



Quick Installation Guide

Adaptive Server® Enterprise

12.5.4

[Mac OS X]

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Message Format Libraries, Sybase Central, Sybase Client/Server Interfaces, Sybase Development Framework, Sybase Financial Server, Sybase Gateways, Sybase IQ, Sybase Learning Connection, Sybase MPP, Sybase SQL Desktop, Sybase SQL Lifecycle, Sybase SQL Workgroup, Sybase Synergy Program, Sybase Virtual Server Architecture, Sybase User Workbench, SybaseWare, Syber Financial, SyberAssist, SybFlex, SybMD, SyBooks, System 10, System 11, System XI (logo), SystemTools, Tabular Data Stream, The Enterprise Client/Server Company, The Extensible Software Platform, The Future Is Wide Open, The Learning Connection, The Model For Client/Server Solutions, The Online Information Center, The Power of One, TotalFix, TradeForce, Transact-SQL, Translation Toolkit, Turning Imagination Into Reality, UltraLite, UltraLite.NET, UNIBOM, Unilib, Uninull, Unisep, Unistring, URK Runtime Kit for UniCode, Viafone, Viewer, VisualWriter, VQL, WarehouseArchitect, Warehouse Control Center, Warehouse Studio, Warehouse WORKS, Watcom, Watcom SQL, Watcom SQL Server, Web Deployment Kit, Web.PB, Web.SQL, WebSights, WebViewer, WorkGroup SQL Server, XA-Library, XA-Server, XcelleNet, XP Server, XTNDAccess and XTNDConnect are trademarks of Sybase, Inc. or its subsidiaries. 05/06

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About This Book

Audience

This guide 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 comprise 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.
- *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.
- *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.

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- *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's 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 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.

To access the Sybase 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 Click Certification Report.
- 3 In the Certification Report filter select a product, platform, and timeframe and then click Go.
- 4 Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

- 1 Point your Web browser to Availability and Certification Reports at <http://certification.sybase.com/>.
- 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.

❖ **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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This documentation describes the steps to install Adaptive Server on Mac OS X 10.3, and contains brief descriptions of some of the content of this release.

This release is supported via a newsgroup, as well as through the terms in your purchase agreement. You can reach the newsgroup at news://forums.sybase.com/sybase.public.macosx.

Note Adaptive Server version 12.5.4 must be installed on Mac OS X 10.3 or later, and cannot be installed on earlier releases.

Adaptive Server features unique to Mac OS X

- Sybase preference pane
- Server Admin plug-ins (server-side and client-side)
- Enhanced Server Discovery
- Open Client Framework
- Sample Xcode Application
- Support for Mac OS X 10.3 (Panther)
- Client Tools installation package
- New features of Adaptive Server 12.5.4

New features for Adaptive Server version 12.5.4

There are many new features of the Adaptive Server contained in this release. A full description can be found in documentation online at the Sybooks Web site at <http://sybooks.sybase.com/>. See the *New Feature Guide for Adaptive Server version 12.5.4*.

Sybase preference pane

A System Preference pane is now provided with Adaptive Server Enterprise. This pane should be used to:

- Start and stop Adaptive Server
- Enable and disable automatic startup during system restart

- Enable and disable monitoring with the new Server Admin utility

The preference pane is located at */Applications/Sybase/System/Plugins/Sybase.prefPane*, and is installed automatically at */Library/PreferencePanes/Sybase.prefPane*. To use it, select the “System Preferences...” menu item from the Apple menu. The Sybase preference pane should appear in the “Other” section at the bottom of the list.

Adaptive Server administration plug-in

Mac OS X 10.3 provides a new utility called Server Admin, which enables monitoring of a computer running the Mac OS X 10.3 Server operating system, and various services running on that computer. Sybase has provided plug-ins for both the server- and client-sides of this utility, making it possible for you to use this utility to monitor and manage not just Apple-provided services, but Adaptive Server as well.

Note The client can run anywhere, but the server-side is only available on the Mac OS X 10.3 Server.

Plug-ins for both are installed automatically during Adaptive Server installation, if the installation is performed on a Panther Server. If not, the installer checks for the presence of the Server Admin tool, and if found, copies the Sybase plug-in to the appropriate location so that the tool recognizes it.

The Server Admin utility is provided by Apple with Mac OS X 10.3 Server, and is installed separately. You can install the Server Admin utilities on any Mac OS X 10.3 system; they do not require the Panther Server.

Enhanced Server Discovery

The Server Discovery program, which shows a list of all Sybase servers running in your network (subnet) through the use of Apple’s Rendezvous technology, has been expanded to allow you to select a particular server of interest, and launch an interactive SQL window for interacting with that server. This window lets you type in SQL commands, execute them, and review the results of those commands in a separate sub-window.

Open Client framework

We have re-packaged our Open Client software into a Mac OS X 10.3 Framework, making it convenient for applications written using Xcode (Project Builder) to incorporate database interaction within the application. The framework is located in the Sybase directory at:

/Applications/Sybase/System/OCS-12_5/frameworks/SybaseOpenClient.framework

It is also installed at:

/Library/Frameworks/SybaseOpenClient.framework

To use the framework, the command used to link your application should contain these linker directives:

```
-framework SybaseOpenClient -framework CoreFoundation
```

The framework can also be incorporated into an application bundle, making the application itself a self-contained package that can be distributed easily across any number of workstations or servers.

For more information about the framework see the *ReadMe* file, located at:

/Applications/Sybase/README/ReadMeFramework.pdf

Sample Xcode application

To demonstrate how the Open Client framework can be used within an application developed using Project Builder or Xcode, we have provided a sample project. This project is located at:

/Applications/Sybase/Projects/OpenClientExample

There is also a *readme* file at:

/Applications/Sybase/README/ReadMeSample.pdf

which contains a more complete description of the application itself and how to use it. You can launch Xcode by selecting the project from the Finder.

Mac OS X support

Adaptive Server version 12.5.4 supports Mac OS X 10.3 and 10.4, PowerPC versions only.

The operating system must be configured to allow the necessary number of concurrent asynchronous disk I/Os. This configuration is done automatically by Adaptive Server during the installation, but the configuration is not persistent — the changes do not survive a system restart. To set appropriate kernel configuration values during system startup, see the next section.

Adaptive Server's use of asynchronous disk I/O is determined by two of Adaptive Server's configuration properties:

- `allow sql server async i/o` – a switch, which defaults to ON (1). If OFF (0), Adaptive Server will not use the new Panther asynchronous disk I/O capabilities, and your system throughput will be noticeably affected.
- `disk i/o structures` – instructs Adaptive Server to use no more than this number of concurrent, outstanding asynchronous disk I/Os. The default is 256.

When Adaptive Server starts, it sets the kernel properties as follows:

- `kern.aiomax` – the maximum number of system-wide concurrent asynchronous disk I/Os allowed. Adaptive Server sets this to the greater of:
 - Current value, or
 - $\text{max online engines} * \text{disk i/o structures} + 128$.
- `kern.aioprocmax` – which is the maximum per-process number of concurrent asynchronous disk I/O's allowed. Adaptive Server sets this to the greater of:
 - Current value, or
 - `disk I/O structures`

If Adaptive Server is not started with sufficient privileges, attempts to set these values will fail. In that case, a number of warning messages will be written to the Adaptive Server error log. This should be avoided in production systems, as this can negatively impact performance. When Adaptive Server is started by the installer, or started during system reboot, it is given sufficient privileges to set these values.

Mac OS X kernel configuration

There are some kernel configuration items that may be necessary to set during system startup. In addition to the asynchronous disk I/O configuration values mentioned in the previous section, there are also some shared memory configuration values that should be set to enable the striping capability of the Sybase Backup Server. To establish these kernel configuration values during system startup, the file located at:

/System/Library/StartupItems/SystemTuning/SystemTuning

should be modified as follows:

```
#!/bin/sh
#
# Configure additional async io resources. Change if
# ASE's config value for
# "disk i/o structures" is changed to exceed 1024.
#
/usr/sbin/sysctl -w kern.aiomax=2048
/usr/sbin/sysctl -w kern.aioprocmax=1024
/usr/sbin/sysctl -w kern.aiothreads=16

exit 0
```

In addition to the asynchronous disk I/O configuration, it may also be necessary to configure more than the default amount of shared memory. The Sybase Backup Server uses SystemV shared memory when performing dump/load operations, and the amount can vary, depending on the degree of striping specified during the operation. If changes are needed, a single file can be modified to specify the shared memory configuration. This file is at */etc/rc*. The file sets up a default amount of shared memory, using the following commands:

```
sysctl -w kern.sysv.shmmax=4194304
sysctl -w kern.sysv.shmmin=1
sysctl -w kern.sysv.shmmni=32
sysctl -w kern.sysv.shmseg=8
sysctl -w kern.sysv.shmall=1024
```

These defaults can be modified as needed; we suggest a multiple of 10 for shmmax, shmmni, shmseg, shmall. This should be sufficient for most uses of shared memory by the Backup Server.

Sybase client tools package

Many of the applications and utilities that are shipped with the complete Adaptive Server distribution can be used on a client machine, where Adaptive Server is not running. These applications and utilities are provided in a separate installable package on the release image, called *Sybase_Client_1251*.

Applications contained in this package include:

- *jISQL – /Applications/Sybase/JISQL*
- *SybaseCentral – /Applications/Sybase/Sybase Central*
- *Server Discovery – /Applications/Sybase/Server Discovery*
- *Sybase Open Client Framework – /Library/Frameworks/SybaseOpenClient.framework*
- *Sybase Open Client Sample Application – /Applications/Sybase/Projects/OpenClientExample*
- *Sybase Open Client libraries – /Applications/Sybase/System/OCS-12_5*

In addition, if the Server Admin utility is installed on your client machine (highly recommended), the Sybase plug-in will be installed for it when the client tools are installed.

Installation variables

Unlike installations of Adaptive Server on other platforms, you are not prompted to provide information about various installation options. Instead, these items are pre-determined by the Installer, as follows:

- *Installation directory – /Applications/Sybase*
- *Adaptive Server name and port number – hostname_ASE, 11222*
- *Backup Server Name, Port Number – hostname_BACKUP, 11223*
- *XP Server Name, Port Number – hostname_XP, 11224*
- *Master device pathname – /Applications/Sybase/System/devices/master.dat*
- *Master device size – 100MB*

- sybsystemprocs device pathname – */Applications/Sybase/System/devices/sybprocs.dat*
- sybsystemprocs device size – 160Mbytes
- Server page size – 4096 bytes
- Server default language, character set, sort order – *us_english, iso_1, binary*

If you use the Terminal window, you should add some entries to your login script (*.login*, for *csh*) so that certain environment variables are always set. An example of this is contained in */Applications/Sybase/System/SYBASE.csh*. If you do not have a *.login* script in your home directory, you can use the *.cshrc* file (if you are using *.csh*). Typically, user accounts do not contain either of these by default; in that case, you must create one. If you do not, the login daemon looks to */etc/csh.login* and */etc/csh.cshrc*.

System requirements

The Apple computer you use to install this software should be configured as follows:

- Operating System – Mac OS X 10.3 or higher for Adaptive Server; Mac OS X 10.2 or higher for Client tools.
- Processor – there are no specific processor requirements at this time.
- Memory – 256MB, minimum.
- Hard Disk – You need approximately 600MB of available disk space.
- Network Configuration – Your system should be configured with DNS, and your system should have a valid DNS host name and IP, available using the shell command `'hostname -s'`.

Downloading the software

Download Adaptive Server software at the Sybase-provided Web site at <http://www.sybase.com/mac>.

Click Download Now. You are asked to answer a few questions and provide registration information. The download file is an OS X 10.3 disk image (.dmg), which allows it to be mounted on your desktop as a new volume.

In a browser window, go to the Web site and download the disk image to your desktop. For some browsers, downloading a disk image also causes the disk image to be mounted automatically. If this does not happen with your browser, then when the download is complete, just double-click on the disk image. This instructs the Finder to mount the image as a new file system volume, named *Sybase*.

Double-click on the volume icon, and its contents appear in a separate window. The Adaptive Server installation package appears in that window. Double-click on the package icon, and the Mac OS X 10.3 installer automatically starts. For installing on “headless” systems, such as an Xserve system, refer to the section in this document named Installation on Xserve.

The installer walks you through the various stages of the installation process, requiring your input after most of them.

Installing from the CD

If you are installing from a CD, then insert the CD into the drive, and when it becomes visible on your desktop, double-click on its icon. A Finder window appears, showing the contents of the CD. Double click on the *Sybase_ASE_1251* package, and the installer starts.

If you intend to install in a headless system, you must make this package visible to that system. You can use the Finder to copy the package to a location that is visible to the headless system (NFS-mounted file system), and then review the section titled Installing on Xserve.

Installation on Xserve

To install Adaptive Server Enterprise on Xserve running in a headless mode (without a monitor), you have two options:

- 1 Use the Apple Remote Desktop, which gives you a desktop interface to the Xserve.

- 2 Use the shell command `/usr/sbin/installer` (refer to `man installer` for details).

To install using the command line installer, first place the disk image containing the Adaptive Server installation package on a disk volume accessible to the Xserve. Then, type the command:

```
% installer -pkg /Volumes/Sybase/Sybase_ASE_1251.pkg -target /
```

Where the pathname to the installation package (*.pkg*) identifies the exact location of the file. The target is the root device (“/”).

Note You must provide a complete pathname to the installation package.

What's in this release?

This distribution is provided with a Developer's Edition license that enables single-CPU operation, and restricts the number of concurrent users (client connections) to 25. All other available features are automatically enabled, and there is no expiration period. To enable usage authorized by your purchase agreement, you must provide license keys. This task is done by the License Manager application bundle that is contained in the `/Applications/Sybase` directory.

Besides Adaptive Server version 12.5.4, this release provides you with some interactive tools to help you use and configure your database:

- `jISQL` – is an interactive query tool that enables you to submit SQL statements to the server, and view their results within a window. This program is an application that can be added to your Dock simply by using the Finder and dragging the `jISQL` icon from `/Applications/Sybase/jISQL` to the Dock.
- `SybaseCentral` – is a tool that allows a Database Administrator to create tables, databases, users, and so on using an easy-to-use graphical interface. This can be dragged to the Dock, as before, from `/Applications/Sybase/SybaseCentral`.
- `Server Build` – is an interactive graphical tool that allows you to change the default values for Adaptive Server installation. For example, if you wanted to locate the master database device somewhere besides the default (`/Applications/Sybase/devices`), you could do so with this utility.

- Server Discovery – uses Rendezvous technology to show you the name and location of all servers running on your network. Each Sybase server registers itself with Rendezvous when it starts, and Sybase Server Discovery shows you where each of these servers is located. Also, the menu item Configuration allows you to automatically generate or update entries in the *interfaces* file, for each server selected in the list.

A new feature in this release allows you to establish an interactive SQL session with a remote server. While viewing the list of servers running in your network, just move your mouse to the entry of interest (it must be Adaptive Server), and click on it. You will notice that the hostname and port number are automatically entered into the login section of the window. Just provide an Adaptive Server login name and password, then click the Login button, and a new window should appear that accepts your SQL statements.

- License Manager – allows to you enter information about your purchased software, and generates a software license key for you.
- SybMigrate – is a utility that allows you to move schema and data from one Adaptive Server to another, primarily for the purpose of changing to a server that uses a different page size.

Note For those of you familiar with prior releases of Adaptive Server on other platforms, jISQL is a Mac OS X 10.3 application package that initiates execution of the *jsql* utility; SybaseCentral is an Mac OS X 10.3 application package that initiates execution of Sybase Central and the Adaptive Server plug-in.

The following Adaptive Server version 12.5.4 features are also provided with this distribution:

- Server license (Developer's Edition)
- Java/XML in Adaptive Server
- External File System
- Component Integration Services
- Row Level Access Control
- Security
- Backup Server
- XP Server

- ODBC Driver from Open Link Software, Inc.
- Client Tools
- Job Scheduler

What's not in this release?

For those of you familiar with Sybase Adaptive Server on other Unix platforms, you will find that some of the features provided for those platforms are not available yet on Mac OS X 10.3. These include:

- XML query engine
- EJB Server
- SSL support
- High Availability option
- Full-Text Search
- Historical Server
- Monitor Server

Post-installation tasks

At the end of the installation process, you have a minimally configured Adaptive Server. There are additional post-installation tasks you must complete to administer Adaptive Server and install stored procedures and sample databases. For more information see the *Configuration Guide* for UNIX platforms.

Entering license keys

If you have downloaded Adaptive Server from the Web or purchased a copy of the Developer's Edition of Adaptive Server, you do not need to use the license entry application. There is no need to enter any license key and you do not need to start up the license daemon software (referred to as SySAM).

If you have purchased the Adaptive Server software with either an Enterprise or Small Business Edition license then you must follow the steps below to set up the license information.

- 1 In the Finder, double-click the License Entry icon.
- 2 You are asked whether you have a Sybase Software Asset Management Certificate. You should have the printed certificate(s) in front of you. Click Yes to continue. If you do not have license certificates to enter, click No and proceed to the next section, “Entering Network License Management Information.”
- 3 Enter the information for the primary server license first and click Enter. The Feature Name is either ASE_SERVER or ASE_SBE.
- 4 You are asked whether or not you have additional license certificates to enter. You will have additional certificates if you purchased any optional features. If you have additional certificates click Yes and repeat the previous step to enter the information. When you are finished entering all license certificates select No to complete license entry.
- 5 Now that the license certificates have been entered start the license daemon. Execute the *startd.sh* script located in */Applications/Sybase/Systems/SYSAM-1_0* from the terminal window.

The license daemon needs to be started after the system is restarted.

If you are using a network license host to server as a central point to check licenses out, enter the machine name and port number for the Network License Manager license daemon. The default port number is 29722. A simplified license is written out that contains information to direct Adaptive Server to contact the remote license daemon to check out licenses.

Post-upgrade tasks

This section contains information about post-upgrade tasks you must perform.

Running the *installmaster* script

Using *isql*, run the new *installmaster* script included with this release using the following syntax. Save the output of this step to an operating system file.

```
isql -Usa -P<sa password> -S<server name> -n  
-i$SYBASE/$SYBASE_ASE/scripts/installmaster -o<output file>
```

Save the output of this step to an operating system file.

Rerunning the *installcommit* script

Rerun the installcommit script if you use two-phase commit or distributed transactions, you need to rerun the installcommit SQL script to restore the following stored procedures:

- sp_start_xact
- sp_abort_xact
- sp_remove_xact
- sp_stat_xact
- sp_scan_xact
- sp_probe_xac

Run the new installcommit script included with this release, using isql, if you have modified any of these Sybase system stored procedures (above) without changing the names. In executing installcommit it overwrites your modifications. In this case, you must reload the modified stored procedures after you run the installcommit script.

```
isql -Usa -P<sa password> -S<servername> -n  
-i$SYBASE/$SYBASE_ASE/scripts/installcommit -o<output file>
```

Save the output of this step to an operating system file.

Rerunning the *installsecurity* script

If the Adaptive Server Auditing functionality was enabled in your installation of Adaptive Server Enterprise, you need to rerun the installsecurity script.

If you have modified any of the Sybase system stored procedures installed by this script without changing the names, executing installsecurity will overwrite your modifications. You must reapply the modifications after you run the installsecurity script.

Using isql, run the new installsecurity script included with this release.

```
isql -U<sa password> -S<servername> -n
-i$SYBASE/$SYBASE_ASE/scripts/installsecurity -o<output file>
```

Save the output to an operating system file.

Running the *instmsgs.ebf* script

from this release. Running the *instmsgs.ebf* script brings your Adaptive Server Enterprise messages up to the level of this release.

Using *isql*, run:

```
isql -U<sa password> -S<server name> -n
-i$SYBASE/$SYBASE_ASE/scripts/instmsgs.ebf -o<output file>
```

Save the output of this step to an operating system file.

Running the *installjsdb* script

Stop Job Scheduler.

From an *isql* session, enter:

```
use sybmgmtdb
go
sp_js_wakeup "stop_js", 1
go
```

Run the *installjsdb* script included with this release:

```
isql -U<sa password> -S<server name> -n -
-i$SYBASE/$SYBASE_ASE/scripts/installjsdb -o<output file>
```

Save the output of this step to an operating system file.

The *installjsdb* script looks for the *sybmgmtdb* database. The script updates Job Scheduler tables and stored procedures.

Start Job Scheduler, then, using *isql*, enter:

```
use sybmgmtdb
go
sp_js_wakeup "start_js", 1
go
```

Starting Sybase services automatically

Sybase Adaptive Server can be automatically started when your system boots or restarts. Setting this up is done in the Sybase preference pane, provided with this release.

Viewing servers that are running on your network

Adaptive Server, along with its associated Backup Server and XP Server, registers with the network using Rendezvous technology, so that any Rendezvous client can discover what services are available. We have provided a service discovery tool for Sybase servers, called Server Discovery. This utility can be launched by double-clicking on its icon from the Finder. Look for */Applications/Sybase/Server Discovery*.

When this application is run, you are presented with a list of available servers, showing service name, host name, port number, and a text field that contains server type, version and process id.

Use the Configuration menu item to automatically update the Sybase *interfaces* file for those servers that you have highlighted in the window.

Starting and stopping Adaptive Server

Once you have installed the server, it may be necessary or desirable to stop it, or to re-initialize it using an alternative disk location. If this is the case, the server can be stopped by means of the new System Preferences pane provided with this release. The installation places the Sybase preference pane at */Library/PreferencePanes/Sybase.prefPane*, making it available to all users of your computer.

Once the preference pane is installed, it is easy to start and stop both Adaptive Server and the Backup Server by clicking on the start (or stop) buttons.

Note Starting or stopping Adaptive Server can also be done through the Server Admin utility, using the new Adaptive Server plug-in.

Connecting to Adaptive Server via Sybase Central

Sybase Central provides a graphical user interface for Adaptive Server administrative tasks. Sybase Central displays a hierarchical list of all servers in the left pane and a details list of the selected server in the right pane. To select a server, click on it with the mouse in the left pane.

To start Sybase Central:

- 1 Double-click the Sybase Central icon from the Finder.
- 2 Select Tools | Connect, then, from the drop-down list, select the server to which you want to connect.
- 3 In the Login window, enter the System Administrator's user name and password. You must log in as the System Administrator to perform administrative tasks.
- 4 Click OK.

Warning! The first time you log in to Adaptive Server, use the default "sa" user name and leave the password blank. After you log in for the first time, change the system administrator's password. See "Setting the System Administrator password" on page 17 for more information.

Sybase Central has online help files. To access the online help for a server, right-click the server icon, and select Online Help from the drop-down list. To access online help for Sybase Central, select Help from the menu bar, then select Sybase Central Help.

Setting the System Administrator password

A user account called "sa" is created for the Sybase System Administrator when you install Sybase software. A user logged in as "sa" can use any database on Adaptive Server, including master, with full privileges. Immediately after a new installation, there is no password on the "sa" account.

The System Administrator should log in to the new Adaptive Server as "sa" and set a password using `sp_password`.

Connect to the server by double-clicking the jSQL icon in the */Applications/Sybase* folder. Connect to the server, and send this command:

```
sp_password null, new_password
```

where `null` is the default password and `new_password` is the password that you are assigning to the “sa” account.

Re-initializing the Adaptive Server

It may be desirable or necessary to re-initialize the databases created during the install process. The main reasons for wanting to do this are:

- Use an alternate disk device for the database devices, perhaps on faster disks.
- Change the size of the pages within the database.

Re-initializing the server can be done in one of two ways, depending on your preference:

- The bootstrap shell script – by running the bootstrap script found in `/Applications/Sybase/System/Install/SybaseAdaptiveServerEnterprise/bootstrap`. This script can be edited to take action as necessary. The script installs a new server using the utility `srvbuildres`. `srvbuildres` is driven by a resource file, and the resource files used by the bootstrap script can be edited to override default values for the installation.
- Server Build – this application is a graphical interface to the `srvbuildres` utility. Server Build collects input from you and uses it to create resource files subsequently used by `srvbuildres`. Server Build then launches `srvbuildres`, and a new server is created.

Changing default character set, sort order or language

If you are going to change the default character set, sort order, or language, there is a complete discussion of the procedure to do this in the *System Administration Guide*. We strongly encourage you to read chapters 7 and 8 in that document. This book can be found online at the Sybooks Web site at <http://sybooks.sybase.com/asg1251e.html>.

A simplified procedure for doing this is described here.

A wide variety of character sets are supported by Adaptive Server, and error messages can be localized to suit your particular user community. By default, Adaptive Server is installed with a default character set of iso_1 (ISO 8859-1, to use the ISO terminology), a binary sort order, and US 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

The default character set can be changed by using the `charset` utility. At this time, this utility can be run only from the Unix shell, so you have to open a Terminal window to do this. The utility is found at `/Applications/Sybase/System/ASE-12_5/bin/charset`. To change Adaptive Server defaults, perform the following steps:

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

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

- `iso_1`
- `utf8`
- `ucjis`

Note These steps should be taken before you add any user data to Adaptive Server. If your server contains data, follow the procedures outlines 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 US English. If this is the case, clients can run the `sp_modifylogin` stored procedure to specify which language is preferred. The language chosen must first be installed by the system administrator using the `langinstall` utility program, found at `/Applications/Sybase/System/ASE-12_5/bin/langinstall`.

Troubleshooting the installation

There are variety of steps to take to troubleshoot the installation of Adaptive Server. The first thing to check is the Installer log. Use the Installer | File | Show Log menu item to review the various stages of the installation. If necessary, save this log; it may be necessary to e-mail it to Sybase Tech Support if the installation problem cannot be resolved. There are several possibilities to check for.

- For configurations that do not utilize a DNS server, some applications such as jSQL may have a problem connecting to a local server using the name localhost. To work around this problem, enter in “127.0.0.1” as the host name in the jSQL host name field.

The Sybase installation process assumes the host name of your system is the same as returned by the shell command `'hostname -s'`. This name will be used in the *interfaces* file entries.

- The installation was attempted a second time. If this is the case, the installer will indicate that your second attempt is an Upgrade, rather than a new Install. If this is the case, the server will not be re-started after the install/upgrade process is complete. To start the server, completely uninstall the software and start over, as described in the next section.

If these problems do not describe your situation, please use our newsgroup to describe the problem and we will respond as soon as we can. Please include the following information in your problem description:

- System configuration – describe the type of Apple computer, memory, disk space available, processor, DNS configuration;
- Problem description – be as concise as you can

- Contents of Installer Log – when running the installer, select Installer | File | Show Log, and save the results to a file.
- Contents of Adaptive Server errorlog – located at `/Applications/Sybase/System/ASE-12_5/install/<hostname>_ASE.log`

Uninstalling Sybase software

To uninstall Sybase software, a shell script is provided in `/Applications/Sybase/System/Install/SybaseAdaptiveServerEnterprise` called `uninstall`.

Warning! This script will remove everything in `/Applications/Sybase`.

If you have set up your system to automatically restart Sybase services, these StartupItems will also be deleted. Finally, the receipt for the installation, found in `/Library/Receipts`, will also be removed.

The `uninstall` script is destructive; to make sure running this script is not accidental, it requires a single argument: 'override', before it will allow installation files to be removed. Also, it must be run with superuser privileges, as follows:

```
sudo ./uninstall override
```

Further reading

All Sybase documentation is accessible online at the Sybase Web site at <http://sybase.sybooks.com>.

Suggested reading for first-time users of Adaptive Server include the *System Administration Guide* and *Transact-SQL User's Guide*. Those two documents should help you get a good start on setting up the server appropriately for your application.

Limitations

Here is a list of issues that we know about with this version of Adaptive Server:

- If you configure Adaptive Server to listen on to a port on localhost (or IP address 127.0.0.1), clients on other systems cannot connect to Adaptive Server. This appears to be a restriction inherent within Mac OS X 10.3.
- Backup server tape drive support is not yet available; backup can be done only to disk. Once on disk, backup images can be copied and burned to a CD (approximately 650MB storage) or DVD (approximately 6GB storage).
- Permissions on files – If the server starts up as root, it may create a configuration file with read/write permission only for user root. If the server is then shut down, and one attempts to restart it as a non-root user, the server will not start because the non-root user has no permissions for the config file. This can be addressed by changing the permission to read/write for owner, group and world users. The file is located at */Applications/Sybase/System/ASE-12_5/servername_ASE.cfg*.

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