SYBASE®

Installation Guide

Software Developer's Kit and Open Server™

15.5

[UNIX]

Contents

About This Book

Audience
This book is for system administrators or the persons responsible for installing the Software Developer's Kit (SDK) or Open Server™.

How to use this book
This book contains these chapters:

*   Chapter 1, "Before You Begin," contains preinstallation information and tasks.

*   Chapter 2, "Installing the SDK and Open Server," describes how to install the SDK and Open Server.

*   Chapter 3, "Post-Installation Tasks," provides information about the tasks you must perform after installing the component software for the SDK and Open Server.

Related documents
You can see these books for more information:

*   The *Open Server Release Bulletin for UNIX* platforms contains important last-minute information about Open Server.

*   The *Software Developer's Kit Release Bulletin for UNIX* platforms contains important last-minute information about Open Client™ and SDK.

*   The *jConnect for JDBC Release Bulletin* versions 6.0.5 and 7.0 contains important last-minute information about jConnect™ for JDBC™.

*   The *Open Client and Open Server Configuration Guide for UNIX* platforms contains information about configuring your system to run Open Client and Open Server products.

*   The *Open Client Client-Library/C Reference Manual* contains reference information for Open Client Client-Library.

*   The *Open Client Client-Library/C Programmers Guide* contains information about how to design and implement Client-Library applications.

*   The *Open Server Server-Library/C Reference Manual* contains reference information for Open Server Server-Library.

- The *Open Client and Open Server Common Libraries Reference Manual* contains reference information for CS-Library, a collection of utility routines that are useful in both Client-Library and Server-Library applications.

- The *Open Client and Open Server Programmers Supplement* contains platform-specific information for programmers using Open Client and Open Server products. This document includes information about:

  - Compiling and linking an application

  - Sample programs that are included with Open Client products

  - Routines that have platform-specific behaviors

- The *Adaptive Server Enterprise ODBC Driver by Sybase Users Guide* for Windows and Linux, provides information on how to access data from Adaptive Server® on Windows and Linux platforms, using the Open Database Connectivity (ODBC) Driver.

- The *jConnect for JDBC Installation Guide* version 6.0.5 contains installation information for jConnect for JDBC.

- The *jConnect for JDBC Programmers Reference* contains information for programmers using jConnect.

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 Partner Certification Report.

  3 In the Partner Certification Report filter select a product, platform, and timeframe and then click Go.

  4 Click a Partner 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.

**Sybase EBFs and
software
maintenance**

❖ **Finding the latest information on EBFs and software maintenance**

1   Point your Web browser to the Sybase Support Page at
    http://www.sybase.com/support.

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   *Table 1: Syntax conventions*

Key	Definition
command	Command names, command option names, utility names, utility flags, and other keywords are in sans serif font.
variable	Variables, or words that stand for values that you fill in, are in *italics*.
{ }	Curly braces indicate that you choose at least one of the enclosed options. Do not include braces in the command.
[ ]	Brackets mean choosing one or more of the enclosed items is optional. Do not include braces in the command.
( )	Parentheses are to be typed as part of the command.
|	The vertical bar means you can select only one of the options shown.
,	The comma means you can choose as many of the options shown as you like, separating your choices with commas to be typed as part of the command.

**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.

Open Client and Open Server 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 requirements and the tasks you must complete before you install Software Developer's Kit (SDK) and Open Server.

SDK and Open Server components

This section summarizes the components in the SDK and Open Server products.

SDK components

SDK is a set of libraries and utilities that you can use to develop client applications and includes these components:

- Open Client – a set of APIs used to develop and deploy C-language applications that access Adaptive Server data. Included on the installation medium are:

    - Drivers for integrating Client-Library and Open Server applications with directory and security services

    - Sample programs for Client-Library and DB-Library™

- Open Client Embedded SQL™/C – the precompiler that allows you to embed Transact-SQL® statements into C-language applications. The installation medium also includes sample programs for Embedded SQL/C.

- Open Client Embedded SQL/COBOL – the precompiler that allows you to embed Transact-SQL statements into COBOL-language applications. The installation medium also includes sample programs for Embedded SQL/COBOL.

  Note This is available only on HP HP-UX, IBM AIX, Linux x86, and Sun Solaris Sparc.

- Language modules – provide system messages and datetime formats to help you localize your applications. Default installation includes these character sets:

ASCII, for use with unspecified 8-bit data (ascii_8)	BIG 5, Traditional Chinese with Hong Kong Supplementary Character Set (big5hk)
BIG 5, Traditional Chinese (big5)	Microsoft Windows Code Page 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 866 (cp1250, cp1251, cp1252, cp1253, cp1254, cp1255, cp1256, cp1257, cp1258, cp866)
IBM Code Page 852, 855, 857, 860, 864, 869, 874, 950 (cp852, cp855, cp857, cp860, cp864, cp869, cp874, cp950)	Variant of Code Page 850 (cp858), IBM Code Page 932 for JIS-X0201 and JIS-X0208 (cp932)
Code Page 437, 850 (cp437, cp850)	
CP936, Simplified Chinese (cp936)	PC (MS) Korean (cp949)
DEC Kanji Code for JIS-X0208 (deckanji)	Extended UNIX Code for CNS-11643 (euccns)
Extended UNIX Code for GB2312-80 (eucgb)	Extended UNIX Code for JIS-X0201 and JIS-X0208 (eucjis)
Extended UNIX Code for KSC-5601 (eucksc)	P.R.C standard GB 18030-2000 (gb18030)
HP Greek (greek8)	ISO_8859-15 Latin9, Western Europe (iso15)
ISO_8859-2 Latin2, Eastern Europe (iso88592)	ISO_8859-5 Cyrillic (iso88595)
ISO_8859-6 Arabic, ASMO-708 (iso88596)	ISO_8859-7 Greek, ELOT_928 (iso88597)
ISO_8859-8 Hebrew (iso88598)	ISO_8859-9 Latin5, Turkish (iso88599)
ISO 8859-1 (iso_1)	KOI-8 Cyrillic 8-bit (koi8)
Kazakhstan, Cyrillic (kz1048)	Macintosh Western European locales (mac)

Macintosh Cyrillic (mac_cyr)	Macintosh, Eastern European (mac_ee)
Macintosh with EURO support for Western European locales (mac_euro)	Macintosh, Greek (macgrk2)
Macintosh, Turkish (macturk)	Hewlett-Packard Roman 8 and Roman 9 (roman8, roman9)
IBM/Microsoft Code for JIS-X0201 and JIS-X0208 (sjis)	Thailand Industrial Standard (tis620)
HP Turkish, 8-bit (turkish8)	Unicode 3.1 UTF-8 encoding (utf8)

Additional language modules:

- Chinese

- French

- German

- Japanese

- Korean

- Polish

- Portuguese

- Spanish

- Thai

Note SDK and Open Server support the same character sets as Adaptive Server.

- Adaptive Server® Enterprise ODBC Driver by Sybase, version 15.5.

Note Adaptive Server ODBC Driver is available only on Linux x86 32-bit and 64-bit, and Linux x86-64 64-bit.

- jConnect for JDBC 6.0.5 and 7.0 – the JAVA implementation of the Java JDBC standard, which provides Java developers with native database access in multitier and heterogeneous environments. For jConnect hardware and software requirements and installation instructions, see the *jConnect for JDBC Installation Guide* version 6.0.5.

- Extended Architecture (XA) Interface Library for Adaptive Server Distributed Data Manager. Also included are sample programs for XA.

Note XA is available on all platforms except Linux POWER 32-bit and 64-bit, and Sun Solaris x86 32-bit.

Table 1-1 lists the libraries and utilities that are included with the SDK.

Note For jConnect 6.0.5 libraries and utilities, see the *jConnect for JDBC Installation Guide* version 6.0.5.

Table 1-1: SDK libraries and utilities for UNIX platforms

SDK	Open Client	Embedded SQL/C	Embedded SQL/COBOL
Libraries			
Client-Library	x	x	x
CS-Library	x	x	x
DB-Library	x	n/a	n/a
Bulk-Library	x	n/a	n/a
XA-Library	x	n/a	n/a
Net-Library	x	n/a	n/a
Common-Library	x	n/a	n/a
LDAP	x	n/a	n/a
SSL	x	n/a	n/a
Kerberos	x	n/a	n/a
Utilities			
bcp, defncopy, dscp, dsedit, isql, certauth, certpk12, certreq, extractjava, installjava, pwdcrypt	x	n/a	n/a
cpre	n/a	x	n/a
cpre64 (non-reentrant version), cpre_r64 (reentrant version)	n/a	x	n/a
cobpre	n/a	n/a	x
cobpre64 (non-reentrant version), cobpre_r64 (reentrant version)	n/a	n/a	x

LEGEND: x = available; n/a = not available on this component.

Open Server components

Open Server is a set of APIs and supporting tools that you can use to create custom servers to respond to client requests submitted through Open Client or jConnect routines. Open Server includes the following components:

- Open Server – a set of APIs and supporting tools. Included on the installation medium are:

- Drivers for integrating Client-Library and Open Server applications with directory and security services

- Sample programs for Server-Library and Client-Library

• Open Client – a set of APIs used to develop and deploy C-language applications that access Adaptive Server data. Included on the installation medium are:

- Drivers for integrating Client-Library and Open Server applications with directory and security services

- Sample programs for Client-Library and DB-Library to Client-Library Migration

• Language modules – provide system messages and datetime formats to help you localize your applications. Default installation includes some of these character sets:

ASCII, for use with unspecified 8-bit data (ascii_8)	BIG 5, Traditional Chinese with Hong Kong Supplementary Character Set (big5hk)
BIG 5, Traditional Chinese (big5)	Microsoft Windows Code Page 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 866 (cp1250, cp1251, cp1252, cp1253, cp1254, cp1255, cp1256, cp1257, cp1258, cp866)
IBM Code Page 437, 850, 852, 855, 857, 860, 864, 869, 874, 950 (cp437, cp850, cp852, cp855, cp857, cp860, cp864, cp869, cp874, cp950)	Variant of Code Page 850 (cp858), IBM Code Page 932 for JIS-X0201 and JIS-X0208 (cp932)
Code Page 437, 850 (cp437, cp850)	
CP936, Simplified Chinese (cp936)	PC (MS) Korean (cp949)
DEC Kanji Code for JIS-X0208 (deckanji)	Extended UNIX Code for CNS-11643 (euccns)
Extended UNIX Code for GB2312-80 (eucgb)	Extended UNIX Code for JIS-X0201 and JIS-X0208 (eucjis)
Extended UNIX Code for KSC-5601 (eucksc)	P.R.C standard GB 18030-2000 (gb18030)
HP Greek (greek8)	ISO_8859-15 Latin9, Western Europe (iso15)
ISO_8859-2 Latin2, Eastern Europe (iso88592)	ISO_8859-5 Cyrillic (iso88595)
ISO_8859-6 Arabic, ASMO-708 (iso88596)	ISO_8859-7 Greek, ELOT_928 (iso88597)

ISO_8859-8 Hebrew (iso88598)	ISO_8859-9 Latin5, Turkish (iso88599)
ISO 8859-1 (iso_1)	KOI-8 Cyrillic 8-bit (koi8)
Kazakhstan, Cyrillic (kz1048)	Macintosh Western European locales (mac)
Macintosh Cyrillic (mac_cyr)	Macintosh, Eastern European (mac_ee)
Macintosh with EURO support for Western European locales (mac_euro)	Macintosh, Greek (macgrk2)
Macintosh, Turkish (macturk)	Hewlett-Packard Roman 8 and Roman 9 (roman8, roman9)
IBM/Microsoft Code for JIS-X0201 and JIS-X0208 (sjis)	Thailand Industrial Standard (tis620)
HP Turkish, 8-bit (turkish8)	Unicode 3.1 UTF-8 encoding (utf8)

Additional language modules:

- Chinese

- French

- German

- Japanese

- Korean

- Polish

- Portuguese

- Spanish

- Thai

Table 1-2 lists the libraries and utilities that are installed with Open Server.

Table 1-2: Open Server libraries and utilities

Libraries	• Server-Library
	• Client-Library
	• CS-Library
	• Net-Library
	• Bulk-Library
	• Common-Library
	• LDAP
	• SSL
	• Kerberos
Utilities	• bcp
	• defncopy
	• dsedit
	• dscp
	• isql
	• certauth
	• certpk12
	• certreq
	• pwdcrypt

System requirements for the SDK and Open Server

This section contains the following information:

- Hardware and software requirements

- Disk space requirements

Hardware and software requirements

Table 1-3 shows the system hardware and software requirements for SDK and Open Server.

Table 1-3: System requirements for SDK and Open Server 15.5

Hardware	Operating system	Supported protocols
IBM AIX POWER 32-bit and 64-bit	AIX 5.3 or later	TCP
HP HP-UX PA-RISC 32-bit and 64-bit	HP-UX 11.11 or later	TCP
HP HP-UX Itanium 32-bit and 64-bit	HP-UX 11.23 or later	TCP
Linux x86-64 32-bit	RHEL 4.5 or later	TCP
Linux POWER 32-bit and 64-bit	RHEL 4.5 or later	TCP
Linux x86-64 64-bit	RHEL 4.5 or later	TCP
Sun Solaris SPARC 32-bit and 64-bit	Solaris 8 or later	TCP
Sun Solaris x86-64 32-bit and 64-bit	Solaris 10 or later	TCP

Note For the required patches that must be installed before installation, check the relevant release bulletin for UNIX platforms. Contact Sybase Technical Support for the appropriate platform for the latest patches available. For the most current certified platforms, see "Sybase certifications on the Web" on page vii.

Disk space requirements

The required installation disk space for each platform varies from 250MB to 534MB, and depends on:

• Product installed – SDK or Open Server

• Architecture – 32-bit or 64-bit

• Platform – IBM AIX POWER, HP HP-UX PA-RISC, HP HP-UX Itanium, Linux x86, Linux POWER, or Sun Solaris

• Type of installation – typical, full, or custom

Disk space required for installation

To ensure that there is sufficient disk space for the installation, a Pre-Installation Summary window displays every component that is to be installed and the total disk space required for all selected components. If you continue without sufficient disk space, a warning appears displaying the space-required, and the space-available information in the target directory. The warning also displays the minimum space that you need to free up to proceed with the installation, otherwise, you can cancel the installation.

jConnect requirements

You can install jConnect as a separate product. It requires approximately 18MB disk space for jConnect 6.0.5, and 11MB for jConnect 7.0.

Preinstallation instructions

The following tasks describe how to prepare for installing the SDK or Open Server products.

Note The instructions in this document do not apply to installing the SDK included in the Adaptive Server Enterprise Suite. Those instructions are in the *Adaptive Server Enterprise Installation Guide*.

❖ **Preparing for installation**

1 Read the *SDK Release Bulletin* or the *Open Server Release Bulletin for UNIX* platforms for the latest information about the products you are installing.

   Your Sybase product shipment includes printed release bulletins; they are also available on the Sybase Web site at http://www.sybase.com/support/techdocs.

2 Create a "sybase" account on your system to perform all installation tasks. The system administrator usually sets up this account, as doing so requires "administrator" privileges.

3 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 unload, installation, upgrade, and setup tasks.

Warning! Be sure your permissions have been set before starting the installation. The installer does not check for permissions. If you do not have the permission, the installer logs exceptions and "Permission denied" error in the log file.

The "sybase" user must have read/write/execute privileges from the top (or root) of the disk partition or operating system directory down to the specific physical device or operating system files.

4   Identify or create a directory location for the Sybase installation directory, where you are going to unload the SDK and Open Server products.

5   Verify that the location for the Sybase installation has sufficient space to unload the software. See "System requirements for the SDK and Open Server" on page 8.

The installation program automatically sets most of the environment variables. You must set others using the *SYBASE.csh* or *SYBASE.sh* scripts file located in *$SYBASE*. You must also source this environment file before using the product.

When you have reviewed and verified the installation requirements and completed the preinstallation tasks, you are ready to install the SDK and Open Server.

Installing the SDK and Open Server

This chapter describes how to install, uninstall, and downgrade using the SDK and Open Server installer and the command line commands.

Using SDK or Open Server installer

This section describes how to use the installer to install SDK or Open Server components. These procedures assume that:

- The target computer meets the requirements outlined in "System requirements for the SDK and Open Server" on page 8.

- You have completed the list of tasks for SDK and Open Server in "Preinstallation instructions" on page 10.

The installation program creates the target directory (if necessary) and unloads all the selected components into that directory.

The options for installing Sybase components from the distribution media using the installation program:

1 GUI mode – install the components using the SDK or Open Server installer interface.

2 Console mode – install components in a command-line environment.

3   Response file – record or create a response file. Using a response file, you can install SDK or Open Server in silent mode. Silent installation lets you install the product without interaction required on your part. This is convenient if you are performing identical installations on multiple machines

Each of these options is described in the following sections.

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 *$SYBASE/log/<product_name>.log*, where *$SYBASE* is the SDK or Open Server installation directory.

Installing on a remote machine

To install on a remote machine from the local machine, you must set permission on the local machine for the remote machine to display the installer windows on the local machine.

❖   **Granting permission for a remote machine to run the SDK or Open Server installer in GUI mode**

1   At the UNIX prompt of your *local* machine, enter:

```
xhost +remote_machine
```

where *remote_machine* is the machine on which you are running the installer.

2   On the remote machine where you are installing the software, verify that the DISPLAY environment variable is set to the local machine where you are viewing the installer windows and output. If the installer cannot find your DISPLAY variable, you cannot run the GUI.

•   For C shell:

```
setenv DISPLAY host_name:0.0
```

•   For Bourne shell:

```
DISPLAY=host_name:0.0; export DISPLAY
```

where *host_name* is the name of the local (display) machine.

Note For remote installations, you must be able to rsh into the machine on which you are installing the software. If you cannot do this, add the installation host to your *.rhosts* file.

Installing SDK or Open Server

Although you can verify product installation at the end of this process, you must also perform additional configuration procedures before you can use the products. See "Configuring the components" on page 26.

Note SDK/Open Server binaries like isql and bcp share the same name between the 32-bit and 64-bit products. Installing Adaptive Server, SDK, or Open Server 64-bit products with other Sybase 32-bit products in the same Sybase installation overwrites the 32-bit binaries, and may cause issues with the peaceful coexistence of multiple products.

Beginning with Adaptive Server 15.0.2 and SDK/Open Server 15.0 ESD #9, 64-bit binaries have been replaced with 32-bit binaries on all 64-bit UNIX platforms to retain the peaceful coexistence of multiple products in the same Sybase installation.

Installing SDK or Open Server 15.5 on the same machine as a pre-15.5 Adaptive Server

To install SDK or Open Server 15.5 in a different directory but on the same machine as a pre-15.5 Adaptive Server installation, and to prevent the previous version from being affected:

1   Shut down Adaptive Server.

   •   Use isql to log in to an Adaptive Server with system administrator privileges:

```
isql -Usa -Ppassword -Sserver_name
```

   •   Enter:

```
1> shutdown
2> go
```

> **Note** Back up your current installation before installing SDK or Open Server 15.5.

2   Complete the SDK or Open Server installation as documented in the following installation sections.

3   Edit the *SYBASE.csh* or *SYBASE.sh* script file to comment out the pre-15.5 SDK and Open Server environment information.

4   Start Adaptive Server at the command line using the *RUN_server_name* file that contains information required to restart the server:

```
$SYBASE/$SYBASE_ASE/install/startserver [-f
RUN_server_name file]
```

For more information about starting and stopping Adaptive Server, see the *Adaptive Server Enterprise Configuration Guide for UNIX*.

Installing SDK or Open Server 15.5 into version 15.0 directory

SDK/Open Server 15.5 is a shelf replacement for the 15.0 version so when you install SDK or Open Server 15.5 in to an existing SDK or Open Server 15.0 directory, the 15.5 files overwrite the 15.0 files. No other migration procedures are required.

Mount the CD

Insert the SDK or Open Server CD in the CD drive, and if necessary, mount the CD. To install both products, repeat this procedure using the appropriate CD, after you install the first product.

> **Note** The location of the mount command is site-specific and may differ from the instructions shown here. If you cannot mount the CD drive using the path shown, check your operating system documentation or contact your system administrator.

•   For HP HP-UX and HP Itanium:

Log out, log in as "root," and mount the CD using:

```
mount -F cdfs -o ro,rr /device_name /cdrom
```

Then, log out and log in again as "sybase."

- For IBM AIX:

  Log in as "sybase," and mount the CD:

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

  where:

  - *device_name* is the CD drive device name.
  - */cdrom* is the name of the directory where the CD is to be mounted.

- For Sun Solaris platforms:

  The operating system automatically mounts the CD. Log in as "sybase." If you receive CD-reading errors, check your operating system kernel to make sure the ISO 9660 option is turned on. On Sun Solaris, the CD drive device name is */cdrom/cdromx*, where *x* is the number of the CD device.

- For Linux platforms:

  The operating system automatically mounts the CD.

Installing in GUI mode

The following steps are required to perform the installation in GUI mode.

❖ **Installing in GUI mode**

1   Verify that the drive on which you will install the products has enough disk space for the products being installed, and at least 10MB extra disk space for the installation program. The program frees this space after the installation is complete.

    If the installer does not have sufficient temporary space to run, set the environment variable IATEMPDIR to *tmp_dir* before running the installer again, where *tmp_dir* is the temporary directory to which the installation program writes the temporary installation files.

    Note When specifying the *tmp_dir*, include the full path.

2   At the UNIX prompt, start the installer.

- For IBM AIX, Linux, and Sun Solaris:

    ```
    cd /cdrom/cdromn/pathname
    ./setup.bin
    ```

- For HP HP-UX and HP Itanium:

    ```
    cd /cdrom/pathname
    ./setup.bin
    ```

    where:

    - *cdrom/cdromn* is the directory (mount-point) you specified when mounting the CD drive. For example, on Sun Solaris the mount-point can be *cdrom/cdrom0*.

    - *setup.bin* is the executable file name to install SDK and Open Server products.

    This unloads the components in GUI mode.

3   In the Introduction window, click Next.

4   Read the License and Copyright Agreement. Select the geographic location from where you are installing, to display the agreement appropriate to your region. Select "I agree to the terms of the Sybase license for the install location specified." and click Next.

    You must agree to the license and copyright agreement before you can continue.

5   In the Choose Install Folder window, click Next to accept the default directory for the installation, or click Choose to browse through the directory and select a location for the installation. One of these occurs:

    - If the installation directory you chose does not exist, the installer prompts:

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

        Click Yes.

    - If the installation directory exists, the installer prompts:

        ```
        Warning: You have chosen to install into an
        existing directory. If you proceed with this
        installation, any older versions of the products
        you choose to install that are detected in this
        directory will be replaced.
        ```

If you continue and the older products were not installed with SDK or Open Server installer (for example, if you installed a version of Adaptive Server earlier than 15.5), the installer overwrites the common files.

If you are prompted to overwrite any files, click Yes *only* if the version of the new file is later than the one the installer is attempting to overwrite.

6   Select the type of installation:

  •   Typical (default) – installs the SDK or Open 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 to be installed and the total disk space required appear before the installation executes. These components are described in "SDK and Open Server components" on page 1.

  •   Full – installs every SDK or Open Server component, including all the supported language modules.

     The components to be installed and the total disk space required appear before the installation executes. For a list of language modules you can install, see "SDK components" on page 1.

  •   Custom – allows you to select the components for SDK or Open Server to install. When you select Custom install, the next window displayed is the Choose Install Set window, which allows you to select the components you want to install.

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

After you have selected the installation type, click Next.

The Pre-Installation Summary window displays the product features or components to be installed and the total disk space required for all the selected features.

7   Verify that you have selected the correct type of installation, and that you have enough disk space to complete the process. Click Install.

The installation program unloads all the components from the CD and displays a progress indicator.

Installing in console mode

To run the installation program without the GUI, launch the installer in console mode. If the installer launches automatically, click Cancel to cancel the GUI installation, then launch the setup program from a terminal or console.

❖ **Installing in console mode**

The steps for installing components in console mode are the same as those described in "Installing in GUI mode" on page 17, except that you need to run the installation program from the command line using the setup.bin -i console command, and you enter text to select the installation options.

1   At the command line, enter:

```
./setup.bin -i console
```

The installer starts.

2   The flow of the installation is identical to a GUI installation, except that the display is written to a terminal window and responses are entered using the keyboard. Follow the remaining prompts to install either the SDK or Open Server software.

For a complete list of command-line options, see "Command line options" on page 24.

Installing using a response file

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

Creating a response file

To create a response file when installing in GUI mode or console mode, specify the -r command line argument . The -r argument records your responses to the installation wizard's prompts and creates a response file when the installation wizard exits. The response file is a text file that you can edit to change any responses before you use it in any subsequent installations.

On the command line, enter:

```
./setup.bin -r responseFileName
```

The *responseFileName* is the file name you choose for the response file. When specifying the response file name, include its full path. For example:

```
/home/sybase/SDK/ResponseFile.txt
```

Note The directory path specified must already exist.

The response file is created in the specified location once installation is completed.

Installing in silent mode

A silent or unattended installation requires no user interaction, and all installation configuration information is taken from the response file. This is useful when you want multiple identical installations or a fully automated installation process.

To install in silent mode, run:

```
./setup.bin -f responseFileName -i silent
-DAGREE_TO_SYBASE_LICENSE=true
```

where *responseFileName* is the absolute path of the file name containing the installation options you chose. The -D option specifies that you agree with the Sybase License Agreement text.

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

Note You must agree to the Sybase License Agreement when installing in silent mode. You can either:

*   Include the option -DAGREE_TO_SYBASE_LICENSE=true in the command line argument.

*   Edit the response file to include the property AGREE_TO_SYBASE_LICENSE=true

---

Uninstalling the SDK or Open Server

The SDK or Open Server installer includes an uninstall feature that removes the Sybase components you have installed.

Before uninstalling, consider:

- If two or more Sybase products install the shared components in the same directory, the uninstaller does not remove the shared component until all the Sybase products are uninstalled.

Warning! Do not uninstall Open Server and SDK products from a directory that contains other Sybase products that have been installed using an installation program other than the SDK or Open Server installer. By doing so, you may remove the components shared by Sybase products and affect their operation.

- The uninstall feature removes only those files that were loaded from the installation CD. Some Sybase files, such as log and configuration files, are left intact for administrative purposes. If all products are uninstalled from the directory and you do not need the remaining configuration files, you can manually delete the directory.

Uninstallation procedures

You can invoke the uninstall procedure using either GUI or the console method.

Before uninstalling Sybase software, shut down all processes and applications that use the software or components that are going to be uninstalled.

❖ **Uninstalling in GUI mode**

1   From the command line, enter:

- For SDK:

```
$SYBASE/sybuninstall/SDKSuite/uninstall
```

- For Open Server:

```
$SYBASE/sybuninstall/OpenServerSuite/uninstall
```

2   Click Next.

The Uninstall Options window appears.

3   Select one of:

- Complete Uninstall – completely remove all features and components of SDK or Open Server. The files and folders created after the installation are not affected.

• Uninstall Specific Features – allows you to uninstall specific features of SDK or Open Server.

If you select this option, the Choose Product Features window appears and you can select the features to uninstall.

4   Click Next. The Uninstall Complete window appears, listing the items that cannot be removed.

Note If there are no other products installed in the directory and it contains files that were not installed by the installer, a window appears asking if you want to delete these files.

---

5   Click Done.

❖   **Uninstalling in console mode**

1   Go to the *$SYBASE* directory, and at the command prompt, enter one of the following commands:

• For SDK:

```
$SYBASE/sybuninstall/SDKSuite
uninstall -i console
```

• For Open Server:

```
$SYBASE/sybuninstall/OpenServerSuite
uninstall -i console
```

The uninstall program starts.

2   The flow of the uninstall program is identical to a regular GUI uninstall, except that the display is written to a terminal window and responses are entered using the keyboard. Follow the remaining prompts to uninstall either Software Developer's Kit or Open Server software.

For a complete list of command-line options, see "Command line options" on page 24.

Downgrading SDK or Open Server

To downgrade SDK or Open Server 15.5 to an earlier version:

1   Uninstall version 15.5. You cannot install the earlier software version into an existing version 15.5 directory.

2   Install the earlier software version. The earlier software version does not contain ESDs, so you must install them separately.

Command line options

Table 2-1 lists the command line options that you can use when running an installer or uninstaller.

Table 2-1: Command line options

Option	Purpose
-i console	Use the console interface mode, where messages during installation are displayed on the Java console and the wizard is run in console mode.

-D	Passes custom variables and properties. For example, if you want to override the default installation directory when you run the installer, enter:
	`<install_launcher_name>`
	`-DUSER_INSTALL_DIR=E:\Sybase`

-i silent	Install or uninstall the product in silent mode, where the installation/uninstallation is performed with no user interaction and the installation is silent.
-i swing	Use the GUI mode.
-r	Generates a response file and a reference.
-f	References response files.
-l	Sets the installer's locales.
-\?	Displays the installer help.

CHAPTER 3   **Post-Installation Tasks**

This chapter describes the tasks you must perform after installation.

Topic	Page
Setting environment variables	25
Configuring the components	26
jConnect for JDBC post-installation tasks	26

Setting environment variables

The installation program automatically sets most of the environment variables it needs, such as PATH, as part of the unloading process. It also unloads *.sh* and *.csh* files, which contain the environment variables you must set manually before you can configure and successfully run Open Client and Open Server components.

Bourne and C shell files   The installer unloads Bourne shell and C shell files containing environment variables in:

- *$SYBASE/SYBASE.sh*

- *$SYBASE/SYBASE.csh*

To set the environment variables, either:

- Modify the component's RUN environment using the environment variable values from the shell files, or,

- Update the component's RUN environment immediately before invoking the component, as described below.

❖ **Updating the RUN environment immediately**

1   In a Bourne shell, enter:

```
cd $SYBASE
. SYBASE.sh
```

2   In a C shell, enter:

```
cd $SYBASE
source SYBASE.csh
```

Configuring the components

Configure each Open Client and Open Server component following the
instructions in the *Open Client and Open Server Configuration Guide for
UNIX* platforms.

For jConnect for JDBC 6.0.5, see the *jConnect for JDBC Installation Guide*
version 6.0.5. For jConnect for JDBC 7.0, see "jConnect for JDBC post-
installation tasks".

Modifying *interfaces* file entries

Use the command-line utility dscp or the X-Windows graphical tool dsedit to
modify master and query server entries in the *interfaces* file and for the
directory services you are using. For information about dscp or dsedit, see the
Open Client and Open Server Configuration Guide for UNIX platforms.

jConnect for JDBC post-installation tasks

jConnect for JDBC 7.0 has these post-installation tasks.

Setting JDBC_HOME

JDBC_HOME represents the directory in which you install jConnect. For
example:

If your installation directory is */usr/local/Sybase*, set the JDBC_HOME to:

```
/usr/local/Sybase/jConnect-7_0
```

Setting the CLASSPATH

CLASSPATH is the location of the jConnect runtime classes and the *jar* files for JDK 1.6 or later. This section describes what you need in your CLASSPATH depending on which versions of JDK and jConnect you are using.

Using jConnect 7.0 with JDK 1.6.x and later

To use jConnect 7.0 with JDK versions 1.6.x and later, add the following path to the CLASSPATH environment variable:

$JDBC_HOME/classes/jconn4.jar

Running samples or TDS-tunnelling servlet

To run the samples or the TDS-tunnelling servlet, add the following to the CLASSPATH environment variable:

$JDBC_HOME/classes/jconn4.jar:$JDBC_HOME/classes

Note Sybase requires that you run JDK 1.6 or later with jConnect 7.0.

In addition, the CLASSPATH should include the location of any application classes you have defined.

CLASSPATH restriction using Firefox

If you use Firefox, some restrictions may apply to the way you set your CLASSPATH environment variable.

The Java VM security manager will not allow a version of jConnect installed in your local file system to create a connection to a server, even if the server is your local system. This can create a problem if you use Firefox to run an applet that uses jConnect.

When Firefox needs to load jConnect to create a connection to a server, it looks for a CLASSPATH defined in its environment to find the jConnect classes. If it finds a CLASSPATH that you have defined to point to your local jConnect installation, it loads jConnect directly from the local file system—rather than from the server—and tries to create a connection. This generates a security error and the connection fails.

Do not set the CLASSPATH to the local jConnect directory if you are using Firefox to run jConnect applets.

Installing stored procedures

For jConnect to function properly, you must install stored procedures and tables on the Adaptive Server Enterprise or Adaptive Server® Anywhere database to which your application will be connecting. jConnect provides the these scripts to install the required stored procedures and tables:

* *sql_server12.5.sql* – installs stored procedures on Adaptive Server Enterprise versions 12.5.x. or later.

* *sql_server15.0.sql* – installs stored procedures for Adaptive Server Enterprise 15.x or later.

* *sql_asa.sql* – installs stored procedures on SQL Anywhere® and Adaptive Server Anywhere databases.

Note If you use Adaptive Server 12.5.3 or later, or ASA 9.0.2 or later, the scripts come pre-installed on the server. You need to install these scripts only if you have a later version of the driver than the one that shipped with Adaptive Server. In addition, for backward compatibility, *sql_server.sql* and *sql_server12.sql* are included on Adaptive Server 11.9.2 and 12.0 respectively, although these versions are no longer supported.

❖ **Running stored-procedure installation scripts**

1 Verify that your JAVA_HOME, JDBC_HOME, and CLASSPATH environment variables are set.

2 Use the IsqlApp sample application. For more information on IsqlApp, see "Installing stored procedures on an Adaptive Server database".

❖ **Installing stored procedures on an Adaptive Server database**

* Go to the *$JDBC_HOME/classes* directory and enter:

    * For Adaptive Server version 15.x:

```
java IsqlApp -U sa -P password -S jdbc:sybase:
 Tds:[hostname]:[port] -I $JDBC_HOME/sp/sql_server15.0.sql -c go
```

    * For Adaptive Server version 12.5.x:

```
java IsqlApp -U sa -P password -S jdbc:sybase:
 Tds:[hostname]:[port] -I $JDBC_HOME/sp/sql_server12.5.sql -c go
```

❖ **Installing stored procedures on a SQL Anywhere or Adaptive Server Anywhere database**

* Go to the *$JDBC_HOME/classes* directory and enter:

```
java IsqlApp -U dba -P password -S jdbc:sybase:
 Tds:[hostname]:[port] -I $JDBC_HOME/sp/sql_asa.sql -c go
```

Reviewing the installation contents

After completing the jConnect installation, review the contents listed in this section.

Packages

For jConnect version 7.0, the following packages are found inside *jconn4.jar* file for the release build, and *jconn4d.jar* file for the debug build:

- com.sybase.jdbc4.jdbc
- com.sybase.jdbc4.tds
- com.sybase.jdbc4.timedio
- com.sybase.jdbc4.utils
- com.sybase.jdbcx

The jConnect driver, com.sybase.jdbc4.jdbc.SybDriver, is located in the com.sybase.jdbc4.jdbc package.

Directories and files

Table 3-1 lists the directories and files in the *jconnect70.zip*.

Table 3-1: Directories and files in the jconnect70.zip

Name	Type	Description
jconnect-7_0	Directory	Contains all of the jConnect version 7.0 files and subdirectories.
classes	Subdirectory	Contains the following jConnect 7.0 components:
		• *jconn4.jar* file that contains jConnect 7.0 classes
		• *sample2* subdirectory with jConnect 7.0 class files for sample applets and applications
		• *gateway2* subdirectory for compiled TDS-tunnelling servlet
devclasses	Subdirectory	Contains the *jconn4d.jar* file that contains the same jConnect 7.0 components as *jconn4.jar*, but debug mode is turned on.

Name	Type	Description
docs	Subdirectory	Contains the:
		• *en* subdirectory, which contains the English javadoc documentation
		• *en/progref* subdirectory, which contains the *jConnect for JDBC Programmers Reference* in HTML and PDF format
		• *en/installdocs* subdirectory, which contains the *jConnect for JDBC Installation Guide* in HTML and PDF format
gateway2	Subdirectory	Contains source code for the TDS-tunnelling servlet.
sample2	Subdirectory	Contains source code for sample Java applications.
sp	Subdirectory	Contains isql scripts that install stored procedures for function escapes and DatabaseMetaData methods on a database server. The scripts are:
		• *sql_asa.sql* (Adaptive Server Anywhere)
		• *sql_server15.0.sql* (Adaptive Server Enterprise version 15.x)
		• *sql_server12.5.sql* (Adaptive Server Enterprise version 12.5.x)
tools	Subdirectory	Contains a perl script (*decode-tli*) that UNIX or Linux users can apply to parse an *interfaces* file into a readable format.
netimpct.gif	Graphic file	Contains a jConnect graphic.
index.html	HTML file	Contains links to jConnect documentation and jConnect samples.

JDBC samples and specifications

You can find JDBC samples and specifications in the *jConnect for JDBC Programmers Reference*.

Testing the jConnect installation

After jConnect is installed, run the Version program to test the installation.

Note The Version program connects to a demonstration database that Sybase has made available on the Internet. You must have Internet access to run the Version program successfully, or explicitly run it with [-U *username*] [-P *password*] [-S *servername*] commands to point it to your database.

❖ **Testing the installation**

1 From the DOS prompt for Windows, or at a UNIX, Linux or Mac prompt, change to the *JDBC_HOME* directory.

2   Verify that your CLASSPATH variable is set for running the sample programs (see "Setting the CLASSPATH" on page 27 for details) and enter the following text:

```
java sample2.SybSample Version
```

A SybSample window appears. At the top of the window, the Running Sybase Sample text box displays the source code for Version as the program runs. The middle text box (Sample Output) should display version information. For example:

```
Using JDBC driver version 7.0
jConnect (TM) for JDBC(TM)/7.0...
```

3   The output could be one of the following:

• If the previous message appears in the Sample Output text box, you have successfully installed jConnect.

• If you get the previous message but the source code for Version does not appear in the Running Sybase Sample text box, and the Status text box at the bottom of the window shows the following message, it means that you have successfully installed jConnect but probably did not enter the command to run the Version program from the *sample2* directory under *JDBC_HOME*:

```
java.io.FileNotFoundException: Version.java
```

• If the SybSample window does not appear and you get the following error message, check your CLASSPATH to verify that it is set correctly:

```
Can't find class sample2.SybSample
```

• If the SybSample window does not come up, and you get one of the following error messages, make sure that your path includes the *bin* subdirectory of your JDK home directory:

```
"Name specified is not recognized as an internal
or external command"
```

```
"Bad command or file name"
```

4   When you have verified that your installation was successful, click Close to exit the SybSample window.

Verifying the jConnect version

Go to the *$JDBC_HOME/classes* directory and enter:

```
java -jar jconn4.jar
```

This command prints a version string like the following:

```
jConnect (TM) for JDBC(TM)/7.00(Build
26464/P/EBF17270/JDK16/Sun Oct 11 7:47:00 2009
```

Here, the version number is 7.0. The 5-digit number following the letters "EBF" indicates the exact version of jConnect. This number increases as subsequent EBFs are released.

Sybase recommends that you check the Sybase download Web site periodically for updated versions of jConnect and download the latest version.

This section describes how you can check the exact build version of your jConnect installation.

Upgrading jConnect

See "Migrating jConnect Applications" in the *jConnect for JDBC Programmers Reference* for instructions.

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