Release Bulletin
Open Client™ and Open Server™ Version 12.5.1 for Windows

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1. Accessing current release bulletin information

A more recent version of this release bulletin may be available on the Web. To check for critical product or document information added after the product release, use the Sybase Product Manuals Web site.

❖ **Accessing release bulletins at the Sybase Product Manuals Web site**

1   Go to Product Manuals at http://www.sybase.com/support/manuals/.

2   Select a product and language and click Go.

3   Select a product version from the Document Set list.

4   Select the Release Bulletins link.

5   From the list of individual documents, select the link to the release bulletin for your platform. You can either download the PDF version or browse the document online.

2. Product summary

This release bulletin describes issues relating to Open Server™ and to all the components in the Software Developer's Kit (SDK), including Open Client™. See "Version contents" on page 3 for a complete list of SDK components.

Warning! If you install both SDK and Open Server in the same directory, Sybase recommends that you use the same version and ESD levels. Because SDK and Open Server share files, using different version and ESD levels can cause product failures.

For more information regarding these platforms and the features supported, refer to Table 2 on page 14.

Note This release bulletin is for all compatible Windows platforms.

Enclosed are Sybase SDK and Open Server version 12.5.1 products, which are compatible with the following platform and operating system configurations:

- Microsoft Windows NT 4.0, Service Pack 6a or later

- Microsoft Windows 2000, Service Pack 3 or later

- Microsoft Windows 2003, Service Pack 1 or later

- Microsoft Windows XP

2.1 Version contents

This release bulletin contains the latest information for:

- SDK:
    - Open Client/C, version 12.5.1
    - Embedded SQL™/C, version 12.5.1
    - Embedded SQL/COBOL, version 12.5.1
    - Adaptive Server® Enterprise (ASE) ODBC Driver by Sybase, version 12.5.1
    - ASE OLE DB Provider by Sybase, version 12.5.1
    - ASE ADO.NET Data Provider, version 1.0
- Open Server, version 12.5.1

For Windows NT, Sybase has tested and certified the following compilers and linkers for use with Open Client and Open Server:

• Microsoft 32-Bit C/C++ Optimizing Compiler, version 12.00.8804 or later

• Microsoft 32-Bit Executable Linker, version 6.00.8447 or later

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Note The ODBC Driver Kit included with previous versions of SDK is no longer shipped. Instead, for SDK 12.5.1 revision 2, the ODBC Driver Kit is superseded with the ASE ODBC Driver by Sybase.

Both the ASE ODBC Driver by Sybase and the ODBC Driver Kit were shipped in parallel in previous versions of SDK 12.5.1. The ODBC Driver Kit was installed in *%SYBASE%\ODBC*, and is registered with the ODBC Driver Manager as "Sybase ASE ODBC Driver".

The ASE ODBC Driver by Sybase is installed in *%SYBASE%\DataAccess\ODBC*, and is registered as "Adaptive Server Enterprise".

For information on migrating to the ASE ODBC Driver by Sybase, refer to "Migrating to ASE ODBC Driver by Sybase" on page 18.

Note The OLE DB Driver Kit included with previous versions of SDK is no longer shipped. Instead, for SDK 12.5.1 revision 2, the OLE DB Driver Kit is superseded with the ASE OLE DB Provider by Sybase.

Both the ASE OLE DB Provider by Sybase and the OLE DB Driver Kit were shipped in parallel in the previous versions of SDK 12.5.1. The OLE DB Driver Kit was installed in *%SYBASE%\OLEDB*, and used the provider short name of "Sybase.ASEOLEDBProvider" and long name of "Sybase ASE OLE".

The ASE OLE DB Provider by Sybase is installed in *%SYBASE%\DataAccess\OLEDB*, and uses the provider short name of "ASEOLEDB."

For information on migrating to the ASE OLE DB Provider by Sybase, refer to "Migrating to ASE OLE DB Provider by Sybase" on page 19.

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3. Special installation instructions

See the Software Developer's Kit *Release Bulletin* or the SDK and Open Server *Installation Guide* for your platform for instructions on how to install the SDK and Open Server software. For guidelines for installing SDK and Open Server on the same server, refer to "Guidelines for installing SDK or Open Server with other Sybase products" on page 16.

For instructions on configuring your environment, see the Open Client and Open Server *Configuration Guide* for your platform.

For information on compiling and executing Open Client and Open Server applications, including the sample programs, see the Open Client and Open Server *Programmer's Supplement* for your platform.

3.1 Installing EBFs

To ensure that your installation is the most current, Sybase strongly recommends that, after you have installed SDK and Open Server version 12.5.1, you download and install the corresponding latest available EBFs. You can download product updates at Sybase Downloads at http://downloads.sybase.com.

Each Open Server release includes a subset of the SDK. As a result, Open Server EBFs contain two separate version strings: one for the Open Server EBF, and one for the SDK files, such as Client-Library™, isql, and bcp.

For example, in an Open Server product, the Server-Library version string might be *Server-Library/12.5.1/P-EBF9728-9715*, and the Client-Library string might be *Client-Library/12.5.1/P-EBF9728-9715*. In these version strings, "9728" identifies the Open Server EBF, and "9715" identifies the Client-Library file and other SDK files.

To verify that you are using the correct version of Open Server, enter the following command to check the version string of *libsrv*:

```
find "Sybase" libsrv.dll
```

3.2 Installing and configuring SDK and Open Server

Follow the instructions in the Software Developer's Kit *Release Bulletin* and the Software Developer's Kit and Open Server *Installation Guide* version 12.5.1 for your platform to install the SDK and Open Server software. When the software has completed installation with no errors, the products are ready for use and you can configure your environment.

3.2.1 Overwriting new versions

In certain cases when versions 12.5.1 of SDK or Open Server are installed with other Sybase products, you might see warnings about overwriting newer versions of *.xml* files. If so, simply instruct the installer to overwrite these files and proceed with the installation.

3.2.2 Running 10.0.*x*, 11.1.1, 12.0, and 12.5 installations on Windows NT

In a heterogeneous environment that uses applications built for SDK and Open Server versions 10.0.*x*, 11.1.1, 12.0, and 12.5, you must explicitly set a path for each version at the command prompt.

In the following example, applications using the 10.0.*x* products are installed in the *d:\sql10* directory; applications using the 11.1.1 products are installed in the *d:\sql\1111* directory; and applications using the 12.0 products are installed in the *d:\ocs-12* directory.

❖ **To set paths for each SDK and Open Server version**

1 Open a command prompt and set the SYBASE and PATH environment variables for the 10.0.*x* directory, for example:

```
set SYBASE=D:\SQL10
set PATH=%PATH%;D:\SQL10\BIN;D:\SQL10\DLL
```

2 Open another command prompt and set the SYBASE and PATH environment variables for the 11.1.1 directory, for example:

```
set SYBASE=D:\SQL\1111
set PATH=%PATH%;D:\SQL\1111\BIN;D:\SQL\1111\DLL
```

3 Open another command prompt and set the SYBASE and PATH environment variables for the 12.0 directory, for example:

```
set SYBASE_OCS=OCS-12_0
set PATH=%PATH%;%SYBASE%\%SYBASE_OCS%\BIN;
%SYBASE%\%SYBASE_OCS%\DLL
```

Although you must install different versions in separate directories, you can maintain a single *sql.ini* file by passing the address file name explicitly to each application, for example:

```
isql -P -Usa -Sconnect50 -Id:\sql1003\ini\sql.ini
```

> **Note** Install only the Net-Library™ drivers for which you have the underlying protocols. Otherwise, you can receive error messages.

4. Changed functionality in this version

Changed functionality is described in the document called *New Features for Open Server 12.5.1 and SDK 12.5.1 for Microsoft Windows, Linux, and UNIX.*

5. Known problems

This section describes all of the known issues that exist for this release.

5.1 ESQL/C samples

ESQL/C samples are currently not building on Windows platforms.

5.2 Open Server start-up error

During start-up, Open Server may return the following error if there are multiple Network Interface Cards (NIC) on your server:

```
WARNING: SRV_CURPROC is null, msgno = 16240
```

Workaround: Create one master/query entry for each Open Server. You no longer need to have entries for each NIC in the interfaces file with version 12.5.1, because it now does a wildcard bind to every network interface on the server.

5.3 ASE ODBC Driver by Sybase issues

This section describes the known problems and workarounds for ASE ODBC Driver by Sybase version 12.5.1.

5.3.1 Unsupported ODBC features

This version of Sybase Adaptive Server Enterprise ODBC Driver by Sybase does not support the following features:

- SQLCancel

- Asynchronous Execution

- Kerberos encryption of network traffic

5.3.2 Limitations when used with Adaptive Server 12.*x*

The following are the limitations of ASE ODBC Driver when used with Adaptive Server version 12.*x*:

- You cannot use server-side cursors that are invoked when UseCursor property is set to 1.

  Workaround: Avoid using server-side cursors by setting UseCursor to 0.

- You cannot use Prepared statements that are invoked when DynamicPrepare connection property is set to 1.

  Workaround: Avoid using Prepared statements by setting DynamicPrepare to 0.

- You cannot use *output* and *input*/*output* parameters on a stored procedure call.

  Workaround: Upgrade to the current version of Adaptive Server.

- SQLProcedureColumns method does not return complete column type information.

  Workaround: Upgrade to the current version of Adaptive Server.

- Limited descriptor types are supported in the SQLColAttribute function

  Workaround: Upgrade to the current version of Adaptive Server.

5.4 ASE OLE DB Provider by Sybase issues

This section describes the known problems and workarounds for ASE OLE DB Provider by Sybase version 12.5.1.

5.4.1 Unsupported OLE DB features

This version of Sybase Adaptive Server Enterprise OLE DB Provider by Sybase does not support the following features:

- Returning OLE DB Error objects (ISupportErrorInfo)

- DBPROP_MAXROWS property on RowSet, which limits the maximum number of rows returned

- DBPROP_INIT_PROMPT property, which prompts you for missing connection information

- IPersist objects, which Read or Write data sources and commands to a storage Object

- IRowsetChange, which changes multiple rows in a batch

- Kerberos encryption of network traffic

- Asynchronous Execution

5.4.2 Limitations when used with Adaptive Server 12.*x*

The following are the limitations of ASE OLE DB Provider when used with Adaptive Server version 12.*x*:

- You cannot use server-side cursors that are invoked when UseCursor property is set to 1.

  Workaround: Avoid using server-side cursors by setting UseCursor to 0.

- You cannot use Prepared statements that are invoked when DynamicPrepare connection property is set to 1.

  Workaround: Avoid using Prepared statements by setting DynamicPrepare to 0.

- You cannot use *output* and *input*/*output* parameters on a stored procedure call.

  Workaround: Upgrade to the current version of Adaptive Server.

- Limited schema information available in the schema rowsets obtained from IDBSchemaRowset::GetRowset.

  Workaround: Upgrade to the current version of Adaptive Server.

5.5 ASE ADO.NET issues

This section describes the known problems and workarounds with Adaptive Server and ASE ADO.NET Data Provider version 1.1.

5.5.1 Limitations when used with Adaptive Server 12.*x*

The following are the limitations of ASE ADO.NET Provider when used with Adaptive Server version 12.*x*:

- You cannot use server-side cursors that are invoked when UseCursor property is set to *true*.

  Workaround: Avoid using server-side cursors by setting UseCursor to *false*.

- You cannot use Prepared statements that are invoked when the prepare method on the AseCommand class is called.

  Workaround: Avoid using Prepared statements by not calling the prepare method on the AseCommand class.

- You cannot use *output* and *input*/*output* parameters on a stored procedure call.

  Workaround: Upgrade to the current version of Adaptive Server.

- GetSchemaTable returns incomplete result set column data.

  Workaround: Upgrade to the current version of Adaptive Server.

- You cannot use AseCommandBuilder class.

  Workaround: Upgrade to the current version of Adaptive Server.

5.5.2 Limited maximum precision of a decimal variable

The ASE ADO.NET Data Provider currently supports a maximum precision of 26 numbers for a decimal type. The underlying .NET structure and the corresponding Adaptive Server datatypes can handle a higher precision, and attempting to use a precision higher than 26 results is an exception. The Adaptive Server datatypes affected by this limitation are decimal and numeric.

5.6 InstallShield problems

This section describes the known problems you might encounter when installing SDK and Open Server products.

5.6.1 InstallShield overwrites existing Sybase files

InstallShield overwrites any existing file with the same name.

To protect against loss of data, save a copy of the *%SYBASE%\SYBASE.BAT* file before installing SDK and Open Server.

 Warning! Installing SDK 12.5.1 or Open Server 12.5.1 on the same machine as any ASE release prior to 12.5.1 prevents the earlier version of the server from booting.

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6. Product compatibilities and interoperability

Table 1 lists the compilers Sybase uses to build version 12.5.1 of Open Client and Open Server 12.5.1.

Note These are not the only compilers you can use to build the programs.

Table 1: Open Client and Open Server platform compatibility

Platform	Operating system level	C and C++ compilers	COBOL compilers	Kerberos version	Light-weight Directory Access (LDAP)	Secure Socket Layer (SSL)
HP-UX 11.0 32-bit	HP-UX 11.0 with Patch bundle 990P	HP C/ANSI 11.00.00 HP ANSI C++ B3910B A.03.10	Micro Focus Server Express 2.0.10	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
HP-UX 11.0 64-bit	HP-UX 11.0 with Patch bundle 99OP	HP C 11.00.00 ANSI HP ANSI C++ B3910B A.03.10	Not available	Not available	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
HP-UX 11.11 (or HP-UX 11iv1.0) 32-bit	HP-UX 11i v1	HP C/ANSI C B.11.11.10 HP ANSI C++ B3910B A.03.10	Micro Focus Server Express 4.0	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
HP-UX 11.11 (or HP-UX 11iv1.0) 64-bit	HP-UX 11i v1 with Patch bundle 99OP	HP C 11.11.10 ANSI HP ANSI C++ B3910B A.03.10	Not available	MIT 1.4.3	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
HP Itanium 32-bit	HP-UX 11.23	HP C++/ANSI C B3910B A.0550	Micro Focus Server Express 4.0 SP2	Not available	Netscape LDAP 4.1	Certicom SSL Plus 5.0.6f

Platform	Operating system level	C and C++ compilers	COBOL compilers	Kerberos version	Light-weight Directory Access (LDAP)	Secure Socket Layer (SSL)
HP Itanium 64-bit	HP-UX 11.23	HP C++/ANSI C B3910B A.0550	Not available	Not available	Netscape LDAP 4.1	Certicom SSL Plus 5.9.6h
HP Tru64	Digital UNIX TRU64 5.0a	C++ 6.0-010	DEC COBOL 2.7	CyberSafe Trust Broker 2.1	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
IBM AIX 32-bit	AIX 5.2	C++ 5.0.22	Micro Focus Server Express 2.0.10	CyberSafe Trust Broker 2.1	Not available	Certicom SSL
IBM AIX 64-bit	AIX 5.2	C++ 5.0.22	Not available	MIT 1.4.3	Not available	Certicom SSL
Linux on POWER 32-bit	Red Hat Enterprise Linux AS 3.0	IBM XL C/C++ Advance Edition V7.0	Not available	Not available	Not available	Not available
Linux on POWER 64-bit	Red Hat Enterprise Linux AS 3.0	IBM XL C/C++ Advance Edition V7.0	Not available	Not available	Not available	Not available
Linux AMD64 (Opteron)/ EM64T	Red Hat Enterprise AS 3.0	GCC 3.2.3 (Red Hat Linux 3.2.3 - 42)	Not available	MIT 1.2.7	Not available	Certicom SSL Plus 5.0.4m
Linux Intel 32-bit	Red Hat AS 2.1 or United Linux/ SuSe SLES 8.0/ UL1.0	Operating system supported C compiler	Not available	MIT 1.3.1	Netscape LDAP 4.1	Certicom SSL
Linux Itanium 64-bit	Red Hat Advance Server 2.1	GCC C 2.96	Not available	Not available	Not available	Not available
Linux PowerPC	Red Hat AS 3.0 or United Linux/ SuSe SLES 9.0 (SLES 9)	XL C/C ++ Advance Edition V7.0	Not available	Not available	Not available	Not available
SGI 32-bit	IRIX 6.5.18	MIPSPro C7.3.x MIPSPro C++ 7.3.x	Not available	Not available	Netscape LDAP 4.0	Not available

Platform	Operating system level	C and C++ compilers	COBOL compilers	Kerberos version	Light-weight Directory Access (LDAP)	Secure Socket Layer (SSL)
SGI 64-bit	IRIX 6.5.18	MIPSPro C7.3.*x* MIPSPro C++ 7.3.*x*	Not available	Not available	Not available	Not available
Sun Solaris 8 (SPARC 32-bit)	Solaris 8	Sun C/C++ 6.2	Micro Focus Server Express 2.0.10	CyberSafe Trust Broker 2.1, MIT 1.3.1	Netscape LDAP 4.0	Certicom SSL Plus 3.1.14
Sun Solaris 8 (SPARC 64-bit)	Solaris 8	Sun C/C++ 6.2	Not available	MIT 1.3.1	Netscape LDAP 4.1	Certicom SSL Plus 3.1.14
Sun Solaris 9 x86 (32-bit)	Solaris 9	Sun C/C++ 6.2	Not available	MIT 1.4.1	Not available	Not available
Sun Solaris 10 x64 (Opteron 64-bit)	Solaris 10	Studio 10 (Sun C/C++ 5.7)	Not available	MIT 1.4.1	Open LDAP 2.2.26	Certicom SSL Plus 5.0.4
Windows NT 32-bit	NT 4.0 Service Pack 4	MS C 6.0 (Microsoft Developers Studio; unoptimized, development only)	Micro Focus Net Express 3.1	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
Windows 2000	Service Pack 3	MS C 6.0 (Microsoft Developers Studio; unoptimized, development only)	Micro Focus Net Express 3.1	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
Windows 2003	Service Pack 1	MS C 6.0 (Microsoft Developers Studio; unoptimized, development only)	Micro Focus Net Express 3.1	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15
Windows XP		MS C 6.0 (Microsoft Developers Studio; unoptimized, development only)	Micro Focus Net Express 3.1	CyberSafe Trust Broker 2.1, MIT 1.3.6	Netscape LDAP 4.1	Certicom SSL Plus 3.1.15

6.1 Open Client and Open Server compatibility

Open Server version 12.5.1 on Windows NT, Windows 2000, Windows 2003, and Windows XP is certified to work with the Client-Library/C and Adaptive Server Enterprise (ASE) products shown in Table 2:

Table 2: Open Client and Open Server compatibility

Open Server 12.5.1 platform	Client-Library 12.5.1	Client-Library 12.5	Client-Library 12.0	ASE 12.5.3	ASE 12.5.2	ASE 12.5.1	ASE 12.5	ASE 12.0
HP Tru64	x	x	x	x	x	x	x	x
HP-UX 11.0 32-bit and 64-bit	x	x	x	x	x	x	x	x
HP-UX 11.11 (or HP-UX 11iv1.0) 32-bit and 64-bit	x	n/a	n/a	x	x	x	n/a	n/a
HP Itanium 32-bit and 64-bit	x	n/a	n/a	x	x	x	n/a	n/a
IBM AIX 32-bit and 64-bit	x	x	x	x	x	x	x	n/a
Linux on POWER 32-bit and 64-bit	x	n/a	n/a	x	x	x	x	n/a
Linux AMD64 (Opteron)/EM64T	x	n/a	n/a	x	x	n/a	n/a	n/a
Linux Intel 32-bit	x	x	x	x	x	x	x	n/a
Linux Itanium 64-bit	x	n/a	n/a	x	x	x	n/a	n/a
Linux PowerPC	x	n/a	n/a	x	n/a	n/a	n/a	n/a
SGI 32-bit	x	x	x	x	x	x	x	x
SGI 64-bit	x	n/a	n/a	x	x	x	n/a	n/a
Sun Solaris 8 (SPARC 32-bit)	x	x	x	x	x	x	x	x
Sun Solaris 8 (SPARC 64-bit)	x	x	n/a	x	x	x	x	n/a
Sun Solaris 9 x86 (32-bit)	x	n/a	n/a	x	x	x	n/a	n/a
Sun Solaris 10 x64 (Opteron 64-bit)	x	n/a	n/a	x	n/a	n/a	n/a	n/a
Windows NT 32-bit	x	x	x	x	x	x	x	x
Windows 2000, 2003, and XP	x	x	n/a	x	x	x	x	n/a

LEGEND: x = compatible; n/a = product not available on that platform.

Warning! Some of the versions identified may be compatible but are no longer supported by Sybase.

Additionally, for Open Server:

• Header files included in an application must be the same version level as the library with which the application is linked.

• Bulk-Library routines cannot be used in applications that call Open Server version 2.*x* routines.

- Open Server applications based on DB-Library are not supported starting with version 11.*x* or later.

6.2 Interoperability matrix

Table 3 shows the interoperability matrix of Adaptive Server Enterprise, Replication Server®, SDK, and Open Server across versions. For specific platform or O/S level information, refer to the respective product certification reports.

Even though two or more products can be interoperable, remember that new features introduced in a newer version of a product are not likely to be supported with older versions of the same or other products.

For the latest interoperability report on these products, refer to the technical document (#1026087) on MySybase at http://www.sybase.com/.

Table 3: Interoperability matrix

	Adaptive Server Enterprise				SDK and Open Server		Replication Server		
	12.5.3	12.5.2	12.5.1	12.0	12.5.1	12.0	12.6	12.5	12.1
Apple Mac OS X	x	x	x	n/a	x	n/a	x	n/a	n/a
HP Tru64	x	x	x	x	x	x	x	x	x
HP-UX 11.*x*	x	x	x	x	x	x	x	x	x
IBM AIX 32-bit and 64-bit	x	x	x	x	x	x	x	x	x
Linux on POWER (32-bit and 64-bit)	x	x	x	n/a	x	n/a	x	n/a	n/a
Linux Advanced Server 2.1	x	x	x	n/a	x	n/a	x	n/a	n/a
Linux Advanced Server 3.0	x	x	x	n/a	x	n/a	x	n/a	n/a
Silicon Graphics IRIX	x	x	x	n/a	x	x	x	x	n/a
Sun Solaris 8 (SPARC 32-bit)	x	x	x	x	x	x	x	x	x
Sun Solaris 8 (SPARC 64-bit)	x	x	x	x	x	x	x	x	x
Sun Solaris 9 x86 (32-bit)	x	x	x	n/a	x	n/a	n/a	n/a	n/a
Sun Solaris 10 x64 (Opteron 64-bit)	x	n/a	n/a	n/a	x	n/a	x	n/a	n/a
Microsoft Windows (NT, 2000, 2003, XP)	x	x	x	x	x	x	x	x	x

LEGEND: x = compatible; n/a = product not available on that platform.

6.2.1 Guidelines for installing SDK or Open Server with other Sybase products

Following are guidelines for installing version 12.5.1 of SDK or Open Server on the same server with other Sybase products:

- On the Windows platform, when you install SDK 12.5.1 or Open Server 12.5.1 on the same server as Adaptive Server 12.5.0.3, Adaptive Server fails to start. To configure this combination, either upgrade Adaptive Server to 12.5.1, or follow the directions in the SDK and Open Server *Installation Guide* for Microsoft Windows version 12.5.1.

- In general, Sybase recommends that you place new installations of SDK and Open Server in separate directories from other Sybase products, such as Replication Server, OpenSwitch, Enterprise Connect™ Data Access, and Sybase IQ, unless Sybase Tech Support has specifically recommended installation in the same directory to address an issue.

  On the Windows platform, use *.bat* files to ensure that each product is started with the correct environment variables and versions of SDK and Open Server.

- Sybase does not recommend mixing versions of SDK and Open Server in the same directory. For example, do not install SDK 12.5.1 into a directory containing Open Server 12.5—upgrade both SDK and Open Server to 12.5.1 in this case.

6.3 SDK and Open Server compatibility

For SDK and Open Server compatibility, the header files included in an application must be the same version level as the library with which the application is linked.

6.4 DB-Library compatibility with Client-Library and Open Server

Following are DB-Library compatibility issues:

- Support for new features in Open Client or Adaptive Server have been made primarily to the Client-Library API. This includes support for LDAP, SSL, XNL, HA Failover, bulk copies into DOS tables, and so on. For this reason, Sybase strongly recommends creating all new applications with the Client-Library API. Older applications written in DB-Library that can be run against Adaptive Server servers offering new technology may also need to be migrated to Client-Library.

- Support for new features is not added to this DB-Library.

- DB-Library is not reentrant or threadsafe and is not supported in threaded applications.

- Although it is possible for DB-Library and Client-Library calls to exist in the same application, Sybase does not test or certify combining the two different APIs. If you must use the two APIs together, make sure the libraries are not only at the same major release level, but also at the same ESD level.

For help on converting a DB-Library application to a Client-Library application, refer to the Open Client *Client-Library Migration Guide*.

7. Documentation updates and clarifications

This section contains updates and additions to the Open Client and Open Server documentation.

7.1 Common Libraries Reference Manual

In the Open Client and Open Server *Common Libraries Reference Manual*, to define a CS-Library message callback, replace the declaration in Chapter 1, page 6, with the following:

```
CS_RETCODE CS_PUBLIC cslibmsg_cb(context, message)
CS_CONTEXT *context;
CS_CLIENTMSG *message;
```

7.2 ASE ADO.NET Data Provider User's Guide

This section contains updates and additions to the ASE ADO.NET Data Provider *User's Guide*.

7.2.1 Usage of GetDouble method on AseDataReader class

In Chapter 4, "ASE ADO.NET Data Provider API Reference," update the precision values for a float as follows.

Use the GetDouble method for Adaptive Server types double and float with a precision greater than or equal to 16 and GetFloat for Adaptive Server types real and float with a precision less than 16.

8. Programming issues

This section describes programming issues relevant to Open Client, Open Server, and Embedded SQL.

8.1 General issues

This section describes programming issues for all Open Client and Open Server products.

8.1.1 Upgrading to a new release

For statically and dynamically linked Open Client and Open Server applications (dblib, ctlib, esql, and srvlib), Sybase recommends the following:

- For statically linked applications, you must do a complete rebuild of the application(s) with the new version of software. You must recompile and relink the application with the new header files and libraries.

- For dynamically linked applications, Sybase recommends a recompile and relink. At the very least, a relink with the new libraries is required.

   Note If you have made any changes to the application files or the Sybase header files have changed, a recompile is mandatory.

   Be certain that the runtime libraries are for the same major release as the version used to build the application.

8.1.2 Restricting system paths

Do not create a system path larger than 1K.

8.1.3 Migrating to ASE ODBC Driver by Sybase

To migrate your applications from the ODBC Driver Kit to the ASE ODBC Driver by Sybase, be sure to complete the following procedure:

❖ **To migrate applications from ODBC Driver Kit to ASE ODBC Driver by Sybase**

   1 *Migrate DSNs*.

You must recreate the DSNs you are using to utilize the ASE ODBC
Driver by Sybase. Alternatively, you can create new DSNs with different
names and change the DSN names in the application code. A DSN
Migration tool is provided for this task.

2   *Migrate ODBC application code*.

If you created new DSNs with different names, you must change the DSN
names in the `SQLConnect` calls. You must also change the
`SQLDriverConnect` connection string if you use `Driver=Driver Name` as
the driver name. The name of the ASE ODBC Driver by Sybase is
"Adaptive Server Enterprise".

The ODBC DSN Migration tool helps you to migrate from the ODBC Driver
Kit to the ODBC Driver by Sybase. More information on the tool is available
in the "ODBC DSN Migration tool" section in the *Open Server 12.5.1 and SDK
12.5.1 New Features for Microsoft Windows, Linux, and UNIX*.

Known differences in behavior between the ODBC Driver Kit and the ASE
ODBC Driver by Sybase are documented in "Unsupported ODBC features" on
page 7.

Note The connection string syntax for ASE ODBC Driver by Sybase is
documented in the Adaptive Server Enterprise ODBC Driver by Sybase *User's
Guide* for your platform.

The connection string syntax differs from the syntax for the ODBC Driver Kit.
The ODBC Driver by Sybase honors the ODBC Driver Kit syntax, but Sybase
recommends that you migrate your connection string syntax to the new syntax
when possible.

8.1.4 Migrating to ASE OLE DB Provider by Sybase

To migrate your applications from the OLE DB Driver Kit to the ASE OLE DB
Provider by Sybase, you must edit the connection string used by OLE DB
client applications. The provider short name for the ASE OLE DB Provider by
Sybase is "ASEOLEDB".

If you use ASE OLE DB Configuration Manager to store your OLE DB Data
Source definitions in the registry, use the OLE DB DSN Migration tool to
migrate these definitions for use by the ASE OLE DB Provider by Sybase. For
instructions, refer to the "Using the Sybase ASE Data Source Administrator"
and "Using the DSN Migration tool" sub-sections in the *Open Server 12.5.1
and SDK 12.5.1 New Features for Microsoft Windows, Linux, and UNIX*.

Known differences in behavior between the OLE DB Driver Kit and ASE OLE DB Provider by Sybase are documented in "Unsupported OLE DB features" on page 8.

Note The connection string syntax for ASE OLE DB Provider by Sybase is documented in the Adaptive Server Enterprise OLE DB Provider by Sybase *User's Guide* for Microsoft Windows.

The connection string syntax differs from the syntax for the OLE DB Driver Kit. The OLE DB Provider by Sybase honors the OLE DB Driver Kit syntax, but Sybase recommends that you migrate your connection string syntax to the new syntax when possible.

8.2 Client-Library issues

This section describes programming issues specific to Open Client Client-Library version 12.5.1.

8.2.1 Asynchronous programming

To properly exit Client-Library, wait until all asynchronous operations are complete, then call ct_exit. If an asynchronous operation is in progress when ct_exit is called, the routine returns CS_FAIL and does not exit Client-Library properly, even when CS_FORCE_EXIT is used.

Client-Library fully supports asynchronous operations on Windows NT and Windows 2000. For more information, see "Asynchronous Programming" in the Open Client *Client-Library/C Reference Manual*.

8.2.2 Registered procedure notifications

The CS_ASYNC_NOTIFS connection property controls how a Client-Library application receives registered procedure notifications from an Open Server application.

Currently, the Open Server application sends a notification to the client as one or more Tabular Data Stream™ (TDS) packets. However, the client application does not learn of the notification until Client-Library reads the notification packets from the connection and invokes the application's notification callback.

You must set CS_ASYNC_NOTIFS to CS_TRUE for ct_poll to trigger the application's notification callback on a connection that is otherwise idle. In other words, unless your application is actively sending commands and reading results on the connection, your application does not receive notifications when CS_ASYNC_NOTIFS is CS_FALSE (the default).

8.3 DB-Library issues

This section describes programming issues specific to DB-Library version 12.5.

8.3.1 Sample programs

To build the DB-Library sample programs, you must uncomment the CFLAGS and DBLIBS definition in the *makefile* for your platform.

Note The *README* file for the DB-Library sample programs contains only UNIX information. For NT and Windows-specific instructions, consult the *README* file for the CT-Library samples.

8.4 Open Server issues

This section describes programming issues specific to Open Server version 12.5.1.

8.4.1 Open Server naming conventions on Windows NT

Some Open Server sample files try to create log files using the name of the server. If such a name is longer than 8 characters, the log file open fails.

8.4.2 Unsupported Open Server routines

Certain Open Server routines are not supported on Windows platforms. Although you can use srv_capability to determine whether a routine is supported, the Open Server DLL does not provide stub points to resolve link-time dependencies. If a portable application uses any of the following Open Server routines, make sure that it calls srv_capability to determine the availability of the routine and to provide a Windows NT- or Windows 98-specific stub module for linking:

• srv_poll

- srv_select

- srv_signal

- srv_sigvec

- srv_dbg_stack

8.5 Embedded SQL issues

This section describes programming issues specific to Embedded SQL/C and COBOL version 12.5 and later.

8.5.1 Sharing Embedded SQL/C objects among multiple threads

By default, Embedded SQL/C connections, cursors, and dynamic statements cannot be shared by multiple threads. The namespace for each of these object types is limited to the currently executing thread; one thread cannot refer to objects that were created by another thread. Objects can be shared by setting the macro CONNECTIONS_ARE_SHARED_ACROSS_THREADS to 1. Set the macro using the -D compiler option when compiling the *sybesql.c* module.

Warning! If Embedded SQL/C objects are shared by multiple threads, the application programmer must add thread serialization code to ensure that objects associated with a single connection are not used simultaneously by multiple threads.

Dynamic descriptors can normally be shared by multiple threads. To give each thread its own namespace for dynamic descriptors, use the -D compiler option to set the macro DESCRIPTOR_SCOPE_IS_THREAD to 1. Use the -D compiler when compiling the *sybesql.c* module.

8.5.2 Precompiler *-b* option

The -b option differs in the 10.0.*x* and 11.*x* versions of the Embedded SQL/C and Embedded SQL/COBOL precompiler:

- For 11.1 and later versions of cpre and cobpre, the norebind attribute applies to all fetch statements of a given cursor whose declaration has been precompiled with the -b option.

- For the 10.0.*x* versions of cpre and cobpre, the norebind attribute applies to all fetch statements in each Embedded SQL source file precompiled with -b, regardless of where the cursors were declared.

- When you run cobpre, if you receive an error message such as "M_NO_INPUT_FILE Error," verify that you have used the current input file name, and that you have typed all input parameters correctly (for example, /D).

8.5.3 Precompiler *-p* option

Applications that rely on inserting empty strings instead of NULL strings when the host string variable is empty does not work if the -p option is turned "on." The persistent bind implementation prevents Embedded SQL/ C and Embedded SQL/COBOL from circumventing Client-Library protocol (which inserts NULL strings).

8.5.4 Error or warning prevents retrieving all rows from a *select into* statement

You can retrieve multiple rows with a single select into statement by using arrays as output host variables. If no errors or warnings occur, all selected rows are returned up to the limit of the length of the arrays. However, if a truncation or conversion warning or error occurs, rows are returned only up to and including the row where the error or warning occurred. To ensure receiving all rows, use a cursor and continue fetching until there are no more rows.

8.5.5 Embedded SQL/C sample programs

When you enter an incorrect password, sample programs *example1.pco* and *example2.pco* generate incorrect error numbers. You can ignore these numbers.

8.5.6 Embedded SQL/COBOL sample programs

The shared library path for compiling the sample programs must include *%COBDIR%\lib* and *%SYBASE%\%SYBASE_OCS%/lib*. The path must also include *%COBDIR%\bin* and *%SYBASE%\bin*.

When compiling the sample programs with the Micro Focus COBOL compiler, you must set the COBMODE environment variable to 32 for 32-bit builds, and to 64 for 64-bit builds.

9. Technical support

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 have any questions about this installation or if you need assistance during the installation process, ask the designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

10. 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/.

10.1 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.

10.2 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.