# Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conventions.</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Installation Task Overview.</td>
<td>7</td>
</tr>
<tr>
<td>2.1</td>
<td>Installation Task Flows.</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>SAP Replication Server Components.</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Planning Your Installation.</td>
<td>10</td>
</tr>
<tr>
<td>4.1</td>
<td>Mixed-Version Support.</td>
<td>10</td>
</tr>
<tr>
<td>4.2</td>
<td>Obtaining a License.</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SySAM License Server.</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>SySAM Licensing Checkout.</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Sub-capacity Licensing.</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Product Editions and License Types.</td>
<td>16</td>
</tr>
<tr>
<td>4.3</td>
<td>System Requirements.</td>
<td>18</td>
</tr>
<tr>
<td>4.4</td>
<td>Installation Directory Structure.</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Installation in a Unique Directory on UNIX Platforms.</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Installation Directory Contents and Layout.</td>
<td>23</td>
</tr>
<tr>
<td>4.5</td>
<td>Installation Setup Options.</td>
<td>24</td>
</tr>
<tr>
<td>4.6</td>
<td>Installation Mode.</td>
<td>24</td>
</tr>
<tr>
<td>4.7</td>
<td>Performing Administrative Tasks.</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Creating the Sybase User Account.</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>Installing SAP Replication Server.</td>
<td>27</td>
</tr>
<tr>
<td>5.1</td>
<td>Mounting the Installation Media.</td>
<td>28</td>
</tr>
<tr>
<td>5.2</td>
<td>Installing in GUI Mode.</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Installing SAP Replication Server Data Assurance Option.</td>
<td>32</td>
</tr>
<tr>
<td>5.3</td>
<td>Installing in Console Mode.</td>
<td>33</td>
</tr>
<tr>
<td>5.4</td>
<td>Installing Using a Response File.</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Creating a Response File.</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Installing in GUI Mode Using a Response File.</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Installing in Silent Mode.</td>
<td>35</td>
</tr>
<tr>
<td>5.5</td>
<td>Installing ODBC Libraries for ExpressConnect for SAP HANA Database.</td>
<td>36</td>
</tr>
<tr>
<td>5.6</td>
<td>Troubleshoot Installation Problems.</td>
<td>37</td>
</tr>
<tr>
<td>5.7</td>
<td>Command Line Options.</td>
<td>37</td>
</tr>
<tr>
<td>6</td>
<td>Postinstallation Tasks.</td>
<td>39</td>
</tr>
<tr>
<td>6.1</td>
<td>Log Files.</td>
<td>39</td>
</tr>
</tbody>
</table>
6.2 SAP ASE for the RSSD .......................................................... 40
6.3 Sample Replication Server Configuration. ............................... 40
6.4 Server Entries in the Interfaces File ........................................ 41
6.5 Environment Variables on UNIX ........................................... 42
6.6 Runserver File .................................................................... 43

7 Uninstalling SAP Replication Server ........................................ 44
7.1 Uninstalling in GUI Mode ...................................................... 45
7.2 Uninstalling in Console Mode ................................................ 45
7.3 Uninstalling in Silent Mode .................................................... 46

8 Obtaining Help and Additional Information .............................. 47
8.1 Technical Support ................................................................. 47
   SAP Support Portal .............................................................. 47
   EBFs and Maintenance Reports .............................................. 47
   Platform Certifications ........................................................ 48
1 Conventions

These style and syntax conventions are used in SAP® documentation.

Style conventions

Table 1:

<table>
<thead>
<tr>
<th>Key</th>
<th>Definition</th>
</tr>
</thead>
</table>
| monospaced(fixed-width)                        | • SQL and program code  
• Commands to be entered exactly as shown  
• File names  
• Directory names |
| <italic monospaced>                            | In SQL or program code snippets, placeholders for user-specified values (see example below). |
| <italic>                                       | • File and variable names  
• Cross-references to other topics or documents  
• In text, placeholders for user-specified values (see example below)  
• Glossary terms in text |
| bold san serif                                 | • Command, function, stored procedure, utility, class, and method names  
• Glossary entries (in the Glossary)  
• Menu option paths  
• In numbered task or procedure steps, user-interface (UI) elements that you click, such as buttons, check boxes, icons, and so on |

If necessary, an explanation for a placeholder (system- or setup-specific values) follows in text. For example:

Run:

```
<installation directory>\start.bat
```

where `<installation directory>` is where the application is installed.
Syntax conventions

Table 2:

<table>
<thead>
<tr>
<th>Key</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>{}</td>
<td>Curly braces indicate that you must choose at least one of the enclosed options. Do not type the braces when you enter the command.</td>
</tr>
<tr>
<td>[]</td>
<td>Brackets mean that choosing one or more of the enclosed options is optional. Do not type the brackets when you enter the command.</td>
</tr>
<tr>
<td>()</td>
<td>Parentheses are to be typed as part of the command.</td>
</tr>
<tr>
<td>.</td>
<td>The comma means you can choose as many of the options shown as you like, separating your choices with commas that you type as part of the command.</td>
</tr>
<tr>
<td>...</td>
<td>An ellipsis (three dots) means you may repeat the last unit as many times as you need. Do not include ellipses in the command.</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Angled brackets are not part of the syntax. Rather, they denote variables within the syntax. For example, if the syntax calls for a variable such as a password, this is denoted as &lt;password&gt;. However, when using the syntax in a command or query, omit the angled brackets. So, instead of using &lt;MyPassword&gt; use MyPassword.</td>
</tr>
</tbody>
</table>

Case-sensitivity

- All command syntax and command examples are shown in lowercase. However, replication command names are not case-sensitive. For example, RA_CONFIG, Ra_Config, and ra_config are equivalent.
- Names of configuration parameters are case-sensitive. For example, Scan_Sleep_Max is not the same as scan_sleep_max, and the former would be interpreted as an invalid parameter name.
- Database object names are not case-sensitive in replication commands. However, to use a mixed-case object name in a replication command (to match a mixed-case object name in the primary database), delimit the object name with quote characters. For example: pdb_get_tables"<TableName>"
- Identifiers and character data may be case-sensitive, depending on the sort order that is in effect.
  - If you are using a case-sensitive sort order, such as "binary," you must enter identifiers and character data with the correct combination of uppercase and lowercase letters.
  - If you are using a sort order that is not case-sensitive, such as "nocase," you can enter identifiers and character data with any combination of uppercase or lowercase letters.

Terminology

SAP® Replication Server® works with various components to enable replication between supported database such as, SAP® Adaptive Server® Enterprise (SAP® ASE), SAP HANA® database, SAP® IQ, Oracle, IBM DB2 UDB, and Microsoft SQL Server. SAP Replication Server uses SAP ASE for its Replication Server System Database (RSSD) or it uses SAP® SQL Anywhere® for its embedded Replication Server System Database (ERSSD).

Replication Agent™ is a generic term used to describe the Replication Agents for SAP ASE, SAP HANA database, Oracle, IBM DB2 UDB, and Microsoft SQL Server. The specific names are:
- RepAgent – Replication Agent thread for SAP ASE
- Replication Agent for Oracle
- Replication Agent for Microsoft SQL Server
- Replication Agent for UDB – for IBM DB2 on Linux, Unix, and Windows
- Replication Agent for DB2 for z/OS
2 Installation Task Overview

To successfully install and configure SAP® Replication Server®, use the configuration guide along with the installation guide.

The installation guide explains how to unload the software from the distribution media to your hard disk.

The configuration guide explains how to:

- Gather the information you need to prepare your system for your configuration
- Configure SAP Replication Servers and add databases to your replication system
- Upgrade existing SAP Replication Server System Databases (RSSDs)
- Downgrade existing RSSDs and then reinstall an earlier version of the software
- Enable password encryption for an SAP Replication Server or a RepAgent
- Start and stop an SAP Replication Server or a RepAgent

See Preparation for Installing and Configuring SAP Replication Server in the Configuration Guide for an installation worksheet and a database setup worksheet to help you plan your replication system.

Related Information

Installation Task Flows [page 7]

2.1 Installation Task Flows

Task flows define a complete path for planning, installing, and uninstalling. Choose the path that best describes your scenario.

Note
Print this topic and use it as a checklist.

Installing the software for the first time

1. Plan your installation and review system requirements. See Planning Your Installation [page 10] and System Requirements [page 18].
2. Install the software. See Installing SAP Replication Server [page 27].
3. Perform postinstallation. See Postinstallation Tasks [page 39].
Uninstalling the software

Uninstall the software. See Uninstalling SAP Replication Server [page 44].
3 SAP Replication Server Components

The software includes several components, as well as a variety of support files. The software components include:

- SAP Replication Server
- SAP Replication Server support files (for example, scripts and configuration files)
- SAP SQL Anywhere for Embedded Replication Server System Database (ERSSD)
- RepAgent for ERSSD
- ExpressConnect for Oracle (ECO) – you can use ECO if you have a licensed SAP Replication Server and have purchased the SAP Replication Server, option for Oracle, which includes the additional ECO license.
- ExpressConnect for SAP HANA database (ECH)

**Note**

Embedded Replication Server System Database (ERSSD) requires SAP SQL Anywhere. It is not supported for 64-bit Linux on POWER.
4 Planning Your Installation

Before you install or upgrade, prepare your environment.

Procedure

- Identify the components and options to install or upgrade.
- Obtain a license.

Note
If you are using served licenses, you must install the SySAM license server version 2.3 or later.

- Make sure your system meets all requirements for your installation scenario and planned use.

Related Information

Mixed-Version Support [page 10]
Obtaining a License [page 11]
System Requirements [page 18]
Installation Directory Structure [page 21]
Installation Setup Options [page 24]
Installation Mode [page 24]
Performing Administrative Tasks [page 25]

4.1 Mixed-Version Support

In a mixed-version environment, SAP Replication Server must be version 12.6 and later.

If a replication system domain has any SAP Replication Server version 15.5 and later, the system version and route versions in the replication system domain must be version 12.6 and later. SAP Replication Server 15.5 or later does not support mixed-version environments containing versions earlier than 12.6.

See Requirements for Upgrading in the Configuration Guide.

Note
Upgrading from any version earlier than 12.6 requires an intermediate upgrade. See Upgrade or Downgrade SAP Replication Server in the Configuration Guide.
4.2 Obtaining a License

Before installing your product, choose a SySAM license model, and obtain license files from the SAP Service Marketplace (SMP) at http://service.sap.com/licensekeys.

Context

Note

If you purchased your product from Sybase or an authorized Sybase reseller and have not been migrated to SAP Service Marketplace (SMP), go to the Sybase Product Download Center (SPDC) at https://sybase.subscribenet.com to generate license keys.

Procedure

1. Choose a SySAM license model.

<table>
<thead>
<tr>
<th>License Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unserved license model</td>
<td>Licenses are obtained directly from the license file. If you are using an unserved license, save the license file to the machine on which you install the product.</td>
</tr>
<tr>
<td>Served license model</td>
<td>A license server manages the allocation of licenses among multiple machines.</td>
</tr>
</tbody>
</table>

2. For the served license model, decide whether to use an existing or new license server.

The license server and your product installation need not share the same machine, operating system, or architecture.

Note

There can be only one instance of a SySAM license server running on a given machine. To set up a SySAM 2 license server on a machine that is already running a SySAM 1.0 license server, follow the migration instructions in the SySAM Users Guide. A migrated license server can serve licenses for both SySAM 1.0 and SySAM 2-enabled products.

3. Get your host IDs.

When you generate licenses, you must specify the host ID of the machine where the licenses will be deployed.

- For unserved licenses – the host ID of the machine where the product will run. If you are running a product with per-CPU or per-chip licensing that supports SySAM sub-capacity and want to run the product in a virtualized environment, see SySAM Sub-capacity Licensing in the SySAM Users Guide.
- For served licenses – the host ID of the machine where the license server will run.

4. Before installing your product, get license files from SMP or from SPDC using the access information in your welcome e-mail message.
Note

If you purchased your software from a reseller, rather than an e-mail message you may receive a Web key certificate that contains the location of the SPDC Web key login page at https://sybase.subscribenet.com/webkey and the activation key to use for the login name.

If you plan to use sub-capacity licensing, see the SySAM Users Guide for information on how to configure using the sysamcap utility.

Use sysadmin lmconfig to configure and show license management-related information in SAP Replication Server. See sysadmin lmconfig in the Reference Manual.

Related Information

SySAM License Server [page 12]
SySAM Licensing Checkout [page 13]
Sub-capacity Licensing [page 14]
Product Editions and License Types [page 16]
Product Editions and License Types [page 16]

4.2.1  SySAM License Server

If you have chosen to use the served license model, make sure you have installed the required SySAM license server version.

SAP Replication Server 15.7.1 SP301 requires SySAM 2.3 or later. To determine the current license server version, use the sysam version command.

Note

SySAM version 2.0 and earlier do not include this command.

Download the latest SySAM version from http://service.sap.com/patches.

SAP Replication Server 15.7.1 SP301 and SySAM 2.3 use FlexNet Publisher version 11.11 on all platforms except Windows, Red Hat Enterprise Linux, and SuSE Linux Enterprise Server, all of which use version 11.11.1.

To check the version of FlexNet Publisher used by your license server, examine the license server log or execute the lmgrd -v command.

Related Information

IPv6 Configuration [page 13]
4.2.1.1 IPv6 Configuration

Use the `sysam configure` command to choose the version of the license server based on your environment.

The SySAM License Server installer installs both IPv4-only and IPv4/IPv6 dual-stack license server binaries during installation and configures use of IPv4-only binaries.

The IPv4 version of the license server cannot be used properly if you have enabled IPv6 on the license server host. If this is the case, you can:

- Disable IPv6 TCP/IP protocol on the license server host.
- Use another Windows host that does not have IPv6 enabled.
- Use a UNIX host for the license server. You can use the IPv4 version of the license even if both IPv4 and IPv6 are enabled on UNIX.

If you are using the IPv6 version of the license server on a Windows host, you can access this license server only through the IPv6 protocol. Any host with an IPv4 only network stack cannot obtain licenses from this IPv6 license server. To resolve this issue:

- Use a UNIX host for the license server. License servers on UNIX can serve licenses to both IPv4 and IPv6 client hosts.
- Use two separate Windows machines. Set up two license servers on two different hosts in the network; one to serve the IPv4 network and the other one to serve the IPv6 network.

You can use the SySAM script to configure the appropriate version of the license server:

```
sysam configure [<IPv6>|<IPv4>]
```

For example, to configure use of the IPv4/IPv6 dual stack binaries, use:

```
sysam configure IPv6
```

4.2.2 SySAM Licensing Checkout

If SAP Replication Server is licensed using a per-processor license type, it checks out a license quantity that is equal to the number of processors, or, if insufficient licenses are available, it allows a 30-day grace period.

If the number of processors dynamically increases while the server is running, and the software cannot check out additional licenses, the software permits a 30-day grace period. If sufficient licenses are not made available within the grace period, the software shuts down. Decreasing the number of processors that the software can use while it is running does not reduce the required license quantity. You must restart the SAP Replication Server on the correct number of processors.

See the SySAM Users Guide.
4.2.3 Sub-capacity Licensing

The sub-capacity licensing allows you to license a subset of the CPUs available on a physical machine using the SySAM sub-capacity license functionality.

Virtualization Technology Support

Table 3: SySAM Virtualization Sub-capacity Compatibility

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product</th>
<th>Virtualization Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>nPar</td>
<td>Physical partition</td>
</tr>
<tr>
<td></td>
<td>vPar</td>
<td>Virtual partition</td>
</tr>
<tr>
<td></td>
<td>Integrity Virtual Machines with Resource Manager</td>
<td>Virtual machine</td>
</tr>
<tr>
<td></td>
<td>Secure Resource Partitions</td>
<td>OS containers</td>
</tr>
<tr>
<td>IBM</td>
<td>LPAR</td>
<td>Virtual partition</td>
</tr>
<tr>
<td></td>
<td>dLPAR</td>
<td>Virtual partition</td>
</tr>
<tr>
<td>Oracle</td>
<td>Dynamic System Domains</td>
<td>Physical partition</td>
</tr>
<tr>
<td></td>
<td>Solaris Containers/Zones with Solaris Resource Manager</td>
<td>OS partition</td>
</tr>
<tr>
<td></td>
<td>Solaris Logical Domain (LDOM)</td>
<td>Virtual partition</td>
</tr>
<tr>
<td>Intel, AMD</td>
<td>VMWare ESX Server Guest O/S: Windows</td>
<td>Virtual machine</td>
</tr>
<tr>
<td></td>
<td><img src="i.png" alt="Note" /> VMWare ESX Server excludes VMWare Workstation and VMWare Server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VMWare ESX Server Guest O/S: Linux and Solaris x64</td>
<td>Virtual machine</td>
</tr>
<tr>
<td></td>
<td>Xen, KVM, DomainU: Windows</td>
<td>Virtual machine</td>
</tr>
<tr>
<td></td>
<td><img src="i.png" alt="Note" /> Xen excludes Solaris x64.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xen, KVM, DomainU: Linux</td>
<td>Virtual Machine</td>
</tr>
<tr>
<td></td>
<td>Hyper-V</td>
<td>Virtual Machine</td>
</tr>
</tbody>
</table>
## Enabling the Sub-capacity Licensing

If you purchased your product from Sybase or an authorized Sybase reseller, you must have a sub-capacity licensing agreement with SAP or Sybase before you can enable sub-capacity licensing.

### Related Information

**Requirements** [page 15]

### 4.2.3.1 Requirements

When using SySAM sub-capacity licensing, set the SYBASE_SAM_CAPACITY environment variable before installing, or, you can copy in the license key after installation.

If you are using sub-capacity licensing, do one of:

- Set the SYBASE_SAM_CAPACITY environment variable before starting your installer. Follow the instructions provided in Configuring SySAM Sub-capacity in the SySAM Users Guide. However, start your installer instead of starting the sub-capacity-enabled SAP product. The installer includes the `sysamcap` utility located in `sysam_utilities/bin`.

- Select **Continue installation without a license key** in the SySAM License pane during installation. After installation, copy your license key to `<installed_directory>/SYSAM-2_0/licenses` directory where `<installed_directory>` is where you have installed your components.
### 4.2.4 Product Editions and License Types

SAP Replication Server is released as two separate product editions—Enterprise Edition (EE) and Real-Time Loading Edition (RTLE) — that comprise different base and optional features, and which require separate licences.

#### Note

SAP Replication Server, enterprise edition including the base SAP Replication Server, the Advanced Services Option, and Data Assurance Option is available for download and license generation. See *Obtaining a License* for details.

<table>
<thead>
<tr>
<th>Table 4: Enterprise Edition Features and Licenses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feature Type</strong></td>
</tr>
<tr>
<td>Base</td>
</tr>
</tbody>
</table>
| Optional | Advanced Services Option | SAP Replication Server performance enhancements. These enhancements include:  
- High Volume Adaptive Replication (HVAR)  
- Enhanced Data Server Interface (DSI) efficiency  
- Enhanced RepAgent executor thread efficiency  
- Enhanced distributor thread read efficiency  
- Enhanced memory allocation  
- Increasing queue block size  
- Multi-Path Replication™ | REP_HVAR_ASE |

ExpressConnect for Oracle

Provides SAP Replication Server with the capability to connect directly to Oracle. See the Replication Server Options product documentation.

Data Assurance Option

Data validation tool.

<table>
<thead>
<tr>
<th>Table 5: Real-Time Loading Edition Features and Licenses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feature Type</strong></td>
</tr>
<tr>
<td>Base</td>
</tr>
<tr>
<td>Feature Type</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Real-Time Loading</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Advanced Services</td>
</tr>
<tr>
<td></td>
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<tr>
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<tr>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Replication Agent</td>
</tr>
</tbody>
</table>

**Related Information**

[SAP Control Center License](#) [page 17]

[SAP Replication Server and SAP IQ InfoPrimer Integration Licenses](#) [page 18]

**4.2.4.1 SAP Control Center License**

SAP® Control Center is licensed free when you have a paid license for a product managed by SAP Control Center such as SAP Replication Server and SAP® Replication Server® Data Assurance Option. Evaluation licenses are also available.

See [SAP Control Center 3.3 Installation Guide](#).
4.2.4.2 SAP Replication Server and SAP IQ InfoPrimer Integration Licenses

Special licensing requirements apply to the integration of SAP Replication Server and SAP IQ InfoPrimer.

Table 6: SAP Replication Server and InfoPrimer Integration Licenses

<table>
<thead>
<tr>
<th>Product</th>
<th>Features</th>
<th>Description</th>
<th>License</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Replication Server</td>
<td>Real-Time Loading (RTL)</td>
<td>Allows replication to SAP IQ from SAP ASE.</td>
<td>REP_RTL_IQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>You cannot use the Real-Time Loading Edition to replicate to SAP ASE or Oracle.</td>
<td></td>
</tr>
<tr>
<td>IQ InfoPrimer 15.3</td>
<td>IQ InfoPrimer</td>
<td>Used for the extraction and loading of data from SAP ASE and transformation of data in SAP IQ.</td>
<td>SY_INFOPRIMER_SERVER</td>
</tr>
</tbody>
</table>

4.3 System Requirements

Before installing SAP Replication Server, ensure that your system is updated with the latest patches and system requirements. Do not use a patch that is earlier than the version suggested for your operating system. Use the patch recommended by the operating system vendor or check the latest release bulletin.

Table 7: System requirements

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| RAM           | A minimum of 4GB RAM.
### Item | Requirement
--- | ---
Disk storage | For a full installation, the total disk space required is approximately 2.5GB.

**Disk space required:**
- 950MB for the software, supporting files, and log files on all UNIX operating systems except on IBM AIX and HP-UX Itanium that require 4GB.
- (Optional) A minimum of 700MB if you are installing SAP Replication Server Data Assurance (DA) Option.
- An additional 20MB for each SAP Replication Server disk partition. The disk partition may be on a different disk than your software.

One of:
- Disk space for your SAP ASE database, which serves as your Replication Server System Database (RSSD) if you are not using the Embedded RSSD (ERSSD). See your Adaptive Server Enterprise documentation for system requirements.
- 80MB for your SAP SQL Anywhere database, which serves as your ERSSD. The database directory, transaction log directory, and backup directory that make up the 80MB should each reside on different disks.

More disk space may be required, depending on your replication system application.

### Supported protocols
TCP/IP

### Table 8: Platform and OS Support

<table>
<thead>
<tr>
<th>Platform</th>
<th>Supported Operating Systems and Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-UX Itanium (64-bit)</td>
<td>- HP-UX 11.31</td>
</tr>
</tbody>
</table>

**Note**
The installer requires the gzip utility. Ensure that the path to gzip is set in the $PATH environment variable.

| Linux x86-64 (64-bit) | - Red Hat Enterprise Linux 6.5  
- Red Hat Enterprise Linux 6.6  
- Red Hat Enterprise Linux 7.0  
- SuSE Linux Enterprise Server SLES 11.1  
- SuSE Linux Enterprise Server SLES 11.2  
- SuSE Linux Enterprise Server SLES 11.3 |
## Supported Operating Systems and Version

<table>
<thead>
<tr>
<th>Platform</th>
<th>Supported Operating Systems and Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux on IBM p-Series</td>
<td>● Red Hat Enterprise Linux 6.5</td>
</tr>
<tr>
<td>(Linux on POWER)</td>
<td>● Red Hat Enterprise Linux 6.6</td>
</tr>
<tr>
<td>(64-bit)</td>
<td>● Red Hat Enterprise Linux 7.0</td>
</tr>
<tr>
<td></td>
<td>● SuSE Linux Enterprise Server SLES 11.1</td>
</tr>
<tr>
<td></td>
<td>● SuSE Linux Enterprise Server SLES 11.2</td>
</tr>
<tr>
<td></td>
<td>● SuSE Linux Enterprise Server SLES 11.3</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>ExpressConnect for SAP HANA database is not supported on Linux on IBM p-Series.</td>
</tr>
<tr>
<td></td>
<td>Before you install SAP Replication Server, install the runtime libraries for the IBM XL C compiler. To verify that IBM XL C runtime packages are installed, issue:</td>
</tr>
<tr>
<td></td>
<td><code>vacpp.rte-10.1.0-0</code></td>
</tr>
<tr>
<td></td>
<td>If the message is “package vacpp.rte-10.1.0-0 is not installed”, download the IBM XL C version 10.1 runtime executables from the IBM Web site at <a href="https://www-304.ibm.com/support/docview.wss?uid=swg24021253">https://www-304.ibm.com/support/docview.wss?uid=swg24021253</a>. Make sure you select the appropriate installation package for your operating systems from the download table.</td>
</tr>
<tr>
<td>IBM AIX</td>
<td>● AIX 7.1</td>
</tr>
<tr>
<td>(64-bit)</td>
<td>Before you install SAP Replication Server, install the IBM XL C/C++ Runtime for AIX and the SMP Runtime Libraries required for your version of AIX. Obtain the libraries from your IBM AIX operating system installation media.</td>
</tr>
<tr>
<td></td>
<td>These libraries are also available from the IBM AIX Web site:</td>
</tr>
<tr>
<td></td>
<td>● The IBM XL C/C++ Runtime for AIX is available on the Web site under “Latest updates for supported IBM C and C++ compilers.”</td>
</tr>
<tr>
<td></td>
<td>● The SMP Runtime Libraries for AIX are available on the Web site under “IBM XL C/C+++ Enterprise Edition for AIX, Runtime Environment and Utilities.”</td>
</tr>
<tr>
<td></td>
<td>To verify that the libraries are installed, issue:</td>
</tr>
<tr>
<td></td>
<td><code>source $SYBASE/SYBASE.csh</code></td>
</tr>
<tr>
<td></td>
<td><code>cd $SYBASE/$SYBASE_REP/bin</code></td>
</tr>
<tr>
<td></td>
<td><code>ldd ./repserver</code></td>
</tr>
<tr>
<td>Solaris</td>
<td>● Solaris 10</td>
</tr>
<tr>
<td>(64-bit)</td>
<td>● Solaris 11</td>
</tr>
</tbody>
</table>

## Operating System Patch Level

If your operating system requires patches, install them before you install SAP Replication Server components.

To list all currently installed patches and display the operating system version level, enter:
On HP-UX, enter:

```
/usr/sbin/swlist -l patch
```

On IBM AIX, enter:

```
/usr/sbin/instfix -a
```

On Solaris, enter:

```
showrev -p
```

On Linux, enter:

```
rpm -q -a
```

Linux distributors that supply Linux Kernel version 2.4.<x> should provide all the libraries you require. If you are alerted to any outdated or missing libraries, download them from your Linux distributor’s Web site.

### 4.4 Installation Directory Structure

The directory structure provides an overview of the installation directory, subdirectory hierarchy, and the naming convention used for the installed components.

Most components of SAP Replication Server are installed in their own subdirectories, which contain the executable program, installation and configuration tools, and display-related files needed by the component. The naming convention for subdirectories includes a component identifier, such as REP (for SAP Replication Server) or OCS (for Open Client and SAP Open Server), and the software release version.

Version 15.7.1 SP301 includes a new version of SAP Replication Server and many of its supporting components. Other products may contain earlier versions of the same components. Installing version 15.7.1 SP301 into the same directory with existing products should not impact the existing products. However, it may cause some environment variables to change. Reset the environment variables to make individual products work.

You can install version 15.7.1 SP301 in the same directory as SAP ASE and Open Client and SAP Open Server versions 15.5 or later.

⚠️ **Caution**

Do not uninstall version 15.7.1 SP301 if it has been installed in the same directory as older products that were installed using the InstallShield installer, otherwise, these products may not work correctly.

You can install version 15.7.1 SP301 on top of version 12.6 and later, in the same `$SYBASE` directory. Doing so creates a duplicate entry in the `interfaces` file for `SAMPLE_RS`, which is the sample Replication Server. `rs_init` warns you about the duplicate entry and uses the first instance of `SAMPLE_RS` found in the `interfaces` file.

See **Upgrades and Downgrades Using Existing Directories** in the Configuration Guide.
Constraints

Do not install version 15.7.1 SP301 on top of these products:

- SAP Replication Server version 12.5 or earlier
- SAP ASE version 12.5.0.x or earlier
- SAP ASE version 12.x (64-bit)
- Open Client and SAP Open Server version 12.5.0 or earlier
- SAP OpenSwitch version 12.5 or earlier
- DirectConnect version 12.5 or earlier

Doing so incapacitates older versions of these products, and may also adversely affect other products. If you perform one of these installations, you cannot reverse it with an uninstallation, as uninstalling might remove required components of the older products updated by SAP Replication Server version 15.7.1 SP301. For this reason, SAP recommends that you back up your current directory before installing version 15.7.1 SP301.

If you are installing SAP Replication Server 15.7.1 SP301 in an existing installation directory that contains SAP ASE version 15.0.<x>, you may be asked if you want to install older locales or charset files on top of newer files. To ensure that you have the latest version of these files, select No to all.

Shared components are installed in subdirectories that are separate from component subdirectories. For example, the subdirectory is $SYBASE/REP-15_5. However, Open Client is installed in $SYBASE/ocs-16_0. The exception is SAP SQL Anywhere, which is installed in $SYBASE/REP-15_5/ASA16, because it is used only for SAP Replication Server. Version 15.7.1 SP300 also includes SAP SQL Anywhere version 12 installed in $SYBASE/REP-15_5/ASA12. SAP SQL Anywhere version 12 is used to upgrade an ERSSD database format if you have installed an earlier version of SAP SQL Anywhere.

Note
Both the ASA12 and ASA16 directories are not available for the 64-bit Linux on POWER (IBM pSeries) platforms.

As a result, the directory structure enables you to install into an existing $SYBASE directory structure, as well as to install and use multiple versions of some components.

Tip
If your earlier installation includes custom applications or scripts that refer to $SYBASE subdirectories, change them to reflect the new installation directory structure.

A diagnostic server (REP-15_5/bin/repserver.diag) captures and displays information about internal processes. Do not delete this program as you may need to use it at the direction of SAP Product Support, to diagnose and resolve these problems.

Note
Depending on the components and versions you install, your actual directory structure may differ from what is documented.
4.4.1 Installation in a Unique Directory on UNIX Platforms

You can install SAP Replication Server in a unique directory without affecting environment variables on UNIX platforms.

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When you install the software in a unique installation directory, you must maintain two <code>interfaces</code> files: one for the SAP Replication Server components and one for your other applications.</td>
</tr>
</tbody>
</table>

4.4.2 Installation Directory Contents and Layout

Check the list of components that are installed in the installation directory on your machine.

**Within `$SYBASE`:**

- **charsets** – character sets and sort order.
- **collate** – Unicode.
- **config** – configuration files, including `mnemonic.dat`, `objectid.dat`, and `trusted.txt`.
- **interfaces** – `interfaces` file.
- **locales** – localization files for Open Client and SAP Open Server, and other components used by SAP Replication Server. Does not include SAP Replication Server specific localization files.
- **log** – log files of the installation process.
- **OCS-16_0** – Open Client and SAP Open Server directories and files, including `bin`, `config`, `devlib`, `include`, `lib`, `lib3p`, `sample`, `scripts`, `sybhelp`, and `xappdefaults`.
- **REP-15_5** – version 15.7.1 SP301 files, including `ASA12`, `ASA16`, `bin`, `certificates`, `connector`, `devlib64`, `doc`, `init`, `install`, `lib64`, `lib3p64`, `locales`, `REFIMP-01_0`, `samp_repserver`, `scripts`, `sample`, `sysam`, `ThirdPartyLegal`, and `upgrade`.
- **Sybase_Install_Registry** – used for storing product registry information to keep track of version of installed and uninstalled software. The `si_reg.xml` file gets installed in the `$SYBASE/Sybase_Install_Registry` directory.
4.5 Installation Setup Options

Decide the installation option that is appropriate for your setup. Typical is the default option.

The setup program provides these installation options:

- **Typical (default)** – installs the components considered to be useful for most customers. In this type of installation, only the English language module and its supported character sets are installed. You see a list of components that will be installed and the total disk space required before the installation begins.
- **Full** – installs every component including all the supported language modules from the installation media. You see a list of components that will be installed and the total disk space required before the installation begins.
- **Custom** – allows you to select the components to install. Recommended for advanced users.

Note: Certain components are automatically installed if they are required to run other selected components.

4.6 Installation Mode

Decide which installation mode you want to use. GUI mode is the default option.

You can install SAP Replication Server using:

- **Graphical user interface (GUI)** – lets you install the components in an interactive user mode.
- **Console** – lets you install components in a command line environment.
- **Response file** – lets you record or create a response file. You can install the software two different ways using a response file:
  - **Silent** – save the installation settings in a response file and install the software without any interaction required on your part. This is convenient if you are performing identical installations on multiple machines.
  - **Interactive installation using response file** – install interactively, but with all the responses already filled in, so you can accept all the defaults and install the software according to the responses in the
response file. This can be convenient if several sites are installing software in a non-graphical user interface environment and must conform to a standard installation with minor changes.

4.7 Performing Administrative Tasks

Complete the administrative tasks before you begin the installation process.

Procedure

1. Back up your current replication system.
2. Verify that you can uncompress files on your UNIX machine. To uncompress:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.zip files</td>
<td>Use the unzip command</td>
</tr>
<tr>
<td>.tgz files</td>
<td>Use gzip or GNU Tar</td>
</tr>
</tbody>
</table>

3. Create the “sybase” user account and make sure it has read, write, and execute permissions.
4. Verify that the directory location for the installation has sufficient space.
5. Verify that your network software is configured.

SAP software uses network software, even if SAP Replication Server and SAP client applications are installed on a machine that is not connected to a network.
6. If you are using an RSSD, verify that SAP ASE is up and running.

Related Information

Creating the Sybase User Account [page 26]
4.7.1 Creating the Sybase User Account

To ensure that SAP product files and directories are created with consistent ownership and privileges, create a system administrator account.

Context

A user, such as the system administrator—who has read, write, and execute privileges—must perform all installation and configuration tasks.

Procedure

1. To create system administrator account, choose an existing account, or create a new account and assign a user ID, group ID, and password for it. This account is sometimes called the “sybase” user account. See your operating system documentation for instructions on creating a new user account.
   
   If you have already installed other SAP software, the “sybase” user already exists.

2. Verify that you can log in to the machine using this account.
5 Installing SAP Replication Server

Install the software using your chosen method.

Prerequisites

Complete installation planning tasks.

Procedure

1. Choose an installation method:
   ○ GUI mode (recommended)
   ○ Console mode
   ○ Response file
2. Follow the instructions for your chosen method.
3. Perform postinstallation steps.

Related Information

Mounting the Installation Media [page 28]
Installing in GUI Mode [page 29]
Installing in Console Mode [page 33]
Installing Using a Response File [page 34]
Installing ODBC Libraries for ExpressConnect for SAP HANA Database [page 36]
Troubleshoot Installation Problems [page 37]
Command Line Options [page 37]
5.1 Mounting the Installation Media

If you are installing using the CD or DVD, mount the installation media.

Context

The location of the `mount` command is site-specific and may differ from the instructions shown here. If you cannot mount the installation media in the appropriate drive using the path shown, check your operating system documentation or contact your system administrator.

- On HP-UX:
  Log out, log in as “root”, and issue:
  ```
  mount -F cdfs -o ro device_name /mnt/cdrom
  ```
  Then, log out as “root” and log in again as “sybase.”

- On IBM AIX:
  Log in as “sybase” and issue:
  ```
  mount -v 'cdrfs' -r device_name /mnt/cdrom
  ```

- On Solaris:
  The operating system automatically mounts the CD or DVD. Log in as “sybase.” If CD- or DVD-reading errors occur, check your operating system kernel to make sure that the ISO 9660 option is turned on. If you have previously installed a CD or DVD on your system, the # sign interferes with the installation process. Before installing your current CD or DVD, either:
  - Restart your system, or,
  - Eject the CD or DVD. Delete the `<Volume Label>` file in `/vol/dsk`, and reinsert the CD or DVD.

- On Linux and Linux on POWER:
  Log in as “sybase” and issue:
  ```
  # mount -t iso9660 /dev/cdrom /mnt/cdrom
  ```

Related Information

Installing in GUI Mode [page 29]
5.2 Installing in GUI Mode

The installer creates a target directory and installs the selected components into that directory.

Prerequisites

Verify that the drive on which you install the SAP Replication Server has enough disk space for the components being installed, and at least 1GB of extra disk space for the installation program.

Procedure

1. Insert the installation media in the appropriate drive, or download and extract the SAP Replication Server installation image from the SAP Service Marketplace (SMP).
2. If you downloaded the product from SMP, go to the directory where you extracted the installation image and start the installer:

./setup.bin

If you are installing using the CD or DVD, mount it and start the installer.

- On HP-UX:

  cd /cdrom
  ./setup.bin

- On IBM AIX:

  cd /device_name
  ./setup.bin

- On Solaris:

  cd /cdrom/VOLUME_LABEL
  ./setup.bin

- On Linux and Linux on POWER:

  cd /mnt/cdrom
  ./setup.bin

where:
- <cdrom> and </mnt/cdrom> is the directory (mount-point) you specified when mounting the CD or DVD drive.
- <device_name> is the name of the CD or DVD device drive.
- setup.bin is the name of the executable file name for installing SAP Replication Server.

If there is not enough disk space in the temporary disk space directory, set the environment variable IATEMPDIR to <tmp_dir> before running the installer again, where <tmp_dir> is where the installation program writes the temporary installation files. When specifying <tmp_dir>, include its full path.
3. In the Introduction window, click Next.

4. Specify where to install the SAP Replication Server.
   Do not use double-byte, single-, or double-quote characters in the installation path. The installer does not recognize these, and displays an error.
   - **Option**: Click Choose.
     **Description**: Browse for and select the installation directory.
   - **Option**: Enter a new directory path.
     **Description**: Create a new directory.
   - **Option**: Click Restore Default Folder.
     **Description**: Use the default directory instead of the directory you have entered or selected.

   ○ If the directory you chose does not exist, click Yes to create it.
   ○ If it does exist, and already contains a current installation, you are warned that you will overwrite the older version. Click Next.

   The installer checks that the version you want to update is compatible with the version of the SAP Replication Server you are installing. If the version is incompatible, the Check Upgrade Incompatible Version dialog appears, and you see this:
   **Warning**: The current “SAP Replication Server” in your destination directory is not compatible with this version upgrade; some bug fixes may be unavailable if you proceed. See the release note for more information.
   You may see a similar message if your SAP Replication Server is an out-of-band release, such as an emergency bug fix, one-off, controlled, or instrumental release:
   **Warning**: The current “SAP Replication Server” in your destination directory is an out-of-band release; some bug fixes may be unavailable if you proceed. Verify that the bug fixes you need are in this newer version before proceeding with the upgrade.
   If you see such messages, click Cancel to stop the installation process. To override the error and continue with the installation, select Proceed installation with incompatible version and click Next.

   ![Caution]
   Upgrading to an incompatible version may cause software regression. SAP recommends that you cancel the installation and obtain a compatible version of an SAP Replication Server.
   If you perform the installation in silent, or unattended mode, and the versions are incompatible, the installer prompts you to re-run the installer with this argument, then quit:
   
   DALLOW_UPGRADE_TO_INCOMPATIBLE_VERSION=true

5. Select the type of installation:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical</td>
<td>Installs the default components. This is recommended for most users.</td>
</tr>
<tr>
<td>Full</td>
<td>Installs every component, including all the supported language modules.</td>
</tr>
<tr>
<td>Custom</td>
<td>Lets you select the components to install. Some components are automatically installed if they are required to run your selected components.</td>
</tr>
</tbody>
</table>

   Click Next.

6. Select the geographic location, agree to the license agreement, then click Next.
7. In the SySAM License Server window:

<table>
<thead>
<tr>
<th>Option</th>
<th>Choose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify license keys</td>
<td>Either:</td>
</tr>
<tr>
<td></td>
<td>○ Click <strong>Browse</strong> to select the license file.</td>
</tr>
<tr>
<td></td>
<td>○ Use <strong>Shift+Click</strong> or <strong>Ctrl+Click</strong> to select multiple license files. The license pane displays the license information.</td>
</tr>
<tr>
<td></td>
<td>○ Copy and paste the license information directly in the license pane.</td>
</tr>
<tr>
<td></td>
<td><strong>Click Next.</strong></td>
</tr>
<tr>
<td></td>
<td>If you specify a served license key, the installer prompts you to install a new SySAM license server. Select:</td>
</tr>
<tr>
<td></td>
<td>○ <strong>Next</strong> – to install the new SySAM license server. Follow the installation prompts.</td>
</tr>
<tr>
<td></td>
<td>○ <strong>Previous</strong> – and select <strong>Use previously deployed license server</strong> if you have an existing SySAM license server on the same host.</td>
</tr>
<tr>
<td>Use previously deployed license server</td>
<td>Enter the:</td>
</tr>
<tr>
<td></td>
<td>○ Host name of the machine where the license server is running</td>
</tr>
<tr>
<td></td>
<td>○ Port number if the port number you are using is not the default</td>
</tr>
<tr>
<td></td>
<td><strong>Click Next.</strong></td>
</tr>
<tr>
<td>Continue installation without a license key</td>
<td>If you do not have licenses for any of the components, select this option, then click <strong>Next</strong> to proceed.</td>
</tr>
<tr>
<td></td>
<td>The installer allows you to install and use the components without a license for a grace period of 30 days. To continue using these components after the end of the grace period, obtain valid licenses, and install these licenses using the SAP Replication Server license installer.</td>
</tr>
</tbody>
</table>

Use `sysadmin lmconfig` to configure and show license management-related information in the SAP Replication Server. See `sysadmin lmconfig` in the Reference Manual.

8. Set SySAM e-mail configuration if necessary. **Click Next.**

9. The installation summary window displays the selections you have made. Review the information, and click **Install.**

10. In the Start Sample Replication Server window, select:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>Configure and start a sample Replication Server. The installer displays the configuration information for the sample Replication Server. Record this information.</td>
</tr>
<tr>
<td></td>
<td>You can enter a maximum of 30 bytes in the password field. For a:</td>
</tr>
<tr>
<td></td>
<td>○ Single-byte character – enter 6 to 30 characters.</td>
</tr>
<tr>
<td></td>
<td>○ Double-byte character – enter 3 to 15 characters.</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>Manually configure a full-featured SAP Replication Server and start a sample Replication Server after installation. The installer prompts you to either create a sample Replication Server directory or to proceed with the installation. Select either:</td>
</tr>
<tr>
<td></td>
<td>○ <strong>Yes</strong> – to create a sample Replication Server directory without starting the sample Replication Server, or,</td>
</tr>
<tr>
<td></td>
<td>○ <strong>No</strong> – to continue with the installation.</td>
</tr>
</tbody>
</table>
You cannot start the sample Replication Server on Linux on POWER because the ERSSD requires an SAP® SQL Anywhere® Server, which is not available on Linux on POWER.

Click Next.

11. Click Done.

Next Steps

Verify that the installation is valid and successful.

- View the log files in the log directory to check for errors. A valid installation does not contain the word “ERROR.”
- Check that the date of the si_reg.xml file in the Sybase_Install_Registry directory reflects the date of the current installation.

Related Information

Installing SAP Replication Server Data Assurance Option [page 32]
Postinstallation Tasks [page 39]
Runserver File [page 43]
Mounting the Installation Media [page 28]

5.2.1 Installing SAP Replication Server Data Assurance Option

SAP Replication Server Data Assurance (DA) Option is available as a separately licensed product for SAP Replication Server. Obtain the setup program from where you have extracted the installation image.

Context

See the SAP Replication Server Data Assurance Option Installation Guide for details.
5.3 Installing in Console Mode

Choose command line installation if you prefer a nonwindowing interface or for developing custom installation scripts.

**Prerequisites**

Launch the installer in console mode. If the installer launches automatically, click Cancel to cancel the GUI installation, then launch the setup program from a terminal or console.

**Context**

The steps for installing components in an interactive text mode are the same as those for GUI mode, except you use `setup -i console` to execute the installer from the command line, and you specify options by entering text.

**Procedure**

1. At the command prompt, enter:
   
   ```bash
   ./setup.bin -i console
   ```

2. Follow the remaining prompts to complete the installation. Output is written to a terminal window, and you must use the keyboard to enter responses.

**Related Information**

Installing in GUI Mode [page 29]
5.4 Installing Using a Response File

Unattended or silent installations are typically used to update multiple systems across the enterprise.

Context

To perform a silent, or “unattended” installation, run the installer and provide a response file that contains your preferred installation configuration.

Related Information

Creating a Response File [page 34]
Installing in GUI Mode Using a Response File [page 35]
Installing in Silent Mode [page 35]

5.4.1 Creating a Response File

Record installation responses into a response file, which is a text file you can edit to change any responses before using it in subsequent installations.

Context

i Note

Versions 15.6 and later use a rearchitected installation program that is incompatible with response files generated for versions 15.5.<<x>> and earlier. Do not use response files from these versions; instead, create a new one from a 15.7.1 SP301 installation.

When installing in GUI or console mode, the -r command line argument records your responses to the installation wizard’s prompts and creates a response file when the installation wizard exits.

Procedure

To generate a response file during installation, enter:

```
./setup.bin -r <responseFileName>
```
When specifying the response file name, include its full path. For example:

```
/home/sybase/REP/<ResponseFile.txt>
```

### 5.4.2 Installing in GUI Mode Using a Response File

An interactive installation using a response file lets you either accept the default values supplied by the response file or enter different values. This is useful when installing multiple instances of SAP Replication Server that have similar but not identical settings.

#### Prerequisites

Create an installation response file.

#### Procedure

To run the GUI installation using the response file, enter:

```
./setup.bin -f <responseFileName>
```

When specifying the response file name, include its full path.

#### Related Information

- Command Line Options [page 37]
- Creating a Response File [page 34]
- Installing in GUI Mode [page 29]

### 5.4.3 Installing in Silent Mode

Unattended or silent installations are typically used to update multiple systems across the enterprise.

#### Prerequisites

Create an installation response file.
A silent or unattended installation does not involve user interaction; and all installation configuration information is taken from the response file. This is useful when you want multiple identical installations, or to fully automate installation.

**Procedure**

To install in silent mode, run:

```
./setup.bin -f <responseFileName> -i silent -DAGREE_TO_SAP_LICENSE=true
```

where:
- `<responseFileName>` – is the absolute path of the file name containing the installation options you chose.
- `-D` – specifies that you agree with the SAP License Agreement text.

Except for the absence of the GUI screens, all actions of the installer are the same, and the result of an installation in silent mode is exactly the same as one performed in GUI mode with the same responses.

**Note**

You must agree to the SAP License Agreement when installing in silent mode. You can either:
- Include the option `-DAGREE_TO_SAP_LICENSE=true` in the command line argument, or,
- Edit the response file to include the property `AGREE_TO_SAP_LICENSE=true`.

**Related Information**

- Command Line Options [page 37]
- Creating a Response File [page 34]
- Installing in GUI Mode [page 29]

### 5.5 Installing ODBC Libraries for ExpressConnect for SAP HANA Database

ExpressConnect for SAP HANA database (ECH) uses the SAP HANA ODBC driver to communicate with SAP HANA database. However, SAP Replication Server does not include the required SAP HANA ODBC driver.
After you have installed SAP Replication Server, download these libraries from the SAP Service Marketplace and install them.

**Context**

See *Installing ODBC Libraries for ExpressConnect SAP HANA Database* in the *Release Bulletin*.

### 5.6 Troubleshoot Installation Problems

Set the installer to debug mode to troubleshoot problems encountered during installation. Set the environment variable LAX_DEBUG to true before running the installer. The installer then generates additional detailed installation information that is useful for debugging installer issues.

**Tip**

If you encounter errors during installation, check the installation log file to see a record of the installation process. The log file is located in `$SYBASE/log`.

### 5.7 Command Line Options

Options for installing or uninstalling SAP Replication Server in console mode.

<table>
<thead>
<tr>
<th>Option</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-i console</code></td>
<td>Uses the console interface mode, where messages during installation appear on the Java console and the wizard is run in console mode.</td>
</tr>
<tr>
<td><code>-i silent</code></td>
<td>Installs or uninstalls the product in silent mode, where the installation or uninstallation is performed with no user interaction.</td>
</tr>
<tr>
<td><code>-D</code></td>
<td>Passes custom variables and properties. For example, to override the default installation directory when you run the installer, enter:</td>
</tr>
<tr>
<td><code>&lt;install launcher name&gt;</code></td>
<td><code>-DUSER_INSTALL_DIR=/sybase</code></td>
</tr>
<tr>
<td><code>-r</code></td>
<td>Generates a response file and a reference.</td>
</tr>
<tr>
<td><code>-f</code></td>
<td>References a response files.</td>
</tr>
<tr>
<td><code>-l</code></td>
<td>Sets installer locales.</td>
</tr>
<tr>
<td>Option</td>
<td>Purpose</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------</td>
</tr>
<tr>
<td>-?</td>
<td>Displays installer help.</td>
</tr>
</tbody>
</table>
6  Postinstallation Tasks

After installing SAP Replication Server, perform the postinstallation tasks necessary for your site.

See the Configuration Guide.

Related Information

Log Files [page 39]
SAP ASE for the RSSD [page 40]
Sample Replication Server Configuration [page 40]
Server Entries in the Interfaces File [page 41]
Environment Variables on UNIX [page 42]
Runserver File [page 43]

6.1  Log Files

Check the information about the configuration of an SAP Replication Server that is stored in the log files.

- Installer error log file:
  $SYBASE/log

- Sample Replication Server error logs:
  $SYBASE/REP-15_5/samp_repserver/SAMPLE_RS.log

  Note
  The installer creates the SAMPLE_RS.log file only if you choose to start sample Replication Server during installation.

- Sample Replication Server SQL Anywhere error logs:
  $SYBASE/REP-15_5/samp_repserver/errorlog/

  Note
  The installer creates the errorlog directory only if you choose to create a sample Replication Server directory without starting the sample Replication Server during installation.

- rs_init log file:
  $SYBASE/REP-15_5/init/logs/<logmmdd.xxx>
  For example: $SYBASE/REP-15_5/init/logs/<log1106.001>

- SAP Replication Server log file:
  $SYBASE/REP-15_5/install/rs_name.log
For example: $SYBASE/REP-15_5/install/<REP_redtail.log>

6.2 SAP ASE for the RSSD

Start the RSSD stored on SAP ASE.

To use the RSSD stored on SAP ASE, install the SAP ASE database, if you have not done so already. See the Adaptive Server Enterprise Installation Guide for your platform.

After successful installation, start the SAP ASE. See the Adaptive Server Enterprise Configuration Guide for your platform.

Note

If you are upgrading an SAP ASE and you have replicated databases, see the Adaptive Server Enterprise Installation Guide for your platform.

6.3 Sample Replication Server Configuration

If you have not configured the sample Replication Server during installation, you can use the resource file created by the installer to configure and start the sample Replication Server.

During installation, the installer prompts you to configure and start a sample Replication Server. Regardless of your choice, the installer creates a resource file, $SYBASE/REP-15_5/samp_repserver/SAMPLE_RS.res, for the sample Replication Server and updates the interfaces file.

Use this resource file to configure and start the sample Replication Server after installation. The sample Replication Server resource file creates an ERSSD.

At the command prompt, enter:

```
cd $SYBASE/REP-15_5/samp_repserver
./rs_init-SAMPLE_RS.sh
```

The rs_init utility in this script displays commands as it executes them, and writes this output to its log.

If you encounter errors during configuration and start-up of the sample Replication Server, read the log file $SYBASE/REP-15_5/init/logs/logmmd<mm><dd>.xxx, where:

- `<mm>` – is the month.
- `<dd>` – is the day.
- `<xxx>` – is the number of that instance of the log on that day.

All files and logs associated with the sample Replication Server are in $SYBASE/REP-15_5/samp_repserver.
Table 10: Sample Replication Server Configuration Information

<table>
<thead>
<tr>
<th>Sample Replication Server Item</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>&lt;SAMPLE_RS&gt;</td>
</tr>
<tr>
<td>Port</td>
<td>11752</td>
</tr>
<tr>
<td>User name</td>
<td>&lt;sa&gt;</td>
</tr>
<tr>
<td>Password</td>
<td>sa user password for the &lt;SAMPLE_RS&gt;. You can enter a maximum of 30 bytes in the password field. For a: • Single-byte character – enter 6 to 30 characters. • Double-byte character – enter 3 to 15 characters.</td>
</tr>
<tr>
<td>ERSSD server name</td>
<td>&lt;SAMPLE_RS_ERSSD&gt;</td>
</tr>
<tr>
<td>ERSSD server port</td>
<td>11751</td>
</tr>
<tr>
<td>ERSSD user name</td>
<td>&lt;SAMPLE_RS_RSSD_prim&gt;</td>
</tr>
<tr>
<td>ERSSD password</td>
<td>Same as the password for &lt;SAMPLE_RS&gt;</td>
</tr>
</tbody>
</table>

See Configure SAP Replication Server and Add Databases Using rs_init in the Configuration Guide and SAMPLE_RS in the ASE-to-ASE Replication Quick Start Guide.

6.4 Server Entries in the Interfaces File

Modify network connection information using the dsedit utility.

If either the primary or the replicate SAP ASE is not on the SAP Replication Server machine, you must change the default host name “localhost” in the SAP Replication Server interfaces file to the actual server name. Use dsedit to update the interfaces file.

dsedit creates and modifies network connection information in the interfaces file. The utility is located in $SYBASE/$SYBASE_OCS/bin.

Tip

If your system does not have X-Windows, use dscp to configure server entries in the interfaces file. The utility is located in $SYBASE/$SYBASE_OCS/bin.

See dscp in the Adaptive Server Enterprise Utility Guide.

Source SYBASE.csh or SYBASE.sh to set the required environment variables before executing dsedit.

See dsedit in the Adaptive Server Enterprise Utility Guide.
6.5 Environment Variables on UNIX

The installer automatically sets the required system environment variables, such as PATH, as well as additional environment variables used by your newly installed software.

The environment variables are in these files:

- $SYBASE/SYBASE.sh
- $SYBASE/SYBASE.csh
- $SYBASE/SYBASE.env

After exiting the installer, you may need to reset the environment variables, for example, if someone other than the administrator must use the software.

To set these environment variables, you can either:

- Source SYBASE.sh (Bourne, Korn, or BASH shell) or SYBASE.csh (C shell) to change the component’s environment variables immediately for your current session, before invoking any component, or,
- Update the environment variables in the shell files to permanently change the component’s environment variables.

Table 11:

<table>
<thead>
<tr>
<th>Environment Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$LD_LIBRARY_PATH</td>
<td>Subdirectory path to the Open Client and SAP Open Server runtime shared library and the connector libraries</td>
</tr>
<tr>
<td>$SHLIB_PATH</td>
<td></td>
</tr>
<tr>
<td>$PATH</td>
<td>Subdirectory path to Open Client files</td>
</tr>
<tr>
<td>$SYBASE</td>
<td>Home directory where you install all the products from the installation media.</td>
</tr>
<tr>
<td>$SYBASE_OCS</td>
<td>Subdirectory path to the SAP Replication Server</td>
</tr>
<tr>
<td>$SYBASE_REP</td>
<td>Subdirectory path to the SAP Replication Server</td>
</tr>
</tbody>
</table>
6.6 Runserver File

The runserver file is an executable script that contains the complete command line required to start an SAP Replication Server. When you install a new SAP Replication Server to your replication system, the runserver file is created in the installation directory.

The runserver file name is constructed based on the name of the server. For example, for an SAP Replication Server named ROME_RS, the runserver file is named RUN_ROME_RS.
Uninstall the product.

Prerequisites

- Log in to your machine using an account with administrator privileges.
- Shut down all applications and processes.

Note

The uninstaller removes only those files that were loaded from the installation media. Some files, such as log and configuration files, are left intact for administrative purposes. jre and other installed directories are also not removed by the uninstaller. You must manually remove these directories.

Procedure

1. Choose an uninstallation method:
   - GUI mode (recommended)
   - Console mode
   - Silent mode
2. Follow the instructions for your chosen method.

Related Information

Uninstalling in GUI Mode [page 45]
Uninstalling in Console Mode [page 45]
Uninstalling in Silent Mode [page 46]
### 7.1 Uninstalling in GUI Mode

Uninstall the components in GUI mode.

**Procedure**

1. Enter:
   
   ```
   $SYBASE/sybuninstall/RepServer_Suite/uninstall
   ```

2. Click **Next**.

3. Select one of:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Uninstall</td>
<td>To completely remove all components. Files and folders created after the installation are unaffected.</td>
</tr>
<tr>
<td>Uninstall Specific Features</td>
<td>Lets you select the components to uninstall.</td>
</tr>
</tbody>
</table>

   Click **Next**.

4. The uninstallation summary window displays the selections you have made. Review the information, and click **Next**.

   **Note**
   
   If you installed SySAM during installation, this window shows the SySAM license utility. SAP recommends that you do not uninstall the SySAM license utility if you are using a SySAM license server.

   The Uninstall Complete window lists the items that cannot be removed.

5. Click **Done**.

### 7.2 Uninstalling in Console Mode

Uninstall the components in console mode.

**Procedure**

1. At the command prompt, navigate to the installation directory and enter:

   ```
   $SYBASE/sybuninstall/RepServer_Suite/uninstall -i console
   ```
The `uninstall` program starts.

2. Follow the remaining prompts to complete the uninstallation. Output is written to a terminal window, and you must use the keyboard to enter responses.

   ![Note]
   If you are prompted to remove shared files, SAP recommends that you do not do so.

Related Information

Command Line Options [page 37]
Uninstalling in GUI Mode [page 45]

7.3 Uninstalling in Silent Mode

Uninstall the components in silent mode.

Procedure

At the command prompt, navigate to the installation directory and enter:

```
$SYBASE/sybuninstall/RepServer_Suite/uninstall -i silent
```

The `uninstall` program starts.

   ![Note]
   If you are prompted to remove files that are created outside the installer, SAP recommends that you do not do so.

Related Information

Command Line Options [page 37]
Uninstalling in GUI Mode [page 45]
8 Obtaining Help and Additional Information

Learn more about this product on the SAP Help Portal.

See product documentation at the SAP Help Portal – online documentation that you can access using a standard Web browser. You can browse documents online or download them as PDFs.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the Adobe Web site.

Note

A more recent release bulletin, with critical product or document information added after the product release, may be available from the SAP Help Portal.

Related Information

Technical Support [page 47]

8.1 Technical Support

Customer support, software downloads, certification and maintenance reports are available online.

SAP Support Portal

Technical support is available online at the SAP Support Portal.


EBFs and Maintenance Reports

EBFs and maintenance report keep your software current and alert you to potential issues.

See the General Information on the SAP Replication Server Product Support Page.
Platform Certifications

Certification reports verify performance on a particular platform.

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