



Quick Installation Guide

Adaptive Server Enterprise Linux Express Edition

12.5.2

[Linux]

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About This Book

Audience

This *Quick Installation Guide for Adaptive Server® Enterprise Linux Express Edition* is written for Sybase® System Administrators and other qualified personnel who are familiar with their system's environment, networks, disk resources, and media devices.

Related documents

The following documents make up the Sybase Adaptive Server Enterprise documentation:

- 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.
- The *Installation Guide* for your platform (this book) – describes installation, upgrade, and configuration procedures for all Adaptive Server and related Sybase products.
- *Configuring Adaptive Server Enterprise* for your platform – provides instructions for performing specific configuration tasks for Adaptive Server.
- *New Functionality in Adaptive Server Enterprise 12.5.2* – describes the new features in Adaptive Server version 12.5.2.
- *What's New in Adaptive Server Enterprise?* – describes the new features in Adaptive Server version 12.5.1, the system changes added to support those features, and the changes that may affect your existing applications.
- *Transact-SQL User's Guide* – documents Transact-SQL®, Sybase's enhanced version of the relational database language. This manual serves as a textbook for beginning users of the database management system. This manual also contains descriptions of the pubs2 and pubs3 sample databases.

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- *System Administration Guide* – provides in-depth information about administering servers and databases. This manual includes instructions and guidelines for managing physical resources, security, user and system databases, and specifying character conversion, international language, and sort order settings.
 - *Reference Manual* – contains detailed information about all Transact-SQL commands, functions, procedures, and datatypes. This manual also contains a list of the Transact-SQL reserved words and definitions of system tables.
 - *Performance and Tuning Guide* – explains how to tune Adaptive Server for maximum performance. This manual includes information about database design issues that affect performance, query optimization, how to tune Adaptive Server for very large databases, disk and cache issues, and the effects of locking and cursors on performance.
 - The *Utility Guide* – documents the Adaptive Server utility programs, such as `isql` and `bcp`, which are executed at the operating-system level.
 - The *Quick Reference Guide* – provides a comprehensive listing of the names and syntax for commands, functions, system procedures, extended system procedures, datatypes, and utilities in a pocket-sized book. Available only in print.
 - The *System Tables Diagram* – illustrates system tables and their entity relationships in a poster format. Available only in print.
 - *Error Messages and Troubleshooting Guide* – explains how to resolve frequently occurring error messages and describes solutions to system problems frequently encountered by users.
 - *Component Integration Services User's Guide* – explains how to use the Adaptive Server Component Integration Services feature to connect remote Sybase and non-Sybase databases.
 - *Java in Adaptive Server Enterprise* – describes how to install and use Java classes as datatypes, functions, and stored procedures in the Adaptive Server database.
 - *Using Sybase Failover in a High Availability System* – provides instructions for using Sybase Failover to configure an Adaptive Server as a companion server in a high availability system.
 - *Using Adaptive Server Distributed Transaction Management Features* – explains how to configure, use, and troubleshoot Adaptive Server DTM features in distributed transaction processing environments.

- *EJB Server User's Guide* – explains how to use EJB Server to deploy and execute Enterprise JavaBeans in Adaptive Server.
- *XA Interface Integration Guide for CICS, Encina, and TUXEDO* – provides instructions for using Sybase's DTM XA interface with X/Open XA transaction managers.
- *Glossary* – defines technical terms used in the Adaptive Server documentation.
- *Sybase jConnect for JDBC Programmer's Reference* – describes jConnect for JDBC and explains how to use it to access data stored in relational database management systems.
- *Full-Text Search Specialty Data Store User's Guide* – describes how to use the Full-Text Search feature with Verity to search Adaptive Server Enterprise data.
- *Historical Server User's Guide* – describes how to use Historical Server to obtain performance information Adaptive Server.
- *Monitor Server User's Guide* – describes how to use Monitor Server to obtain performance statistics from Adaptive Server.
- *Monitor Client Library Programmer's Guide* – describes how to write Monitor Client Library applications that access Adaptive Server performance data.

Other sources of information

Use the Sybase Getting Started CD, the Sybase Technical Library CD and the Technical Library 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 Technical Library CD. It is included with your software. To read or print documents on the Getting Started CD you need Adobe Acrobat Reader (downloadable at no charge from the Adobe Web site, using a link provided on the CD).
- The Technical Library CD contains product manuals and is included with your software. The DynaText reader (included on the Technical Library CD) allows you to access technical information about your product in an easy-to-use format.

Refer to the *Technical Library Installation Guide* in your documentation package for instructions on installing and starting the Technical Library.

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

To access the Technical Library Product Manuals Web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ Finding the latest information on product certifications

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Select Products from the navigation bar on the left.
- 3 Select a product name from the product list and click Go.
- 4 Select the Certification Report filter, specify a time frame, and click Go.
- 5 Click a Certification Report title to display the report.

❖ Creating a personalized view of the Sybase Web site (including support pages)

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click MySybase and create a MySybase profile.

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.

Installing Adaptive Server

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Sybase is providing a free edition of Adaptive Server version 12.5.2 on Linux for Intel x86 (32-bit). This version, called Adaptive Server Enterprise Linux Express Edition, does not require a license.

This Linux Express Edition has the following configuration limitations:

- You can specify only one engine in the max online engines configuration parameter.
- You can configure up to 2GB of max memory.
- The total disk space is limited to 5GB.

Note Full-Text Search Specialty Data, SQL Remote, and Web Services are not included in the Adaptive Server Enterprise Linux Express Edition.

System requirements

For the most recent certification information, see Sybase Product Certification on Linux Operating System at <http://www.sybase.com/detail/1,6904,1024194,00.htm>.

Table 1-1 shows the minimum kernel and glibc levels for the Linux Express Edition.

Table 1-1: Minimum operating system requirements

Operating system	Requirements
Red Hat Enterprise Linux 2.1 for Intel x86 (32-bit)	<ul style="list-style-type: none">• kernel 2.4.9-e3• glibc 2.2.4-26
Red Hat Enterprise Linux 3.0 for Intel x86 (32-bit)	<ul style="list-style-type: none">• kernel 2.4.21-4• glibc 2.3.20-95.3• compat-libstdc++-7.3-2.96.123
SuSE Linux Enterprise Server 8.0/United Linux 1.0	<ul style="list-style-type: none">• kernel 2.4.19-113• glibc 2.3.5-213• compat-2002.8.15-29
Red Flag Linux 4.0	<ul style="list-style-type: none">• kernel 2.4.21-AS.1 or higher• glibc 2.3.93-5.1 or higher

Note Newer kernels/glibc intended for the same operating system are implicitly certified.

Pre-installation tasks

Before installing Adaptive Server:

- 1 Create a “sybase” account on your system to perform all installation tasks.
The “sybase” user must have permission privileges from the top (or root) of the disk partition or operating system directory down to the specific physical device or operating system file.
- 2 Log in to the machine as the “sybase” user.
Maintain consistent ownership and privileges for all files and directories. A single user—the Sybase System Administrator with read, write, and execute permissions—should perform all installation, upgrade, and setup tasks.
- 3 Decide where to install the Adaptive Server software. Make sure that there is sufficient available disk space. Do not use any spaces in the path name of the directory.
- 4 Verify that the operating system meets the version level, RAM, and network protocol requirements for your platform.

- 5 Verify that your network software is configured.

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

Ping the host if you are having connection problems, or to verify your network configuration.

- 6 The operating system shared memory default of most Linux releases is 32MB. The minimum required by Adaptive Server is 64MB for a default Server with 2K pages. You must increase the amount of shared memory if you plan to increase the total memory of Adaptive Server.

Use the `sysctl(8)` method to check and adjust the operating system shared memory parameter.

- To check the current shared memory size, enter:

```
# /sbin/sysctl kernel.shmmax
```

- To adjust the shared memory size, enter the following, where *nnn* is the new size in bytes (at least 64MB which is 67108864 bytes):

```
# /sbin/sysctl -w kernel.shmmax=nnn
```

To guarantee that this value is applied every time the system is started, add this line to your `/etc/rc.d/rc.local` file (`/etc/init.d/boot.local` on SuSE systems).

Installing Linux Express Edition

Note You must log in as “sybase” when you perform installation tasks. Do not install Linux Express Edition as “root.”

The installer creates the target directory, if necessary, and installs all the selected components into that directory.

At the end of the installation, you can verify the product installation. You might need to perform additional configuration procedures before you can use some products.

As part of the installation, the installer sets most of the environment variables that Adaptive Server products need. However, you must source other environment variables by running the *SYBASE.csh* or *SYBASE.sh* script file after exiting the installer.

❖ **Installing server components**

- 1 Insert the Adaptive Server CD into the CD drive.

Change to the CD directory and start the installer by entering:

```
./setup
```

The welcome window displays.

- 2 When the license selection window displays, select the most appropriate location from the drop-down list, read the license terms, and then click “I agree...” to proceed. Click Next.

Not every country is listed in the drop-down list. If the country you are located in is not listed, select the most appropriate area (“Americas & Asia Pacific,” “Europe, Middle-East, and Africa,” or “Any Other Locations”).

- 3 The Install directory window allows you to select a directory for the installation by clicking Browse. By clicking Next, you can accept the default of:

```
/opt/sybase
```

You can also enter a directory for installation.

Note When you browse “...” in the Destination panel, a directory chooser dialog displays. In this dialog, you must navigate to one directory above where you want to install the software, and enter or choose a directory name in the field, before clicking OK.

- 4 You can choose from three types of installations in the Install Type window:
 - Typical
 - Full
 - Custom

- 5 If you select Custom, the Products and Features Selection window displays. Indicate the products you install by selecting the box.

Note Language modules other than English are not installed as part of a typical install. Use Full or Custom to install them.

After you make your selection, click Next. Before proceeding to the next window, the installer verifies the selections, and checks for dependencies and available disk space.

- 6 The Product Selection Summary window displays the selections that you made. Verify that you:

- Selected the correct type of installation
- Have enough disk space to complete the process

Click Next to proceed. The Install Progress window shows the progress of the installation.

- 7 The Install Status window displays the result of the installation process.

Click Next to configure the software.

- 8 The Configure New Servers window asks if to configure new servers, depending on the products you installed. If you:

- Choose to configure the new servers, the Custom Configure New Server Options window displays next. Select the servers you want to configure.
- Do not configure the new servers at this point, unselect the item and click Next.

- 9 Select the servers to configure in the Custom Configure New Server Options window. If you do not select any servers in this window, the installer configures all servers using default values.

If you choose the default values, the installer chooses everything, including the server name, port number, and master device location. The installer does this for the System Procedure device. It also installs Backup Server, Monitor Server, and the XP Server, choosing the name, port number, and error log.

If you:

- Accept the defaults, the server names are:
 - Adaptive Server – *host name*

- Backup Server – *host name_BS*
 - Monitor Server – *host name_MS*
 - XP Server – *host name_XP*
 - Configure the servers with default values, the Configure Server Attributes Summary window displays next.
 - Select to configure the server with custom values, the Custom Configure Input window displays next.
- 10 The Custom Configure Input window prompts you for the following custom Adaptive Server configuration information:
- Server name
 - Port numbers
 - Page size
 - Error log
 - Master device

Note When configuring the master device, allow an extra 8K for the config block.

- Master device size (MB)
- Master database size (MB)
- System procedure device
- System procedure device size (MB)
- System procedure database size (MB)

After you customize the Adaptive Server configuration, select Next to record the input fields.

- 11 The Custom Configure Backup Server Input window prompts you for the Backup Server information.

Enter the appropriate information, then click Next to record the information.

- 12 The Custom Configure Monitor Server Input window prompts you to enter the Monitor Server configuration information.

Enter the appropriate information, then click Next to record the information.

- 13 The Custom Configure XP Server Input window prompts you to enter the XP Server configuration information.

Enter the appropriate information, then click Next to record the information.

- 14 The Configure Server Attributes Summary window displays a summary of the values that are used to configure the servers. These values are either the default or custom values.

Verify the information, then click Next. The installer proceeds with the server configuration.

The Configure Server Progress window displays the progress of the server configuration.

The Installation Complete window is the last window.

Note Sybase strongly recommends that you check the Sybase Web site at <http://www.sybase.com/downloads> for software updates.

If you encounter any errors, see the *Troubleshooting Guide*.

To configure your Adaptive Server Express Edition, read the *Configuration Guide*.

Changing default character set, sort order or language

To change the default character set, sort order, or language, read Chapter 7, “Configuring Character Sets, Sort Orders, and Languages” and Chapter 8, “Configuring Client/Server Character Set Conversions,” in the *System Administration Guide*. This book can be found online at Sybooks at <http://sybooks.sybase.com/asg1251e.html>.

A simplified procedure for doing this is included here.

Adaptive Server supports a wide variety of character sets, and you can localize error messages to suit your user community. By default, Adaptive Server is installed with a default character set of iso_1 (ISO 8859-1), a binary sort order, and English as the default language. All of these can be changed as required, as described in this section.

Changing the default character set and sort order

Use the charset utility to change the default character set. At this time, you can only run this utility from the UNIX/Linux shell, so you must open a terminal window to do this. charset is at `$$SYBASE/ASE-12_5/bin/charset`.

❖ Changing Adaptive Server defaults

- 1 Run the charset utility to add the character set to Adaptive Server's system catalogs.
- 2 Execute `sp_configure` to set the default character set.
- 3 Restart the server. The server comes up, performs any necessary reconfiguration it needs to do internally, and then shuts itself down. You can then restart it.

Examples of doing this can be found in various shell scripts at `$$SYBASE/ASE-12_5/install`:

- iso_1
- utf8
- eucjis

Note Complete these steps before you add any user data to Adaptive Server. If your server contains data, follow the procedures outlined in the *System Administrators Guide* to save and restore it.

Changing the default language

Client programs may require messages to be delivered in their preferred language, rather than English. In such cases, clients can run `sp_modifylogin` to specify the preferred language. The language chosen must first be installed by the System Administrator using the `langinstall` utility program, located in `$$SYBASE/ASE-12_5/bin/langinstall`.

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