided Procedure Management] [Technical Systems] [← select the SAP Solution Manager system] [Guided Procedure] [Application Area: Technical Administration] [← filter for "Preprocessing for SolMan SW Maintenance"] [Execute] [New Instance].

   **Note:** Create only one guided procedure instance in this release upgrade process. Use the same instance if there are multiple stakeholders in the upgrade.

   - Prepare to activate the content of your solution.

2. Perform the post-processing in 7.2:

   - [SAP Solution Manager Configuration] [SOLMAN_SETUP] [Related Links] [Maintenance] [Post-processing Solution Manager Software Maintenance].

   **Note:** Create only one guided procedure instance in this release upgrade process. Use the same instance if there are multiple stakeholders in the upgrade.

   - Activate the solution documentation content in 7.2.

**Updating the support package stack of SAP Solution Manager 7.2**

Follow the two guided procedures in the [SAP Solution Manager Configuration](https://help.sap.com/viewer/p/SAP_Solution_Manager/) under [Related Links → Maintenance], which describe the additional steps to implement the latest Support Package stack on both the ABAP and Java systems:

- *Pre-Processing Solution Manager Software Maintenance*
- *Post-Processing Solution Manager Software Maintenance*

  **Note:** Create only one guided procedure instance (per guided procedure), each time you plan to implement a new Support Package stack, on both the SAP Solution Manager 7.2 ABAP and Java systems.

  Use the same instance if there are multiple stakeholders in the update process.

  - Use the [guided tour](https://help.sap.com/viewer/p/SAP_Solution_Manager/) and the [Overview](https://help.sap.com/viewer/p/SAP_Solution_Manager/) of the [Mandatory Configuration](https://help.sap.com/viewer/p/SAP_Solution_Manager/) to see whether some activities still need to be perform after the update. If you select an entry in the [Overview](https://help.sap.com/viewer/p/SAP_Solution_Manager/) table, and “To be done” as Show filter for
the second table, you see the activities which are still open for that configuration scenario. The system updates this list automatically.

Table 11:

<table>
<thead>
<tr>
<th>Document</th>
<th>Note/Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Logistics Toolset</td>
<td><a href="http://service.sap.com/sitoolset">http://service.sap.com/sitoolset</a> → Software Logistics Toolset 1.0 → Documentation → System Maintenance</td>
</tr>
<tr>
<td>Further SAP Solution Manager 7.2 Upgrade Information</td>
<td>SAP Note 2227300</td>
</tr>
<tr>
<td>Solution Documentation Content Activation</td>
<td><a href="https://service.sap.com/%7Esapidb/012002523100011391702015E">https://service.sap.com/%7Esapidb/012002523100011391702015E</a></td>
</tr>
</tbody>
</table>
| Update your authorizations                            | https://help.sap.com/solutionmanager72 Application Help <release and language> Configuration | SAP Note 1236420
9 Troubleshooting

9.1 Connection to SAP

To send data to SAP, an SAP Support Portal connection, an RFC connection (SAP-OSS) and a support hub connection, are required. They are set up in SAP Solution Manager Configuration (transaction SOLMAN_SETUP) under Mandatory Configuration > System Preparation > Set Up Connections to SAP.

Note
SAP Note 2000132
Configuring RFC connections to the SAPNet R/3 front end (OSS)

9.2 SAP EarlyWatch Alert

SAP EarlyWatch Alert (EWA) is a good indicator of the functioning of the RFC connections, so check EWA regularly in the SAP EarlyWatch Alert Reports application, and select a managed system. If something is wrong with the EWA data collection, a red flag or a grey icon is displayed.

In this case, check the RFC connections and SDCC. For more information, see SAP Note 216952 "Service Data Control Center (SDCC) – FAQ" and SAP Note 762696 "Grey rating for EarlyWatch Alert".

9.3 Self-Diagnosis

The Self-Diagnosis application checks the system requirements for SAP Solution Manager operations, to identify and solve runtime or configuration errors.

You can customize SAP Solution Manager self-monitoring, to avoid red alerts. In Self-Diagnosis, choose Self-Diagnosis Settings and select and activate the relevant SAP Solution Manager, functions, managed systems and alerts.

It runs daily, in the background, by default (SM:SELFDIAGNOSIS job). You can also run it manually, at any time, for example, to check whether a problem indicated by alerts in the previous analysis has been resolved.
The self-diagnosis checks the RFC connection, batch jobs, and performance values.

You can display the self-diagnosis results in various levels of detail:

- SAP Solution Manager alerts: specific to the SAP Solution Manager system
- Managed systems alerts: for example, to check whether your user has authorization to access managed systems

### 9.4 CA Introscope

To check whether the CA Introscope is running properly, proceed as follows:

- Connect to your CA Introscope WebView via web browser (standard): http://hostname:8081/webview/jsp/login.jsp. If the logon screen of your WebView does not appear, CA Introscope Enterprise Manager may not be active.

Choose SMD > Diagnostics Setup > Managed Systems > Introscope Agent and check which Introscope Agent is running for the system.

Ensure that the version of your agent is the same as the version on SAP Solution Manager. The equals icon indicates that the version is up-to-date.

Check that CA Introscope Enterprise Manager receives information from CA Introscope Agent.

For more information, see the CA Introscope User Guide, SAP Note 797147 (Introscope Installation for SAP Customers), and SAP Community Network: Introscope.

### 9.5 Logging and Tracing

Logging and tracing is essential to analyze problems in the Java-based parts of SAP Solution Manager, which all use the standard logging of AS Java. This can be configured using the log configuration function of the SAP NetWeaver Administrator, under Problem Management > Logs and Traces > Log Configuration. The main logging categories and tracing locations are in the tables:

<table>
<thead>
<tr>
<th>Table 12: Logging Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging Category</td>
</tr>
<tr>
<td>/Applications/AdminConsole/*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 13: Tracing Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing Locations</td>
</tr>
<tr>
<td>com.sap.sup.admin.*</td>
</tr>
<tr>
<td>com.sap.smd.server.*</td>
</tr>
</tbody>
</table>
### Table 14: Related Information

<table>
<thead>
<tr>
<th>Logging Category</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP NetWeaver Administrator</td>
<td><a href="http://help.sap.com/saphelp_nw74/helpdata/en/49/49b19720cc3b5be10000000a42189b/frameset.htm">http://help.sap.com/saphelp_nw74/helpdata/en/49/49b19720cc3b5be10000000a42189b/frameset.htm</a></td>
</tr>
<tr>
<td>Solution Manager Java application logs and operation</td>
<td>SAP Note <a href="http://help.sap.com/saphelp_nw74/helpdata/en/49/49b19720cc3b5be10000000a42189b/frameset.htm">1911751</a></td>
</tr>
</tbody>
</table>

### 9.6 Other Important Notes

Inbound qRFC Error/unwanted BDocs on Solution Manager system: SAP Note [1960627](http://help.sap.com/saphelp_nw74/helpdata/en/49/49b19720cc3b5be10000000a42189b/frameset.htm)
Important Disclaimers and Legal Information

Coding Samples

Any software coding and/or code lines / strings (“Code”) included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, unless damages were caused by SAP intentionally or by SAP’s gross negligence.

Accessibility

The information contained in the SAP documentation represents SAP’s current view of accessibility criteria as of the date of publication; it is in no way intended to be a binding guideline on how to ensure accessibility of software products. SAP in particular disclaims any liability in relation to this document. This disclaimer, however, does not apply in cases of willful misconduct or gross negligence of SAP. Furthermore, this document does not result in any direct or indirect contractual obligations of SAP.

Gender-Neutral Language

As far as possible, SAP documentation is gender neutral. Depending on the context, the reader is addressed directly with “you”, or a gender-neutral noun (such as “sales person” or “working days”) is used. If when referring to members of both sexes, however, the third-person singular cannot be avoided or a gender-neutral noun does not exist, SAP reserves the right to use the masculine form of the noun and pronoun. This is to ensure that the documentation remains comprehensible.

Internet Hyperlinks

The SAP documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. SAP does not warrant the availability and correctness of this related information or the ability of this information to serve a particular purpose. SAP shall not be liable for any damages caused by the use of related information unless damages have been caused by SAP’s gross negligence or willful misconduct. All links are categorized for transparency (see: http://help.sap.com/disclaimer).