

SYBASE®

Installation Guide

**Replication Server®**

15.0.1

[ UNIX ]

DOCUMENT ID: DC32237-01-1501-02

LAST REVISED: June 2007

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# About This Book

## Audience

This book is for System Administrators and other qualified installers who are familiar with their system's environment, networks, disk resources, and media devices.

## How to use this book

Before you install Replication Server®, read Chapter 1, “Preparing to Install and Configure Replication Server” in the *Replication Server Configuration Guide for UNIX* to help you plan your installation. However, the step is unnecessary if you plan to install a sample Replication Server.

This guide contains these chapters:

- Chapter 1, “Before You Begin,” describes pre-installation information and tasks.
- Chapter 2, “Installing Replication Server,” describes how to install Replication Server.
- Chapter 3, “Post-Installation Tasks,” provides information about the tasks you must perform after installation.

## Related documents

The Sybase® Replication Server documentation set consists of:

- The release bulletin for your platform – contains last-minute information that was too late to be included in the books.

A more recent version of the release bulletin may be available on the World Wide Web. To check for critical product or document information that was added after the release of the product CD, use the Sybase® Technical Library.

- *Installation Guide* for your platform (this book) – describes installation and upgrade procedures for all Replication Server and related products.
- *What's New in Replication Server?* – describes the new features in Replication Server version 15.0.1 and the system changes added to support those features.

- 
- *Administration Guide* – contains an introduction to replication systems. This manual includes information and guidelines for creating and managing a replication system, setting up security, recovering from system failures, and improving performance.
  - *Configuration Guide* for your platform – describes configuration procedures for all Replication Server and related products, and explains how to use the `rs_init` configuration utility.
  - *Design Guide* – contains information about designing a replication system and integrating heterogeneous data servers into a replication system.
  - *Getting Started with Replication Server* – provides step-by-step instructions for installing and setting up a simple replication system.
  - *Heterogeneous Replication Guide* – describes how to use Replication Server to replicate data between databases supplied by different vendors.
  - *Reference Manual* – contains the syntax and detailed descriptions of Replication Server commands in the Replication Command Language (RCL); Replication Server system functions; Sybase Adaptive Server® commands, system procedures, and stored procedures used with Replication Server; Replication Server executable programs; and Replication Server system tables.
  - *System Tables Diagram* – illustrates system tables and their entity relationships in a poster format. Available only in print version.
  - *Troubleshooting Guide* – contains information to aid in diagnosing and correcting problems in the replication system.
  - Replication Manager plug-in help, which contains information about using Sybase Central™ to manage Replication Server.
  - *Sybase Software Asset Management User's Guide* – this manual introduces you to Sybase asset management concepts and provides instructions for establishing and managing your license files.
  - *FLEXnet Licensing End User Guide* – this Macrovision manual explains FLEXnet Licensing for administrators and end users and describes how to use the tools which are part of the standard FLEXnet Licensing distribution kit from Sybase.
  - *SAMreport User's Guide* – this Macrovision manual explains how to use SAMreport, a report generator that helps you monitor the usage of applications that use FLEXnet licensing.

**Other sources of information**

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

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- 
- 2 Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
  - 3 Select Search to display the availability and certification report for the selection.

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- 2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.
- 3 Select a product.
- 4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the “Technical Support Contact” role to your MySybase profile.

- 5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

**Conventions**

This section describes the stylistic and syntactic conventions used in this book.

**Style conventions** Syntax statements (displaying the syntax and options for a command) are printed as follows:

```
alter user user
set password new_passwd
[verify password old_passwd]
```



Examples that show the use of Replication Server commands are printed as follows:

```
alter user louise
set password hFE5t
verify password hFE5t
```

Command names, command option names, program names, program flags, keywords, configuration parameters, functions, and stored procedures are printed as follows:

- Use `alter user` to change the password for a login name.
- Variables, parameters to functions and stored procedures, and user-supplied words are in italics in syntax and in paragraph text, as follows:

The `set password` *new\_passwd* clause specifies a new password.

- Names of database objects, such as databases, tables, columns, and datatypes, are in italics in paragraph text, as follows:

The `base_price` column in the `Items` table is a money datatype.

- Names of replication objects, such as function-string classes, error classes, replication definitions, and subscriptions, are in italics.

**Syntax conventions** Syntax formatting conventions are summarized in Table 1. Examples combining these elements follow.

**Table 1: Syntax formatting conventions**

Key	Definition
<i>variable</i>	Variables (words standing for values that you fill in) are in italics.
{ }	Curly braces mean you must choose at least one of the enclosed options. Do not include braces in the command.
[ ]	Brackets mean you may choose or omit enclosed options. Do not include brackets in the command.
	Vertical bars mean you may choose no more than one option (enclosed in braces or brackets).
,	Commas mean you may choose as many options as you need (enclosed in braces or brackets). Separate your choices with commas, to be typed as part of the command. Commas may also be required in other syntax contexts.
( )	Parentheses are to be typed 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.

#### Obligatory choices

- Curly braces and vertical bars – choose only one option.

```
{red | yellow | blue}
```

- 
- Curly braces and commas – choose one or more options. If you choose more than one, separate your choices with commas.

```
{cash, check, credit}
```

### Optional choices

- One item in square brackets – choose it or omit it.

```
[anchovies]
```

- Square brackets and vertical bars – choose none or only one.

```
[beans | rice | sweet_potatoes]
```

- Square brackets and commas – choose none, one, or more options. If you choose more than one, separate your choices with commas.

```
[extra_cheese, avocados, sour_cream]
```

**Repeating elements** An ellipsis (...) means that you may repeat the last unit as many times as you need. For the alter function replication definition command, for example, you can list one or more parameters and their datatypes for either the add clause or the add searchable parameters clause:

```
alter function replication definition function_rep_def
{deliver as 'proc_name' |
add @parameter datatype[, @parameter
datatype]... |
add searchable parameters @parameter
[, @parameter]... |
send standby {all | replication definition}
parameters}
```

## Accessibility features

This document is available in an HTML version that is specialized for accessibility. You can navigate the HTML with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Replication Server HTML documentation has been tested for compliance with U.S. government Section 508 Accessibility requirements. 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 might 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 Sybase Accessibility at <http://www.sybase.com/accessibility>. The Sybase Accessibility site includes links to information on Section 508 and W3C standards.

**If you need help**

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.



# Before You Begin

This chapter provides information about system and licensing requirements for installing Replication Server. It also discusses other pre-installation tasks you must complete before you install Replication Server.

<b>Topic</b>	<b>Page</b>
Introduction	1
SySAM licensing requirements	2
Pre-installation tasks	3

## Introduction

This section describes the components of Replication Server and provides an overview of the tasks involved in installing and setting up Replication Server.

## Replication Server components

Replication Server consists of the following components:

- Replication Server
- RepAgent™ for Adaptive Server Enterprise
- Replication Server support files (for example, scripts and configuration files)
- Adaptive Server® Anywhere for Embedded Replication Server System Database (ERSSD)
- RepAgent for ERSSD

- The Replication Server Administration tool, which consists of:
  - Sybase Central version 4.3
  - Replication Manager (RM) plug-in to Sybase Central
- Replication Monitoring Services (RMS)

## Installation task overview

The *Replication Server Installation Guide for UNIX* explains how to unload the Replication Server software from the distribution media to your hard disk.

The *Replication Server Configuration Guide for UNIX* explains how to:

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

## SySAM licensing requirements

Replication Server version 15.0.1 includes a new Sybase Software Asset Management System (SySAM) implementation to perform license administration and asset management tasks.

Sybase recommends that you get your license files from the Sybase Product Download Center (SPDC) at <https://sybase.subscribenet.com> before you begin installation. Accessing SPDC requires a separate login and password information through e-mail.

For general information about SySAM 2.0, see the *Sybase Software Asset Management User's Guide*.

## Pre-installation tasks

Before you install Replication Server, follow the steps outlined in this section.

### Read the release bulletin

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

Your Sybase products shipment includes printed release bulletins. They are also available on the Product Manuals Web page at <http://www.sybase.com/support/manuals>.

### Plan your replication system

The *Replication Server Configuration Guide for UNIX* provides the necessary information, including an installation worksheet and a database setup worksheet to help you plan your replication system. Become familiar with Chapter 1, “Preparing to Install and Configure Replication Server” and the requirements of your replication system before continuing with the installation.

### Review system requirements

Replication Server requires a computer with the system configuration described in Table 1-1.

**Table 1-1: System requirements for UNIX**

Item	Requirement
Disk storage	<p>A minimum of 450MB of available hard disk space:</p> <ul style="list-style-type: none"> <li>• 400MB for the Replication Server software, supporting files, and log files.</li> <li>• An additional 20MB for each Replication Server disk partition. The disk partition may be on a different disk than your Sybase software.</li> <li>• One of the following: <ul style="list-style-type: none"> <li>• Disk space for your Adaptive Server Enterprise database, which serves as your Replication Server System Database (RSSD) if you are not using the Embedded RSSD (ERRSD). See your Adaptive Server Enterprise documentation for system requirements.</li> <li>• 80MB for your Adaptive Server 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.</li> </ul> </li> </ul> <p>More disk space may be required, depending on your replication system application.</p>
Operating system	<p>One of the following platforms:</p> <ul style="list-style-type: none"> <li>• Sun Solaris 8 and 9</li> <li>• HP-UX 11.11 and 11.23</li> <li>• HP Itanium</li> <li>• IBM AIX 5.2</li> </ul>
Supported protocols	TCP/IP

## Review operating system patch requirements

Contact your operating system provider for any patches recommended for your installation, or check the Replication Server release bulletin for your platform.

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

---

**Note** Do not use a patch that is earlier than the version suggested for your operating system. If a patch has been superseded by a newer patch, use the most recent one.

---

Solaris:

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

```
showrev -p
```



## Increase operating system threads

*HP-UX only* – Beginning with version 12.5, Replication Server uses operating system threads instead of Open Client/Server threads™. This requires the operating system kernel to allocate many more threads per process than previously. However, because many HP-UX systems have relatively low default limits on the number of threads per process and total number of threads per kernel, Replication Server can report the following error message:

```
F. 2002/05/28 12:23:37. FATAL ERROR #1030 ?(?) - /errhand.c(730)
Open Server error: Error: 16361, State: 0, Severity 20 --
'CreateEvent() failed in srv_spawn_thread'.
T. 2002/05/28 12:23:37. (2): Exiting due to a fatal error
```

To prevent this error message, increase the value of `max_thread_proc` to 256, and the value of `nkthread` to 2048 in your operating system:

- 1 Log in as the superuser (SU), and go to the root directory.
- 2 Start `sam`.
- 3 In `sam`, select “Kernel configuration.”
- 4 Select “Configurable parameters.”
- 5 Scroll down to “`max_thread_proc`.”
- 6 Increase the value of `max_thread_proc`.
- 7 Select Actions | ProcessNew Kernel to rebuild the kernel.
- 8 Restart the system.

## Configure the operating system for asynchronous I/O

*HP-UX only* – To optimize asynchronous I/O and to prevent the paging of shared memory, you must grant MLOCK permissions before you install Replication Server.

To grant MLOCK permissions to a group, enter:

```
/etc/privgrp add mlock <group name>
```

or:

```
/etc/setprivgrp <group name> MLOCK
```

## Understand the installation directory structure

Most components of Replication Server are installed in their own subdirectories, with 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 Replication Server) or OCS (for Open Client™ and Open Server™), and the software release version, such as 15\_0.

Replication Server 15.0.1 includes a new version of Replication Server and many of its supporting components. Other Sybase products may contain earlier versions of the same components. Installing Replication Server 15.0.1 into the same directory containing these existing products, will not impact the products.

However, if you are using other Sybase products, installing Replication Server 15.0.1 may cause some environment variables to change. You will have to reset the environment variables in order to make the individual products work.

---

**Note** Replication Server 15.0.1 may be installed in the same directory as Adaptive Server Enterprise (ASE) and OCS versions 12.5.1 or later.

---

You can install Replication Server 15.0.1 on top of Replication Server 12.6, in the same *\$SYBASE* directory. Installing 15.0.1 on top of Replication Server 12.6 will create a duplicate entry in the interfaces file for *SAMPLE\_RS*, which is the sample Replication Server. *rs\_init* will warn you about the duplicate entry and will use the first instance of *SAMPLE\_RS* found in the interfaces file.

---

**Warning!** Do not install Replication Server version 15.0.1 on top of the following Sybase products:

- Replication Server version 12.5 or earlier
- Adaptive Server version 12.5.0.x or earlier
- Open Client/Server version 12.5.0 or earlier
- OpenSwitch version 12.5 or earlier
- DirectConnect™ version 12.5 or earlier

Doing so incapacitates older versions of these products, and can also adversely affect other Sybase products. If you perform one of these installations, you cannot reverse it with an uninstallation, as uninstalling might remove required components of the older Sybase products updated by Replication Server version 15.0.1. For this reason, Sybase recommends that you back up your current directory before installing Replication Server version 15.0.1.

---

**Note** If you are installing Replication Server 15.0.1 in an existing Sybase installation directory that contains Adaptive Server version 15.0.1, you may be asked if you wish 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 Replication Server subdirectory is `$$SYBASE/REP-15_0`. However, Open Client is installed in `$$SYBASE/OCS-15_0`, and the Replication Manager plug-in for Sybase Central, `RMPugin.jar` and its associated files are installed in `$$SYBASE/RMP-15_0`. The exception is Adaptive Server Anywhere (ASA), which is installed in `$$SYBASE/REP-15_0/ASA9`, as it is used only for Replication Server. 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.

---

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

---

A diagnostic server `REP-15_0/bin/repserver.diag` is installed to capture and display information about internal processes. Do not delete this program as you may need to use it at the direction of Sybase Technical Support, to diagnose and resolve Replication Server problems.

---

**Note** The directory structure listed in this section is a partial directory structure. Your actual directory structure may differ, depending on the components you choose to install.

---

## Review the Sybase installation directory contents

The section lists the contents of the Sybase installation directory in alphabetical order.

### Installation directory after installation from the CD

The following items are installed on your machine.

Within `$$SYBASE`:

Components of  
Replication Server

- *charsets* – character sets and sort order.
- *collate* – Unicode.
- *config* – configuration files.
- *interfaces* – *interfaces* file.
- *locales* – localization files.

- *log.txt* – the log of the installation process.
- *OCS-15\_0* – Open Client and Open Server files, including *bin*, *config*, *devlib*, *include*, *lib*, *lib3p*, *sample*, *sybhelp*, and *xappdefaults*.
- *REP-15\_0* – Replication Server 15.0.1 files, including *ASA9*, *bin*, *certificates*, *doc*, *init*, *install*, *samp\_repserver*, *scripts*, *sysam*, *ThirdPartyLegal*, and *upgrade*.
- *SYBASE.csh*, *SYBASE.sh*, *SYBASE.env* – files created by InstallShield that you use to reset environment variables.
- *SYSAM-2\_0* – software license manager files, including *bin*, *licenses*, and *log*.
- *\_jvmrep* – files used by InstallShield.
- *uninstall* – files used by InstallShield to uninstall Replication Server software.
- *ua* – the Replication Monitoring Service (RMS) files in the *plugin* directory, including *common*, *ldap*, *log*, *server*, *services*, *bin*, *conf*, *rtlib*, *utility*, *thirdparty* and *shared*.
- *vpd.properties* – file used by InstallShield to keep track of version of installed and uninstalled software. The *vpd.properties* file gets installed in the \$SYBASE directory.

---

Warning! Do not modify or remove *vpd.properties*. Modifying or removing this file prevents InstallShield from accurately managing installed component versions when you install or uninstall Sybase software subsequent to this installation.

---

Components of  
Replication Manager  
plug-in to Sybase  
Central

- *RMP-15\_0* – files and directories for Replication Manager plug-in to Sybase Central, including *bin*, *help*, *install*, *lib*, and *scripts*.
- *Shared* – common components shared across products, including the Java runtime environment and files and directories for Sybase Central 4.3.

## Set the required environment variable for *dsedit* utility

The Replication Server installation also includes a utility called *dsedit*, which lets you configure the *interfaces* file. The *dsedit* utility requires the following environment variables to be set:

- Solaris – LD\_LIBRARY\_PATH

- HP-UX – SHLIB\_PATH
- IBM AIX – LIBPATH

Set the environment variable as follows:

```
$SYBASE/$SYBASE_OCS/lib
```

If you do not set this environment variable, dsedit does not start, and an error message reports that a shared library cannot be found. All libraries needed to run dsedit are in the `$SYBASE/$SYBASE_OCS/lib` directory. Use the `SYBASE.csh` and `SYBASE.sh` files to set this environment variable. See “Set environment variables” on page 33 for more information.

For more information on dsedit, see Chapter 5, “Using dsedit” in the *Adaptive Server Enterprise Utility Guide*.

## Perform administrative tasks

This section describes administrative tasks that you must complete before you begin the installation process.

- 1 Back up your current replication system.
- 2 Create the “sybase” user account and make sure it has read, write, and execute permissions. See “Creating the “sybase” user account” on page 10 for more information.
- 3 Verify that the directory location for the Sybase installation has sufficient space.
- 4 Verify that your network software is configured.

Sybase software uses network software, even if Replication Server and Sybase client applications are installed on a machine that is not connected to a network.

- 5 If you are using an RSSD, verify that Adaptive Server Enterprise is up and running.

## Creating the “sybase” user account

To make sure that Sybase product files and directories are created with consistent ownership and privileges, one user (typically the Sybase System Administrator, who has read, write, and execute privileges) should perform all installation, configuration, and upgrade tasks.

To create a Sybase 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 Sybase software, the “sybase” user probably already exists. Verify that you can log in to the machine using this account.

## Installing SySAM

Before you install Replication Server, you must plan the type of SySAM license configuration you want to use. Depending on your configuration choice, you may also need to perform additional pre-installation tasks before installing Replication Server.

SySAM allows you to acquire a license using a local file or you can acquire a license from a network license server. See “Choosing a license model”, in Chapter 2 “Understanding Licensing Concepts and Models” of the *Sybase Software Asset Management User’s Guide*.

---

**Note** There can only be one instance of a SySAM license server running on a given machine. If you want to setup a SySAM 2.0 license server on a machine that is already running a SySAM 1.0 license server, the old license server must be migrated to 2.0. A migrated license server can serve licenses for both SySAM 1.0 and SySAM 2.0 enabled products.

For instructions on migrating a license server, see Appendix F of the *Sybase Software Asset Management User’s Guide*.

---

### ❖ Installing a new license server

1 Mount the CD by running the following command:

- **HP-UX**

Enter the following where *device\_name* is the name of the CD device drive, and */RS150HP/cdrom* is the name of the directory where the CD is to be mounted:

```
/etc/mount -F cdfs -o ro device_name /RS150HP/cdrom
```

- **IBM AIX**

Enter the following where *device\_name* is the name of the CD device drive, and /RS150IBM/cdrom is the name of the directory where the CD is to be mounted:

```
/usr/sbin/mount -v 'cdrfs' -r device_name /RS150IBM/cdrom
```

The location of the mount command is site-specific and may differ from what is shown in these instructions.

- Solaris

The operating system mounts the CD automatically.

- 2 Launch the Sybase installer program by entering:

```
./setup
```

- 3 The Welcome Window displays. Click Next.
- 4 Accept the license agreement.
- 5 Enter or select the destination directory.
- 6 Select the custom installation.
- 7 Select only SySAM Network License Server for installation.
- 8 Unselect other components, to install the Net License Server only.
- 9 Click OK for the installer to install SySAM licensing tools.
- 10 Get the host ID for the machine on which the new license server will run.  
To get the host ID:

- Go to `$$SYBASE/$$SYBASE_SYSAM/bin` where `$$SYBASE` is the Sybase installation directory and `$$SYBASE_SYSAM` is the directory for `SYSAM-2_0`.
- Enter:

```
./lmutil lmhostid
```

---

**Note** If your machine has multiple network adapters, `lmutil lmhostid` returns host IDs associated with each adapter. Choose one of the IDs. Avoid using IDs for removable network adapters.

---

- Save the host ID to use at the Sybase Product Download Center.
- 11 Go to the Sybase Product Download Center (SPDC) at <https://sybase.subscribenet.com>.



- 12 Get the license you want to install. See Chapter 3 “Getting and Using Your License” of the *Sybase Software Asset Management User’s Guide*.
- 13 Copy the license file in the licenses directory `$SYBASE/$SYBASE_SYSAM/licenses` on the network license server machine.
- 14 Start the SySAM network license server:
  - Go to:  
`$SYBASE/$SYBASE_SYSAM/bin`
  - Enter:  
`sysam start`
- 15 Validate that the license daemon is running by entering:  
`sysam status`

You can also check Chapter 4 “License Server Administration” and Chapter 7 “GUI Administration for SySAM” of the *Sybase Software Asset Management User’s Guide*, for more information.



# Installing Replication Server

This chapter describes how to install the Replication Server software from a CD using InstallShield.

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Using InstallShield for installation	15
Installing Replication Server	17
Uninstalling Sybase products	27

---

**Note** When you have completed the installation instructions in this chapter, return to the *Replication Server Configuration Guide for UNIX* to begin customizing your newly installed Replication Server.

---

## Using InstallShield for installation

When you first install a Sybase product, InstallShield creates a Sybase installation directory, if it does not already exist, which contains the support files for all Sybase products.

When you install Replication Server using InstallShield, its software and support files are stored in the Sybase installation directory. You can install all Sybase software in the same installation directory.

---

**Warning!** Do not install Replication Server into an existing Adaptive Server Enterprise 12.x (64-bit) directory. This may cause some localization (*.loc*) files to be overwritten, resulting in problems with starting Adaptive Server Enterprise.

---

InstallShield is Java-based, so the installation process is similar on both UNIX-based and Windows-based computers.

InstallShield enables you to:

- Install all Replication Server components. You can choose the installation option that works best for you:
  - Typical (default) – installs the Replication Server components considered to be useful for most customers. In this type of installation, only the U.S. English language module and its supported character sets are installed. The components that will be installed and the total disk space required display prior to installation.
  - Full – installs every Replication Server component including all the supported language modules from the CD. The components that will be installed and the total disk space required display prior to installation.
  - Custom – allows you to select the components to install. Recommended for advanced users. When you select Custom install, the next window displayed is the Component Selection window, which allows you to select the components to install.

---

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

---

- Easily view software release version and properties for components on the installation CD.
- Uninstall all Replication Server 15.0.1 components.

In addition, InstallShield:

- Creates the *SYBASE.csh* or *SYBASE.sh* script files. You can later use these files to reset environment variables after exiting InstallShield and before configuring Replication Server. See “Set environment variables” on page 33.
- Starts the sample Replication Server when the installation process is complete, if you installed the defaults.
- You must manually start other components, such as Replication Monitoring Services, and the license manager, if needed.

If you did not install the defaults, follow the instructions in the *Replication Server Configuration Guide for UNIX* to start, then configure Replication Server.

# Installing Replication Server

Follow the procedures in this section to install Replication Server components.

## ❖ Installing Replication Server components

- 1 Choose one of the following installation modes:
  - Graphical user interface (GUI) – lets you install the components using the InstallShield interface.
  - Console – lets you install components in a command line environment.
  - Response file – lets you record or create a response file. You can install Replication Server in two different ways using a response file:
    - Silent – lets you save the installation settings in a response file and install the product without any interaction required on your part. This is convenient if you are performing identical installations on multiple machines.
    - Console installation using response file – lets you install in console mode but with all the responses already filled in, so that you can accept all the defaults and install Replication Server according to the responses in the response file. This can be convenient if several sites are installing Replication Server in a nongraphical user interface environment and must conform to a standard installation with minor changes.

---

**Note** If you encounter problems during installation, check the installation log file to see a record of the installation process. The file is located in *\$\$YBASE/log.txt*, where *\$\$YBASE* is the Replication Server installation directory.

---

2 Mount the Replication Server CD:

- Solaris:

The operating system mounts the CD automatically. If you get CD-reading errors, check your operating system kernel to make sure the ISO 9660 option is turned on.

---

**Note** If your CD shows up as anything other than *sybasecd*, it means you previously installed a Sybase CD on your system. Perform either of these two options to install your current CD:

- Restart your system.
  - Delete the *sybasecd* file in */vol/dsk*.
- 

- **HP-UX:**

- a Log out.
- b Log in as “root.”
- c Enter the following where *device\_name* is the name of the CD device drive, and */RS150HP/cdrom* is the name of the directory where the CD is to be mounted:

```
/etc/mount -F cdrfs -o ro device_name /RS150HP/cdrom
```

- d Log out as “root.”
- e Log in as “sybase.”

- **IBM AIX:**

Mount the CD using the following command, where *device\_name* is the name of the CD device drive, and */RS150IBM/cdrom* is the name of the directory where the CD is to be mounted:

```
/usr/sbin/mount -v 'cdrfs' -r device_name /RS150IBM/cdrom
```

The location of the mount command is site-specific and may differ from what is shown in these instructions.

If you cannot mount the CD drive, consult your operating system documentation or contact your operating system administrator.

3 Verify that you are logged in as the “sybase” user with “root” privileges.

## ❖ Installing in GUI mode

- 1 At the UNIX prompt, enter the following, where *cdrom* is the directory you specified when mounting the CD drive, and *./setup* unloads the components in GUI mode:

- IBM AIX:

```
cd /device_name
./setup -is:javahome JVM
```

- HP-UX:

```
cd /cdrom
./setup
```

- Solaris:

```
cd /cdrom/rs150solaris
./setup
```

- 2 You might see the following error message:

```
Error writing file = There may not be enough
temporary disk space. Try using -is:tempdir to use a
temporary directory on a partition with more disk
space.
```

If so, set the temporary directory to another directory that has more disk space by entering the following at the command line, where *directory\_name* is the name of the temporary directory to which InstallShield will write its temporary files:

```
setup -is:tempdir directory_name
```

This directory should have at least 100MB of disk space.

- 3 Select Next.
- 4 Choose your geographic location in the license and copyright agreement window.
- 5 Read the Sybase license agreement and select “I agree.” Click Next. You must agree to the license and copyright before you can continue.
- 6 In the install directory window, click Next to accept the default directory for the installation (*\$SYBASE* or */opt/sybase*), or enter a different directory name.
- 7 If the installation directory you chose does not exist, InstallShield prompts:

```
The directory does not exist. Do you want to create it?
```

- 8 Click Yes. If the installation directory you selected exists, and contains a prior installation, InstallShield prompts you with the following message:

You have chosen to install into an existing directory. Any older versions of the products you choose to install that are detected in this directory will be replaced. Do you want to continue with installation into this directory?

Click Yes if you wish to install on top of the previous installation. If the products were previously installed with:

- Studio Installer (for example, if you installed a version of Replication Server earlier than 12.6 or a version of Adaptive Server earlier than 12.5.1), InstallShield overwrites common components.
  - InstallShield, the correct course of action is determined by InstallShield without prompting you.
- 9 Select the type of installation:
- If you choose Full or Typical, InstallShield displays the following default components:
    - Sybase Servers – Replication Server
    - Connectivity
    - Language Modules for Replication Server
    - Language Modules – Connectivity
    - Shared
    - Replication Monitoring Services
    - Replication Server Administration Tools – Sybase Central and Replication Manager Plugin
    - Sybase Software Asset Management
  - If you choose Custom, select the components to install. Certain components are automatically installed if they are required to run your selected components.
- 10 Click Next. InstallShield displays a progress indicator as it installs the components.



If you do not have enough disk space for the installation, InstallShield displays an error message. In this case, exit InstallShield, remove any programs or files that you do not need, and clean out temporary directories. Then, restart InstallShield.

- 11 On successful installation, InstallShield displays the following message: Click Next.

```
The InstallShield Wizard has successfully installed
Replication Server Software, Version 15.0.1. Choose
next to continue the wizard.
```

- 12 The SySAM License Server window opens and displays this prompt:

```
Will licenses be obtained from the License Server?
```

- Select Yes if you have a preexisting SySAM network license server installed or install a new license server using “Installing a new license server” on page 11.

Enter the host name and the port number of the license server.

- Select No if you do not have a SySAM license server installed and are going to use a local license file. A message displays telling you to download the license file.

If you select Yes and the license server is not found, or you select No and the local license file is not installed on your local machine, this message displays:

```
Installer can't check out a license. Do you want to
continue with a license?
```

Click Yes to complete the installation. If you select No, this message displays:

```
Please remember to download and install the license
file after this installation.
```

Click OK to return to the beginning of step 12.

---

**Note** See “Choosing a license model,” in Chapter 2 “Understanding Licensing Concepts and Models” of the *Sybase Software Asset Management User’s Guide* for information on which choice is appropriate for your installation.

---

- 13 The SySAM Notification window asks you to configure your server for e-mail notification. When configuration is enabled, you will receive information about license management events requiring attention.

- SMTP server host name
  - SMTP server port number
  - E-mail Return Address
  - Recipient e-mail addresses
  - Message severity that triggers e-mail messages
- 14 On the sample Replication Server option window, select:
- Yes – to configure and start a sample Replication Server. InstallShield displays the configuration information for the sample Replication Server. Write this information down.
  - No – to complete the installation and configure a fully-featured Replication Server manually.
- If you select No, you can configure and start a sample Replication Server after installation. See “Start the sample Replication Server” on page 32 for more information.
- 15 Click Next. If you chose to configure and start a sample Replication Server, InstallShield displays the configuration information related to the sample Replication Server:

This page contains detailed information regarding the sample Replication Server. Please record this information.

The sample Replication Server will be called `SAMPLE_RS` and will run on port 11752. It will be configured with a user of `sa` and no password.

The sample Replication Server will use an embedded RSSD called `SAMPLE_RS_ERSSD` that runs on port 11751. It will be configured with a user of `SAMPLE_RS_RSSD_prim` and a password of `SAMPLE_RS_RSSD_prim_ps`.

The installer has updated the appropriate interfaces file or `sql.ini` file.

All files and logs associated with the sample Replication Server will be located in the directory `$$YBASE/REP-15_0/samp_repserver`.

The sample Replication Server will be configured using the file `$$YBASE/REP-15_0/samp_repserver/SAMPLE_RS.res`.

- 16 Click Next. The Configure New Replication Server window displays the progress of the server configuration.
- 17 Click Next. The Installation Completed window appears, verifying that the Replication Server software is now installed.

If you chose to start a sample Replication Server, it is started automatically. If you did not choose to start a sample Replication Server, you must configure and then start your Replication Server manually.

See the *Replication Server Configuration Guide for UNIX* for information about configuring your new Replication Server.

18 Click Finish. The InstallShield wizard closes.

#### ❖ **Installing in console mode**

The steps for installing components in an interactive text mode are the same as those described in “Installing in GUI mode” on page 19, except that you execute InstallShield from the command line using the `setup -console` command, and you enter text to select installation options.

1 At the command line, enter:

- HP-UX and Solaris:

```
./setup -console
```

- IBM AIX:

```
./setup -console -is:javahome JVM
```

InstallShield starts and displays the welcome window as follows:

```
-----  
Welcome to the InstallShield Wizard for Sybase  
Replication Server Software, Version 15.0.1.
```

```
The InstallShield Wizard will install Replication  
Server Software, Version 15.0.1 on your computer.
```

```
To continue, choose Next.
```

```
Press 1 for Next, 3 to Cancel or 4 to Redisplay [1]
```

2 Follow the remaining prompts to install Replication Server software.

## Installing in command line mode

This section discusses the various installation methods available to you from the command line.

---

**Note** If the environment variable \$SYBASE is set, the installer uses it as the default directory for installation. However, you can explicitly specify a different directory during the installation process to override \$SYBASE.

---

## Installing with a response file

You can install Replication Server using a response file in combination with a console or silent installation. You must first create the response file.

---

**Note** You must provide the absolute path name for the response file you create.

---

To create a response file, do one of the following at the command line:

- Enter the following command, where *REP.response* is name you choose for the response file:

- HP-UX and Solaris:

```
./setup -options-template REP.response
```

- IBM AIX:

```
./setup -options-template REP.response -is:javahome JVM
```

InstallShield creates an options template called *REP.response*. Edit the template with the values you want to use during installation.

- Enter the following command at the command line, where *REP.response* is a name you choose for the response file:

---

**Note** You must provide the absolute path name for the response file you create.

---

- HP-UX and Solaris:

```
./setup - options-record REP.response
```

- IBM AIX:

```
./setup - options-record REP.response -is:javahome JVM
```

InstallShield runs the installation in GUI mode and captures all user choices to a file called *REP.response*. You can also specify the `-console` option to get the same results.

You can use *REP.response* for future installations of Replication Server, either as is or edited for the new installation.

#### ❖ Editing the response file

- 1 Specify the installation location, where *path* is the full path and file name:

```
-P installLocation=path
```

Do not use special characters for the path name, such as blanks or periods.

- 2 Specify the setup type, where *installation\_type* specifies the type of installation (Full, Typical, or Custom):

```
-W setupTypes.selectedSetupTypeId=installation_type
```

If you specify either the Full or Typical installation, you do not need to uncomment the individual features; these features have been predefined as installed.

If you choose the Custom installation, you must uncomment the desired features and set their values to “true.”

- 3 The last line in the response file allows you to specify if you want to start a sample Replication Server. You must uncomment this line and specify either “yes” or “no” (case sensitive; use all lowercase):

```
-W ConfigureReplicationServer.Yes-or-No="no"
```

## Installing in console mode with a response file

A console mode installation using a response file lets you accept all defaults as you move through an interactive text installation, because the values come from a response file that you have set up.

Follow the same steps as you would for a regular console installation, but at the command line, enter:

- HP-UX and Solaris:

```
./setup -console -options REP.response -W\  
SybaseLicense.agreeToLicense=true
```

- IBM AIX:

```
./setup -console -options REP.response -is:javahome JVM\  
-W SybaseLicense.agreeToLicense=true
```

## Installing in silent mode

A silent mode installation, sometimes referred to as an unattended installation, allows you to install the product using a response file to set default values, without any interaction required on your part.

Follow the same steps as you would for a console installation, but at the command line, enter:

- HP-UX and Solaris:

```
./setup -console -options REP.response -W\  
SybaseLicense.agreeToLicense=true
```

- IBM AIX:

```
./setup -console -options REP.response -is:javahome JVM\  
-W SybaseLicense.agreeToLicense=true
```

Where:

- *REP.response* – is the name of the file containing the installation options you chose.
- `-W SybaseLicense.agreeToLicense=true` – specifies that you agree with the Sybase License Agreement text.

## Checking for a valid installation

- 1 View the `$$SYBASE/log.txt` file and check for errors.
- 2 Verify that the `vpd.properties` file has been written in the `$$SYBASE` directory.
- 3 Check that the date of the `vpd.properties` file reflects the date of this current installation.

## Troubleshooting installation

For troubleshooting during GUI, console, or silent mode installation using an option file, enter the following at the command line where *ERROR.log* is the name of the log that will capture events specific to the console or silent mode installation:

- HP-UX and Solaris:

```
./setup -silent -options Rep.response -W\  
SybaseLicense.agreeToLicense=true -is:log Error.log
```

```
-is:javaconsole
```

- IBM AIX:

```
./setup -silent -options Rep.response -is:javahome JVM\  
-W SybaseLicense.agreeToLicense=true -is:log ERROR.log  
-is:javaconsole
```

The `-is:log` parameter creates an *ERROR.log* log file, and the `-is:javaconsole` parameter causes errors to be written to the screen.

---

**Note** 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.txt*.

---

If this is the first time you have installed a Sybase product on this machine, InstallShield creates a Sybase installation directory. This directory contains the support files for all Sybase products.

## Uninstalling Sybase products

InstallShield includes an uninstall feature that removes the Sybase components you have installed.

You can invoke the uninstall procedure using either GUI or console methods. Sybase recommends that you use the GUI method.

Before uninstalling Sybase software, log on to your machine using an account with administrator privileges. Then shut down Replication Server and all other processes for the components you are uninstalling.

---

**Note** InstallShield removes only those files that were loaded from the installation media. Some Sybase files, such as log and configuration files, are left intact for administrative purposes. The *installed* or *\_jvmrep* directories are also not removed by InstallShield.

---

❖ **Uninstalling in GUI mode**

- 1 To uninstall the products in GUI mode, first source the *SYBASE.csh* or *SYBASE.sh* as appropriate, then execute the following at the command line:

IBM AIX, HP-UX, and Solaris:

```
$$SYBASE/uninstall/REP1501/uninstall
```

The Uninstaller window opens.

- 2 Click Next.
- 3 Select the product you want to remove from the list, then click Next.
- 4 Verify the summary information, then click Next.

The uninstaller removes the files associated with the software.

- 5 Click Finish.

---

**Note** You may be prompted to decide whether to remove shared files. Sybase recommends that you do *not* remove shared files.

---

- 6 If you are uninstalling the Replication Manager plug-in to Sybase Central, Java Edition, and you have previously installed both the Replication Manager plug-in *and* the Adaptive Server plug-in to Sybase Central, Java Edition, unregister the Replication Manager plug-in in Sybase Central.

See the Replication Manager plug-in online help for more information.

❖ **Uninstalling in console mode**

- 1 To uninstall the products in console mode, first source the *SYBASE.csh* or *SYBASE.sh* as appropriate, then execute the following at the command line:

IBM AIX, HP-UX, and Solaris:

```
$$SYBASE/uninstall/REP1501/uninstall -console
```

The uninstaller program starts.

- 2 Choose the Replication Server software product you want to uninstall.



The Replication Server software product you chose and its associated files are removed.

---

**Note** You may be prompted to decide whether to remove shared files. Sybase recommends that you do not remove shared files.

---

- 3 If you are uninstalling the Replication Manager plug-in to Sybase Central, Java Edition, and you have previously installed both the Replication Manager plug-in *and* the Adaptive Server plug-in to Sybase Central, Java Edition, unregister the Replication Manager plug-in in Sybase Central.  
See the Replication Manager plug-in online help for more information.



This chapter describes the post-installation tasks that you need to perform after installing the Replication Server software.

For more information, see the *Replication Server Configuration Guide for UNIX*.

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## Review the log files

Information about the configuration of Replication Server is stored in the following log files:

- InstallShield error log file:  
`$SYBASE/log.txt`
- Adaptive Server Anywhere error logs:  
`$SYBASE_REP/samp_repserver/errorlog/`
- rs\_init log file:  
`$SYBASE/$SYBASE_REP/init/logs/logmmd.xxx`  
For example: `$SYBASE/$SYBASE_REP/init/logs/log1106.001`
- Replication Server log file:  
`$SYBASE/$SYBASE_REP/install/rs_name.log`  
For example: `$SYBASE/$SYBASE_REP/install/REP_redtail.log`

## Start Adaptive Server for the RSSD

To use the RSSD stored on Adaptive Server Enterprise, install the Adaptive Server Enterprise database, if you have not done so already. For installation instructions, see the *Adaptive Server Enterprise Installation Guide* for your platform.

After successful installation, start Adaptive Server Enterprise. For more information, see Chapter 2, “Starting and Stopping Servers” in the *Adaptive Server Enterprise Configuration Guide* for your platform.

---

**Note** If you are upgrading to a later version of Adaptive Server Enterprise and you have replicated databases, read Appendix B, “Upgrading Servers with Replicated Databases,” in the *Adaptive Server Enterprise Installation Guide* for your platform.

---

## Start the sample Replication Server

During installation, InstallShield asks if you want to configure and start a sample Replication Server. InstallShield creates a resource file, `$$SYBASE/REP-15_0/samp_repserver/SAMPLE_RS.res`, for the sample Replication Server and updates the *interfaces* file regardless of your choice. If you select No, you can still configure and start the sample Replication Server after installation using this resource file.

To create and start the sample Replication Server after installation, at the command prompt, enter:

```
$$SYBASE/REP-15_0/install/rs_init -r\  
    $$SYBASE/REP-15_0/samp_repserver/SAMPLE_RS.res
```

The `rs_init` utility 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 this log file, `$$SYBASE/REP-15_0/init/logs/logmdd.xxx`, where:

- *mm* – is the month.
- *dd* – is the day.

- *xxx* – is the number of that instance of the log on that day.

The sample Replication Server is configured using the *SAMPLE\_RS.res* resource file. All files and logs associated with the sample Replication Server are in the directory *\$SYBASE/REP-15\_0/samp\_repserver*.

Table 3-1 contains the sample Replication Server configuration information. Keep this information in a safe place for later reference.

**Table 3-1: Sample Replication Server configuration information**

Sample Replication Server item	Definition
Name	<i>SAMPLE_RS</i>
Port	11752
User name	<i>sa</i>
Password	None
ERSSD server name	<i>SAMPLE_RS_ERSSD</i>
ERSSD server port	11751
ERSSD user name	<i>SAMPLE_RS_RSSD_prim</i>
ERSSD password	<i>SAMPLE_RS_RSSD_prim_ps</i>

For more information about *rs\_init*, see Chapter 2, “Configuring Replication Server and Adding Databases with *rs\_init*,” in the *Replication Server Configuration Guide for UNIX*.

## Set environment variables

InstallShield automatically sets system environment variables that are needed by InstallShield. InstallShield installs three files that contain these environment variables:

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

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

To set these environment variables, you can either:

- Use the source command to source *SYBASE.sh* or *SYBASE.csh* and update the component's RUN environment immediately for your current session, before invoking any component, or
- Modify the component's RUN environment permanently using the environment variable values from the shell files.

Table 3-2 describes the environment variables.

**Table 3-2: Environment variables for UNIX**

Environment variable	Description
<i>Solaris:</i> \$LD_LIBRARY_PATH <i>IBM AIX:</i> \$LIBPATH <i>HP-UX:</i> \$SHLIB_PATH	The subdirectory path to the Open Client and Open Server runtime shared library.
\$LM_LICENSE_FILE	The subdirectory path to the <i>license.dat</i> file, which SySAM needs to run the license manager.
\$PATH	The directory path to Replication Server files.
\$\$SYBASE	The home directory where you install all Sybase products.
\$\$SYBASE_JRE	The subdirectory path to the Java Runtime Environment (JRE).
\$\$SYBASE_OCS	The subdirectory path to Open Client files.
\$\$SYBASE_REP	The subdirectory path to Replication Server.
\$\$SYBASE_RMP	The subdirectory path to the Replication Manager plug-in to Sybase Central, Java Edition.
\$\$SYBASE_SYSAM	The subdirectory path to SySAM license manager.
\$\$SYBASE_UA	The subdirectory path to the Unified Agent Framework and Replication Monitoring Services.
\$\$SCROOT	The subdirectory path to Sybase Central.
\$\$SYBROOT	The parent directory of \$\$SCROOT. If Sybase Central is installed in the same directory as Replication Server, \$\$SYBASE and \$\$SYBROOT will be the same.

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