Installation Guide

SAP Replication Server® 15.7.1 SP200

Windows

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Contents

Conventions **1**
Installation Task Overview **5**
Installation Task Flows 5
SAP Replication Server Components **7**
Planning Your Installation **9**
Release Bulletin 9
Mixed-Version Support 9
Obtaining a License 9
SySAM License Server 11
SySAM Licensing Checkout 12
Sub-capacity Licensing 12
Product Editions and License Types 14
System Requirements 16
Installation Directory Structure 18
Installing in a Unique Directory on Windows 19
Installation Directory Contents and Layout 21
Installation Setup Options 21
Installation Mode 22
Performing Administrative Tasks 22
Installing SAP Replication Server **25**
Installing in GUI Mode 25
Installing SAP Replication Server Data Assurance Option 29
Installing in Console Mode 29
Installing Using a Response File 29
Creating a Response File 30
Installing in GUI Mode Using a Response File 30
Installing in Silent Mode 31
Installing ODBC Libraries for ExpressConnect for SAP HANA Database 32
Troubleshoot Installation Problems 32

Command Line Options 32
Postinstallation Tasks 35
Log Files 35
SAP ASE for the RSSD 35
Sample Replication Server Configuration 36
Server Entries in the sql.ini File 37
Environment Variables on Windows 37
Runserver File 38
SAP Replication Server Registry Keys 38
Uninstalling SAP Replication Server 41
Uninstalling in GUI Mode 41
Uninstalling in Console Mode 42
Uninstalling in Silent Mode 42
Obtaining Help and Additional Information 45
Technical Support 45
Downloading Product Updates 45
Product and Component Certifications 46
Accessibility Features 46
Index 49

Conventions

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

Style conventions

Key	Definition
`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

Key	Definition
{ }	Curly braces indicate that you must choose at least one of the enclosed options. Do not type the braces when you enter the command.
[ ]	Brackets mean that choosing one or more of the enclosed options is optional. Do not type the brackets when you enter the command.
( )	Parentheses are to be typed as part of the command.
|	The vertical bar means you can select only one of the options shown.
,	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.
...	An ellipsis (three dots) means you may repeat the last unit as many times as you need. Do not include ellipses in the command.

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

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.

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* on page 9 and *System Requirements* on page 16.
2. Install the software. See *Installing SAP Replication Server* on page 25.
3. Perform postinstallation. See *Postinstallation Tasks* on page 35.

Uninstalling the software

Uninstall the software. See *Uninstalling SAP Replication Server* on page 41.

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)

Planning Your Installation

Before you install or upgrade, prepare your environment.

- 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.

Release Bulletin

Obtain the updated information from the release bulletin.

The release bulletin contains last-minute information about installing and upgrading the software.

The latest release bulletins are available on the Product Documentation Web site at *http://www.sybase.com/support/manuals*.

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*.

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*.

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.

1. Choose a SySAM license model.

License Model	Description
Unserved license model	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.
Served license model	A license server manages the allocation of licenses among multiple machines.

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*.

See also

- *Product Editions and License Types* on page 14

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 SP200 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 SP200 and SySAM 2.3 use FlexNet Publisher version 11.11 on all platforms except on 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.

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
```

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*.

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.

Platform Support

Table 1. SySAM Virtualization Sub-capacity Compatibility

Vendor	Product	Platform Support	Virtualization Type
HP	nPar	HP IA 11.31	Physical partition
	vPar		Virtual partition
	Integrity Virtual Machines with Resource Manager		Virtual machine
	Secure Resource Partitions		OS containers
IBM	LPAR	AIX 6.1, AIX 7	Virtual partition
	dLPAR		Virtual partition
Oracle	Dynamic System Domains	Solaris 10	Physical partition

Vendor	Product	Platform Support	Virtualization Type
	Solaris Containers/Zones with Solaris Resource Manager		OS partition
	Solaris Logical Domain (LDOM)		Virtual partition
Intel, AMD	VMWare ESX Server Guest O/ S: Windows **Note:** VMWare ESX Server excludes VMWare Workstation and VMWare Server.	VMWare ESX 3.5, ESX 4.0, ESX 4.1, and ESXi 5.0 Guest OS: Windows 2008 R2, Windows 7, Windows 2012, and Windows 8	Virtual machine
	VMWare ESX Server Guest O/ S: Linux and Solaris x64	VMWare ESX 3.5, ESX 4.0, ESX 4.1, and ESXi 5.0 Guest OS: Red Hat 5.6, Red Hat 6.1, SuSE 11, and Solaris x64	Virtual machine
	Xen, KVM, DomainU: Windows **Note:** Xen excludes Solaris x64.	Windows 2008 R2 and Windows 7	Virtual machine
	Xen, KVM, DomainU: Linux	Red Hat 5.6, Red Hat 6.1, and SuSE 11	Virtual Machine
	Hyper-V	Windows 2008 R2 Guest OS: Windows 2008 R2, Windows 7, Windows 2012, and Windows 8	Virtual Machine

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.

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.

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 2. Enterprise Edition Features and Licenses

Feature Type	Features	Description	License
Base	SAP Replication Server	SAP Replication Server features, excluding Advanced Services Option, ExpressConnect for Oracle, and real-time loading.	REP_SERVER
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

Feature Type	Features	Description	License
	ExpressConnect for Oracle	Provides SAP Replication Server with the capability to connect directly to Oracle. See the Replication Server Options product documentation.	REP_EC_ORA
	Data Assurance Option	Data validation tool.	See the *SAP Replication Server Data Assurance Option Installation Guide*.

Table 3. Real-Time Loading Edition Features and Licenses

Feature Type	Features	Description	License
Base	SAP Replication Server	SAP Replication Server features, excluding Advanced Services Option, ExpressConnect for Oracle, and real-time loading.	REP_SERVER
	Real-Time Loading (RTL)	Allows replication to SAP® IQ from SAP® Adaptive Server® Enterprise (SAP® ASE) and Oracle. **Note:** You cannot use the Real-Time Loading Edition to replicate to an SAP ASE or Oracle.	REP_RTL_IQ
	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	REP_HVAR_ASE

Feature Type	Features	Description	License
	Replication Agent for Oracle.	Includes Replication Agent™ for Oracle to connect to Oracle as a primary data server.	RTLE includes a license for Replication Server Options.

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*.

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 4. SAP Replication Server and InfoPrimer Integration Licenses

Product	Features	Description	License
SAP Replication Server	Real-Time Loading (RTL)	Allows replication to SAP IQ from SAP ASE. **Note:** You cannot use the Real-Time Loading Edition to replicate to SAP ASE or Oracle.	REP_RTL_IQ
IQ InfoPrimer 15.3	IQ InfoPrimer	Used for the extraction and loading of data from SAP ASE and transformation of data in SAP IQ.	SY_INFOPRIMER_SERVER

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 bulletins.

Item	Requirement
CPU	A Pentium processor.
RAM	A minimum of 4GB RAM.

Item	Requirement
Disk storage	For a full installation, the total disk space required is approximately 1GB. Disk space required: • 800MB for the software, supporting files, and log files. • (Optional) A minimum of 1GB if you are installing SAP Replication Server Data Assurance (DA) Option. • 20MB for each SAP Replication Server disk partition. The disk partition may be on a different disk than your software. **Tip:** For the best performance, install the partitions on fast file systems or operating system raw devices. • 30MB for temporary usage during installation. 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.
Operating system	One of: • Windows Server 2008 R2 – Service Pack 1 • Windows 7 – Service Pack 1 If you are installing the SAP Replication Server on Windows 64-bit, download and install the latest security updates from the Microsoft Web site. Before you start the installation, install both Microsoft Visual Studio patches for your x86 or x64 Windows platform, download: • Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package ATL Security Update at *http://www.microsoft.com/download/en/details.aspx?amp;displaylang=en&id=26347*. • Microsoft Visual C++ 2010 Service Pack 1 Redistributable Package MFC Security Update at *http://www.microsoft.com/en-us/download/details.aspx?id=26999*.
Additional hardware	A minimum of 32-bit network card for better performance.

Item	Requirement
Supported protocols	TCP/IP, IPX/SPX, Microsoft Named Pipes.

Service Pack

If your operating system requires a service pack, install it before you install SAP Replication Server. Contact your operating system representative for a complete list of service packs.

To determine the current service pack system level and build number, either:

- Click **Start** > **Control Panel** > **System**; or,
- Click **Start** > **Run** and enter `winver`.

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 SP200 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 SP200 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 SP200 in the same directory as SAP ASE and Open Client and SAP Open Server versions 15.5 or later.

Warning! Do not uninstall version 15.7.1 SP200 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 SP200 on top of version 12.6 and later, in the same `%SYBASE%` directory. Doing so creates a duplicate entry in the `sql.ini` 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 `sql.ini` file.

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

Constraints

Do not install version 15.7.1 SP200 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 SP200. For this reason, SAP recommends that you back up your current directory before installing version 15.7.1 SP200.

If you are installing SAP Replication Server 15.7.1 SP200 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 SP200 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. 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\drepsrvr.exe)` 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.

Installing in a Unique Directory on Windows

Installing SAP Replication Server in a unique directory may reset environment variables for other products and produce unpredictable results.

1. Terminate all processes running on the system on which you are installing SAP Replication Server, including the SySAM License Server if you plan to upgrade it.

   Note: If you do not know which processes are running, contact your system administrator.

To stop the SySAM license server, see the *SySAM Users Guide*.

2. If you have an existing SAP ASE that runs as a Windows service, disable the service.
   a) Click **Start > Settings > Control Panel > Administrative Tools > Services**.
   b) In the Services list, right-click **SAP SQLServer** *server name*.
   c) Select **Properties**.
   d) Set Startup Type to Disabled.
   e) Close the Services window.
3. Record the current environment variable settings in a file called `env.orig` by entering:

   ```
   set > env.orig
   ```

   You can read this file with a text editor.

   Specifically, record the current values of:

   - INCLUDE
   - LIB
   - LM_LICENSE_FILE
   - PATH
   - SYBASE
   - SYBASE_JRE
4. Insert the SAP Replication Server media in the appropriate drive, or download and extract the installation image from the SAP Service Marketplace (SMP).
5. Install the software.
6. Specify a unique directory for the SAP Replication Server product.
7. Specify the host name and port number of the license server.
8. Change the environment variables to the original settings that you recorded in step 3:
   a) Select **Start > Settings > Control Panel > System**.
   b) Click the **Advanced** tab.
   c) Select **Environment Variables**.
   d) Under System Variables, change the values of the variables listed in step 3.
9. Configure SAP ASE to start automatically:
   a) Select **Start > Settings > Control Panel > Administrative Tools > Services**.
   b) In the Services list, right-click the **SAP SQLServer** *server name*.
   c) Click **Properties**.
   d) Set Startup Type to Automatic.
10. Restart your system.

Note: When you install the software in a unique installation directory, you must maintain two `sql.ini` files: one for SAP Replication Server components and one for your other applications.

See also

- *Environment Variables on Windows* on page 37
- *Installing in GUI Mode* on page 25

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.
- `ini` – initialization files, including `mnemonic.dat`, `objectid.dat`, `sql.ini`, and `trusted.txt`.
- `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`, `dll`, `include`, `ini`, `lib`, `lib3p`, `sample`, and `scripts`.
- `REP-15_5` – version 15.7.1 SP200 files, including `ASA12`, `ASA16`, `bin`, `certificates`, `connector`, `devlib` (32-bit platforms), `devlib64` (64-bit platforms), `doc`, `init`, `install`, `lib` (32-bit platforms), `lib64` (64-bit platforms), `lib3p` (32-bit platforms), `lib3p64` (64-bit platforms), `locales`, `REFIMP-01_0`, `samp_repserver`, `scripts`, `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.

  Warning! Modifying or removing `si_reg.xml` prevents the installer from accurately managing installed component versions when you install or uninstall the software subsequent to this installation.
- `sybuninstall` – files used by the uninstaller to uninstall the software.
- `SYSAM-2_0` – software license manager files including `bin`, `licenses`, `locales`, and `log`.
- `SYBASE.bat`, `SYBASE.env` – files created by the installer that you use to reset environment variables.

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.

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 nongraphical user interface environment and must conform to a standard installation with minor changes.

Performing Administrative Tasks

Complete the administrative tasks before you begin the installation process.

1. Back up your current replication system.
2. Verify that you have **Winrar** or **Winzip** installed on your machine so the installer can decompress files during the installation process.
3. Log in using an account with Windows administrator privileges

4. Close any open applications or utilities, including currently installed components, to free disk space and system resources.
5. Verify that the installation directory does not have a space in the directory name.

Installing SAP Replication Server

Install the software using your chosen method.

Prerequisites
Complete installation planning tasks.

Task

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

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.

Task

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. Launch the **setup** program.

   If the installer does not start automatically, double-click `setup.exe` or select **Start** > **Run** and enter the following, where *x* is your CD or DVD drive:

   ```
   x:\setup.exe
   ```

   If there is not enough disk space in the temporary disk space directory, set the environment variable TMP to *directory_name* before running the installer again, where *directory_name* is where the installation program writes the temporary installation files. When specifying *directory_name*, 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	Description
Click **Choose**.	Browse for and select the installation directory.
Enter a new directory path.	Create a new directory.
Click **Restore Default Folder**.	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**.

     Warning! 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:

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

Click **Next**.

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

Option	Choose
Specify license keys	Either: • Click **Browse** to select the license file. • Use **Shift+Click** or **Ctrl+Click** to select multiple license files. The license pane displays the license information. • Copy and paste the license information directly in the license pane. Click **Next**. If you specify a served license key, the installer prompts you to install a new SySAM license server. Select: • **Next** – to install the new SySAM license server. Follow the installation prompts. • **Previous** – and select **Use previously deployed license server** if you have an existing SySAM license server on the same host.
Use previously deployed license server	Enter the: • Host name of the machine where the license server is running • Port number if the port number you are using is not the default Click **Next**.
Continue installation without a license key	If you do not have licenses for any of the components, select this option, then click **Next** to proceed. 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.

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:

Option	Description
Yes	Configure and start a sample Replication Server. The installer displays the configuration information for the sample Replication Server. Record this information. 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.
No	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: • **Yes** – to create a sample Replication Server directory without starting the sample Replication Server, or, • **No** – to continue with the installation.

Click **Next**.

11. Click **Done**.

Next

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.

See also

- *Postinstallation Tasks* on page 35
- *Runserver File* on page 38

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.

See the *SAP Replication Server Data Assurance Option Installation Guide* for details.

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.

Task

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.

1. At the command prompt, enter:

   ```
   x:\setupConsole.exe -i console
   ```

   where *x* is the location of the installer.
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.

See also

- *Installing in GUI Mode* on page 25

Installing Using a Response File

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

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

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.

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 SP200 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.

To generate a response file during installation, enter:

```
x:\setupConsole.exe -r responseFileName
```

where *x* is the location of the installer.

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

```
C:\Sybase\REP\ResponseFile.txt
```

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.

Task

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

```
x:\setupConsole.exe -f responseFileName
```

where *x* is the location of the installer.

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

See also

- *Command Line Options* on page 32
- *Creating a Response File* on page 30
- *Installing in GUI Mode* on page 25

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.

Task

To install in silent mode, run:

```
x:\setupConsole.exe -f responseFileName -i silent
-DAGREE_TO_SAP_LICENSE=true
```

where:

- *x* – is the location of the installer.
- *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.

Warning! When running in silent installation mode, SAP recommends that you use `setupConsole.exe`. The normal `setup.exe` runs the installation program in the background, and gives the impression that the installation has terminated immediately. This may result in additional installation attempts, which can corrupt the Windows Registry and lead to an operating system restart failure.

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`.

See also

- *Command Line Options* on page 32
- *Creating a Response File* on page 30
- *Installing in GUI Mode* on page 25

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.

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

Troubleshoot Installation Problems

Set the installer to debug mode to troubleshoot problems encountered during installation.

While starting the installer, press the **Ctrl** key until a console window appears. The installer then generates additional detailed installation information that is useful for debugging installer issues.

Tip: If you encounter errors during installation using any installation mode, check the installation log file to see a record of the installation process. The log file is located in `%SYBASE%\log`.

Command Line Options

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

Option	Purpose
-i console	Uses the console **interface** mode, where messages during installation appear on the Java console and the wizard is run in console mode.
-i silent	Installs or uninstalls the product in silent mode, where the installation or uninstallation is performed with no user interaction.
-D	Passes custom variables and properties. For example, to override the default installation directory when you run the installer, enter: `install_launcher_name -DUSER_INSTALL_DIR=E:\Sybase`
-r	Generates a response file and a reference.
-f	References a response files.

Option	Purpose
-I	Sets installer locales.
-\?	Displays installer help.

Postinstallation Tasks

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

See the *Configuration Guide*.

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`*

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.

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 `sql.ini` 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.bat
```

A setup window shows configuration status. The **rs_init** utility in this script displays commands in a DOS window as it executes them, and writes any 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\logmmdd.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 5. Sample Replication Server Configuration Information

Sample Replication Server Item	Definition
Name	*SAMPLE_RS*
Port	11752
User name	*sa*

Sample Replication Server Item	Definition
Password	sa user password for the *SAMPLE_RS*. 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.
ERSSD server name	*SAMPLE_RS_ERSSD*
ERSSD server port	11751
ERSSD user name	*SAMPLE_RS_RSSD_prim*
ERSSD password	Same as the password for *SAMPLE_RS*

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*.

Server Entries in the sql.ini 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 `sql.ini` file to the actual server name. Use **dsedit** to update the `sql.ini` file.

dsedit creates and modifies network connection information in the `sql.ini` file. The utility is located in `%SYBASE%\%SYBASE_OCS%\bin`.

Execute `SYBASE.bat` to set the required environment variables before executing **dsedit**.

See **dsedit** in the *Adaptive Server Enterprise Utility Guide*.

Environment Variables on Windows

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.bat`
- `%SYBASE%\SYBASE.env`

After exiting the installer, you can reset the environment variables using these files, if needed.

Environment Variable	Description
%LIB%	Subdirectory path to the Open Client and SAP Open Server runtime shared library and the connector libraries
%PATH%	Includes directories that are needed to execute the SAP Replication Server (such as SAP Replication Server executables and OCS libraries)
%SYBASE%	Home directory where you install all the products from the installation media.
%SYBASE_OCS%	Subdirectory path to Open Client files
%SYBASE_REP%	Subdirectory path to SAP Replication Server

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, **rs_init** creates a runserver file in the installation directory.

The runserver file name is constructed based on the name of the server, truncated to eight characters, if necessary, and a `.bat` extension. For example, for an SAP Replication Server named ROME_RS, the runserver file is named `run_rome.bat`.

SAP Replication Server Registry Keys

When you install an SAP Replication Server for Windows, the installation program and server configuration store configuration information to several branches, called keys, in the Windows Registry.

In some cases, you may be able to manually change the registry to configure the SAP Replication Server features. However, if you make incorrect changes, you can seriously impair your Windows system.

Warning! Do not modify key values in the registry unless you are an experienced Windows administrator, and you are familiar with the **regedt32** utility. See your system Windows documentation for information about using **regedt32**.

HKEY_LOCAL_MACHINE\SOFTWARE\SYBASE\Replication Server
Registry values that contain information about the software.

Key Name	Default	Description
CurrentVersion	15.7	Version number of the SAP Replication Server installed on the computer
Description	Replication Server	Name of the software installed

HKEY_LOCAL_MACHINE\SOFTWARE\SYBASE\Replication Server\server_name
Registry values that contain basic information about the SAP Replication Server *server_name*.

Key Name	Default	Description
ServerType	REP	Type of server

HKEY_LOCAL_MACHINE\SOFTWARE\SYBASE\Server\server_name \Parameters
Registry values that contain start-up parameters for the SAP Replication Server *server_name* when *server_name* is started as a Windows service.

Key Name	Default	Description
Arg0	**-S***server_name*	Name of the SAP Replication Server
Arg1	**-C**:*installed_directory*\path*server_name*.cfg	Location and name of the configuration file for the SAP Replication Server *server_name*
Arg2	**-E**:*installed_directory*\path*server_name*.log	Location and name of the log file for sample Replication Server *server_name*
Arg3	**-I***installed_directory*\ini\sql.ini	Location of the `sql.ini` file

HKEY_LOCAL_MACHINE\SOFTWARE\SYBASE\Server\server_name \Environment
Registry values that contain environment variables for the SAP Replication Server *server_name* when *server_name* is started as a Windows service. The key values in this branch take precedence over other values for these variables.

Key Name	Default	Description
SYBASE	*installed_directory*	Value for the SYBASE variable

Key Name	Default	Description
SYBASE_REP	15.5	Value for the SYBASE_REP variable

Uninstalling SAP Replication Server

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.

Task

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

Uninstalling in GUI Mode

Uninstall the components in GUI mode.

1. Choose one of:
   - Select **Start > Settings > Control Panel > Add or Remove Programs**.
   - From the command line, enter:
     ```
     %SYBASE%\sybuninstall\RepServer_Suite\uninstall.exe
     ```
   - Click **Start > Run** and enter:
     ```
     %SYBASE%\sybuninstall\RepServer_Suite\uninstall.exe
     ```
   - Open Windows Explorer, navigate to `%SYBASE%\sybuninstall\RepServer_Suite`, and double-click `uninstall.exe`.
2. Click **Next**.
3. Select one of:

Option	Description
Complete Uninstall	To completely remove all components. Files and folders created after the installation are unaffected.
Uninstall Specific Features	Lets you select the components to uninstall.

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**.

Uninstalling in Console Mode

Uninstall the components in console mode.

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

   ```
   %SYBASE%\sybuninstall\RepServer_Suite\uninstall.exe -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.

See also

- *Command Line Options* on page 32
- *Uninstalling in GUI Mode* on page 41

Uninstalling in Silent Mode

Uninstall the components in silent mode.

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

```
%SYBASE%\sybuninstall\RepServer_Suite\uninstall.exe -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.

See also

- *Command Line Options* on page 32

- *Uninstalling in GUI Mode* on page 41

Obtaining Help and Additional Information

Use the Product Documentation site and online help to learn more about this product release.

- Product Documentation at *http://sybooks.sybase.com/* – online documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. The Web site also has links to other resources, such as white papers, community forums, maintenance releases, and support content.
- Online help in the product, if available.

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 Product Documentation Web site.

Technical Support

Get support for SAP® products.

If your organization has purchased a support contract for this product, then one or more of your colleagues is designated as an authorized support contact. If you have any questions, or if you need assistance during the installation process, ask a designated person to contact Technical Support as specified in your contract:

- Sybase Technical Support or the Sybase subsidiary in your area
- SAP Technical Support

Customers with an SAP support contract can obtain support for this product at the SAP support site, *http://service.sap.com/sybase/support*. You can also find information about Sybase support migration at this location (login may be required).

Customers with a Sybase support contract can obtain support for this product at *http://www.sybase.com/support* (login required).

Downloading Product Updates

Get maintenance releases, support packages and patches, and related information.

- If you purchased the product directly from Sybase or from an authorized Sybase reseller:
  a) Go to *http://www.sybase.com/support*.
  b) Select **Support > EBFs/Maintenance**.

c) If prompted, enter your MySybase user name and password.
d) (Optional) Select a filter, a time frame, or both, and click **Go**.
e) Select a product.

   Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as an authorized support contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click **My Account** to add the "Technical Support Contact" role to your MySybase profile.
f) Click the **Info** icon to display the EBF/Maintenance report, or click the product description to download the software.

- If you ordered your product under an SAP contract:
  a) Go to *http://service.sap.com/swdc* and log in if prompted.
  b) Select **Search for Software Downloads** and enter the name of your product. Click **Search**.

Product and Component Certifications

Certification reports verify Sybase product performance on a particular platform.

To find the latest information about certifications:

- For partner product certifications, go to *http://www.sybase.com/detail_list?id=9784*
- For platform certifications, go to *http://certification.sybase.com/ucr/search.do*

Accessibility Features

Accessibility ensures access to electronic information for all users, including those with disabilities.

Documentation for this product is available in an HTML version that is designed for accessibility.

Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. Documents that comply with Section 508 generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.

Note: You may need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

For information about how Sybase supports accessibility, see the Sybase Accessibility site: *http://www.sybase.com/products/accessibility*. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.

Index

A

administration tasks 22

C

charsets subdirectory 21
check upgrade incompatible version
    emergency bug fix, one-off, controlled, or instrumental release 25
checking for a valid installation
    in SAP Replication Server 25
choose update installation 25
collate subdirectory 21
command line installation
    SAP Replication Server 29
components of SAP Replication Server 7
configuration information
    environment variables 38
    start-up parameters 38
    Windows Registry 38
console mode
    installing SAP Replication Server 29
    response file, installing SAP Replication Server with 30
    troubleshooting 32
    uninstalling SAP Replication Server 42
conventions
    style 1
    syntax 1
CPU requirements 16
creating
    response files for SAP Replication Server 30
custom installation 21, 25

D

-D flag and setup
    SAP Replication Server 31
default directory 25
definitions
    runserver 38
diagnosing software problems 18
directories
    default 25
    installation, structure of 18
    Sybase_Install_Registry 25
disk storage requirements 16
drepsrvr.exe program 18
dsedit utility 37

E

Embedded Replication Server System Database (ERSSD) 7, 16
environment variables
    %LIB% 37
    %PATH% 37
    %SYBASE_OCS% 37
    %SYBASE_REP% 37
    %SYBASE% 37
    required for dsedit 37
    setting 37
    SYBASE_SAM_CAPACITY 13
errors
    while starting installer 25
ExpressConnect for Oracle (ECO) 7
ExpressConnect for SAP HANA database (ECH) 7
ExpressConnect for SAP HANA database(ECH)
    install ODBC libraries 32

F

files
    installation log, SAP Replication Server 25, 32
    log.txt 21, 32
    runserver 38
    si_reg.xml 25
    SYBASE.bat 21, 37
    SYBASE.env 21, 37
full installation 21, 25

G

graphical user interface (GUI) installation 22
GUI mode
    installing SAP Replication Server 25
    uninstalling SAP Replication Server 41

H

hardware requirements 16

I

ini subdirectory 21
installation
    check upgrade incompatible version 25
    GUI mode 25
    log file, SAP Replication Server 32
    overview 5
    plan 9
    starting 25
    troubleshooting during silent or console mode 32
    typical software components 25
Installation
    task flow 5
installation directories
    contents 21
installer
    custom installation 21, 25
    errors in starting 25
    full 21
    full installation 25
    standard installation, typical 21
    typical installation 25
installing
    ODBC libraries for ExpressConnect for HANA DB 32
    Replication Server Data Assurance (DA) Option 29
    SAP Adaptive Server Enterprise (SAP ASE) for the Replication Server System Database 35
    SAP Replication Server, using -D flag 31
interactive mode
    response file, installing Replication Server with 22
IQ InfoPrimer 16

L

%LIB% 37
license
    sub-capacity 12
licenses
    check number of processors 12
    IQ InfoPrimer integration 16
    license model 9
    obtaining 9
    SAP Control Center 16
    sub-capacity 13
    types of 14, 16
log files, reviewing after installation 35
log.txt file 21, 32

M

methods of installation
    SAP Replication Server 25
Microsoft Visual C++ 2010 16
Microsoft Visual Studio 2005 16
mixed-version requirements 9
modifying
    remove si_reg.xml file 21

O

obtaining licenses 9
OCS-16_0 subdirectory 21
operating system
    service pack levels 16
    service pack requirements for 16
operating system requirements 16
overview
    installation 5
    SySAM licensing 9
    SySAM sub-capacity licensing 9

P

%PATH% 37
planning replication system 5
postinstallation tasks
    SAP Replication Server 35
preinstallation tasks 9
product editions, types of 14
programs
    drepsrvr.exe 18

R

RAM requirements 16
regedt32 utility 38
registry keys 38
release bulletin 9

REP-15_5 subdirectory 21
requirements
    CPU 16
    disk storage 16
    hardware 16
    operating system 16
    operating system service packs 16
    RAM 16
response files
    installing command line mode 22
    installing with, SAP Replication Server 22
    SAP Replication Server, creating for 30
reviewing log files after installing 35
rs_init utility 36

S

SAP Adaptive Server Enterprise (SAP ASE)
    for the Replication Server System Database 35
    upgrading 35
SAP Replication Server
    components 7
    details 7
    in console mode 22, 29
    in GUI mode 22, 25
    in silent mode 22, 31
    installing in command line mode 22, 29
    installing in silent mode, unattended 29
    licenses 9
    uninstalling, prerequisites 41
    with response files 22
SAP Service Marketplace (SMP) 9, 25, 32
setting environment variables 37
si_reg.xml file 21
silent mode
    uninstalling SAP Replication Server 42
silent mode installations
    response file, installing SAP Replication Server with 31
    SAP Replication Server 22, 31
    troubleshooting 32
software, diagnosing problems 18
standard installation 21, 25
starting
    installation 25
    the sample Replication Server 36
subdirectories
    charsets 21
    ini 21
    OCS-16_0 21
    REP-15_5 21
    Sybase_Install_Registry 21
    sybuninstall 21
    SYSAM-2_0 21
supported protocols 16
%SYBASE% environment variable 37
Sybase_Install_Registry subdirectory 21
%SYBASE_OCS% environment variable 37
%SYBASE_REP% environment variable 37
SYBASE_SAM_CAPACITY 13
SYBASE.bat file 21, 37
SYBASE.env file 21
sybuninstall subdirectory 21
SySAM 25
    configure IPv6 11
    FlexNet Publisher 11
    license checkout 12
    license server version 11
    sub-capacity licensing 11, 12
SySAM license model 9
SySAM license server 11
SySAM sub-capacity 12
    requirements 13
SYSAM-2_0 subdirectory 21
sysamcap utility 9
system requirements 16

T

tables
    system requirements 16
tasks, administration 22
troubleshooting
    during console or silent mode installation 32
types of installations
    custom 21, 25
    full 21, 25
    standard 25
    typical 21, 25
typical installation 21, 25

U

uninstalling
    in console mode, SAP Replication Server 42
    in GUI mode, SAP Replication Server 41
    in silent mode, SAP Replication Server 42

upgrading
    mixed-version environments 9
    SAP Adaptive Server Enterprise (SAP ASE) 35
utilities
    dsedit 37
    regedt32 38
    rs_init 36
    sysamcap 9, 13

V

version restrictions, when upgrading 9