

Release Bulletin Software Developer's Kit Version 15.0 for Microsoft Windows

Document ID: DC74865-01-1500-02

Last revised: May 02, 2006

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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 release of the product CD, use the Sybase® Technical Library Product Manuals Web site.

❖ Accessing release bulletins at the Technical Library Product Manuals Web site

- 1 Go to Product Manuals at <http://www.sybase.com/support/manuals/>.
- 2 Follow the links to the appropriate Sybase product.
- 3 Select the Release Bulletins link.
- 4 Select the Sybase product version from the Release Bulletins list.
- 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 all the components in the Software Developer's Kit (SDK), including Open Client™. See "Product components" 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.

Note This release bulletin is for all compatible Windows platforms.

Sybase SDK version 15.0 products are available on the following Microsoft Windows platforms:

- Windows 2000 (x86) Service Pack 4 (32-bit)
- Windows 2003 (x86) Service Pack 1 (32-bit)
- Windows XP (x86) Service Pack 2 (32-bit)
- Windows 2003 (x64) (Service Pack 1)

For more information regarding these platforms and the features supported, refer to Table 1 on page 12.

2.1 Product components

The Software Developer's Kit version 15.0 CD includes the following components:

- Open Client, version 15.0
- Embedded SQL™/C, version 15.0
- Embedded SQL/COBOL, version 15.0
- Sybase Adaptive Server® Enterprise (ASE) ODBC Driver by Sybase, version 15.0
- Sybase Adaptive Server Enterprise (ASE) OLE DB Provider by Sybase, version 15.0
- Sybase Adaptive Server Enterprise ADO.NET Data Provider, version 1.15

- jConnect™ for JDBC™, version 6.05
- Extended Architecture (XA) Interface Library for ASE Distributed Data Manager
- Language modules 15.0

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

- Microsoft 32-bit C/C++ Optimizing Compiler version 12.00.8804 or later
- Microsoft 64-bit C/C++ Optimizing Compiler version 14.00.50727.42 or later
- Microsoft 32-bit Executable Linker version 6.00.8447 or later

2.2 IPv6 support

As of this release, Sybase SDK on Microsoft Windows 32-bit supports IPv6.

2.3 Sample files

You can find sample files in the SDK installation directory
`%SYBASE%\%SYBASE_OCS%\sample`.

2.4 Utilities

There are two versions of the bcp, isql, defncopy, cobpre, and cpre utilities; nonthreaded and native-threaded. The native-threaded version names have “_r” suffixes.

3. Special installation instructions

See the Software Developer's Kit and Open Server *Installation Guide* version 15.0 for your platform for instructions on how to install the software. For guidelines for installing SDK with other Sybase products on the same server, refer to “Guidelines for installing SDK with other Sybase products” on page 16 of this release bulletin.

For instructions on configuring your environment, see the Open Client and Open Server *Configuration Guide* version 15.0 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* version 15.0 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 version 15.0, you download and install the corresponding latest available EBFs. You can download product updates at Sybase Downloads at <http://downloads.sybase.com>.

3.2 Installation and configuration instructions

Follow the instructions in the Software Developer's Kit and Open Server *Installation Guide* version 15.0 for your platform to install the SDK and Open Server software. When the software has completed installation with no errors, the products are ready to use and you can configure your environment.

3.2.1 Running different versions of Open Server on Windows

In a heterogeneous environment that uses applications built for different versions of Open Server product, you must explicitly set a path for each version at the command prompt.

In the following example, applications using the 12.5.x products are installed in the *d:\ocs-1251* directory and applications using the 15.0 products are installed in the *d:\ocs-150* directory:

- 1 Open a command prompt and set the SYBASE and PATH environment variables for the 12.5.x directory, for example:

```
set SYBASE=D:\ocs-1251
set SYBASE_OCS=OCS-12_5
set PATH=%PATH%;%SYBASE%\%SYBASE_OCS%\BIN;
%SYBASE%\%SYBASE_OCS%\DLL
```

- 2 Open another command prompt and set the SYBASE and PATH environment variables for the 15.0 directory, for example:

```
set SYBASE=D:\ocs-150
set SYBASE_OCS=OCS-15_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
```

4. Special upgrade instructions

This section provides information for upgrading to ASE ADO.NET Data Provider version 1.15 that is not included or should be corrected in the installation guide.

4.1 Upgrading to ASE ADO.NET Data Provider version 1.15

This release of SDK ships ASE ADO.NET Data Provider version 1.15. The previous shipping version was 1.1. Since the update is not of the same release (major plus minor version), Sybase does not provide a publisher policy file that will automatically migrate applications to use the Data Provider version 1.15.

To migrate your applications to use the new version of the Data Provider, do one of the following steps:

- Create an Application configuration file, as described in Chapter 1 of the *ADO.NET Data Provider's User Guide* to redirect your applications to use the version 1.15 of the Data Provider.
- Rebuild and redeploy your application against the version 1.15 of the Data Provider. Sybase recommends this step.

5. Changed functionality in this version

Changed functionality for Sybase SDK is described in *New Features SDK 15.0 and Open Server 15.0 for Microsoft Windows, Linux, and UNIX*.

6. Known problems

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

6.1 Client-Library scrollable cursor issues

This section describes the known issues with scrollable cursors.

6.1.1 `ct_scroll_fetch` returns incorrect rows

[CR #397247]

In a `ct_bind` call, if you set the array bind *count* value less than the number of rows returned (`CS_CURSOR_ROWS`), you can receive unpredictable results. This problem occurs only with `ct_scroll_fetch` calls.

For best performance, set `CS_CURSOR_ROWS` to the same value as the *count* field in the `ct_bind` call. For `ct_scroll_fetch` calls, the *count* value must be equal to or greater than `CS_CURSOR_ROWS`.

6.1.2 Fetch size issue

[CR #401659]

In Client-Library scrollable cursors and implicit cursors you must explicitly set the number of rows to fetch (*fetch size*) before you open the cursor. The fetch size must be set to 1 or greater than 1 using `ct_cursor(CS_CURSOR_ROWS)`. Failing to do so, can result in unpredictable results.

6.2 Bulk-Library issue

[CR #400849]

If you call `blk_done(CS_BLK_CANCEL)` before you call `blk_done(CS_BLK_ALL)`, incorrect information about the row data is sent to the Adaptive Server. Adaptive Server generates an error. No invalid data is inserted in the Adaptive Server.

6.3 Incorrect ASE default packet size with SSL functionality causes Open Client/Open Server applications to hang

[CR #395517]

If you set the ASE default network packet size to larger than 4096 bytes and then enable Secure Sockets Layer (SSL), Open Client/Open Server applications can hang. To avoid this, set the default network packet size to 4096 bytes or less, using `sp_configure`.

6.4 Error in installer string

[CR #398187]

The installer version string contains “EBF XXXXX”, which you can ignore.

6.5 Language installation using ASE langinstall fails in pre-15.0 ASE location

[CR #398720]

Addition of any new Sybase supported language using langinstall on UNIX (or langinst.exe on Windows) fails if you install SDK 15.0 in a pre-15.0 ASE installation directory. SDK 15.0 locales overwrites the locales in the pre-15.0 ASE installation directory.

Sybase recommends that you not install SDK 15.0 in a pre-15.0 ASE release area.

6.6 ASE ODBC Driver by Sybase issues

This section describes the known problems and workarounds, if any, for ASE ODBC Driver by Sybase version 15.0.

6.6.1 Unsupported ODBC features

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

- Bookmarks (SQLBindCol for Column 0, SQLDescribeCol for Column 0, SQLColAttribute for Column 0, SQLGetData for Column 0, SQLFetchScroll with SQL_FETCH_BY_BOOKMARK as the Fetch Orientation)
- SQLBulkOperations
- SQLSetPos
- SQLCancel
- Asynchronous Execution
- Kerberos encryption of network traffic
- Obtaining Adaptive Server connection from the interfaces file

6.6.2 Limitations when used with Adaptive Server 12.x

The following are 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. The workaround is to not use the server-side cursors; to do so, set UseCursor to 0.

- You cannot use Prepared statements that are invoked when DynamicPrepare connection property is set to 1. The workaround is to not use Prepared statements; to do so, set DynamicPrepare to 0.
- You cannot use output and input/output parameters on a stored procedure call.
- SQLProcedureColumns method does not return complete column type information.
- Limited descriptor types are supported in the SQLColAttribute function

Workaround: Upgrade to the current version of Adaptive Server.

6.7 ASE OLE DB issues

This section describes the known problems and workarounds, if any, for ASE OLE DB Provider by Sybase version 15.0.

6.7.1 Unsupported OLE DB features

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

- Bookmarks (IRowsetLocate) to locate arbitrary rows from a rowset.
- Returning OLE DB Error objects (ISupportErrorInfo).
- DBPROP_MAXROWS property on RowSet to limit maximum number of rows returned.
- DBPROP_INIT_PROMPT property; User is not prompted for missing connection information.
- IPersist objects to Read or Write data source and commands to a storage object.
- IRowsetChange method to change multiple rows in a batch.
- Kerberos encryption of network traffic.
- Asynchronous Execution.
- Ability to store or access OLE DB Data sources in the registry.

6.7.2 Limitations when used with Adaptive Server 12.x

The following are 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. The workaround is to not use the server-side cursors; to do so, set UseCursor to 0.
- You cannot use Prepared statements that are invoked when DynamicPrepare connection property is set to 1. The workaround is to not use Prepared statements; to do so, set DynamicPrepare to 0.
- You cannot use output and input/output parameters on a stored procedure call.
- Schema information available in the schema rowsets obtained from IDBSchemaRowset::GetRowset is limited.

Workaround: Upgrade to the current version of Adaptive Server.

6.8 ASE ADO.NET Data Provider issues

This section describes the known problems and workarounds, if any, for ASE ADO.NET Data Provider version 1.15.

6.8.1 Limitations when used with Adaptive Server 12.x

The following are 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”. The workaround is to not use the server-side cursors; to do so, set UseCursor to “false”.
- You cannot use Prepared statements that are invoked when prepare method on the AseCommand class is called. The workaround is to not use Prepared statements; to do so, do not call prepare method on the AseCommand class.
- You cannot use output and input/output parameters on a stored procedure call.
- GetSchemaTable returns incomplete result set column data.
- You cannot use AseCommandBuilder class.

Workaround: Upgrade to the current version of Adaptive Server.

6.8.2 Limitation on precision for decimal and numeric datatypes

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 in an exception. The Adaptive Server datatypes affected by this limitation are decimal and numeric.

6.9 InstallShield issues

This section describes the known problems you might encounter when installing the SDK product.

6.9.1 InstallShield overwrites existing Sybase files

[CR #402532]

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.

Warning! Installing SDK 15.0 on the same machine as any ASE release prior to 15.0 prevents the earlier version of the server from booting.

6.9.2 Error messages received during creation of response file

[CR #398188]

Error messages appear when SDK 15.0 installer generates a response file. The response file is created when the "template" option is used during setup.

Error messages begin with, "...Error formatting options file entry...Illegal character '8' in encoding name", and end with, "Options file ... was successfully created, however one or more entries were not formatted properly".

Ignore these error messages as they have no effect on the functionality of the response file created.

7. Product compatibilities and interoperability

Version 15.0 of Open Client works with Adaptive Server 15.0 on the following platforms:

- IBM RS/6000 AIX 5.2
- HP-UX 11.11 (or HP-UX 11iv1.0) on PA-RISC
- HP-UX 11.23 on Itanium
- Linux RH 3.0 x86
- Linux RH 3.0 on POWER
- Linux RH 3.0 on AMD64 (Opteron)/EMT64
- Sun Solaris 8 (SPARC)
- Sun Solaris 10 x64
- Windows 2003 (x64) (Service Pack 1)
- Windows 2000 (x86) Service Pack 4
- Windows 2003 (x86) Service Pack 1
- Windows XP (x86) Service Pack 2

Table 1 lists the compilers Sybase uses to build version 15.0 of Open Client.

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

Table 1: Open Client platform compatibility

| Platform | Operating system level | C and C++ compilers | COBOL compilers | Kerberos version | *Light-weight Directory Access (LDAP) | Secure Sockets Layer (SSL) |
|--------------------|------------------------------------|--|-----------------------|----------------------------|---------------------------------------|------------------------------------|
| HP-UX 11.11 32-bit | HP-UX 11iv1 | HP C/ANSI C B.11.11.10 HP ANSI C++ B3910B A.03.10 | MF Server Express 4.0 | CyberSafe Trust Broker 2.1 | Netscape LDAP 4.1 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| HP-UX 11.11 64-bit | HP-UX 11iv1 with Patch bundle 99OP | HP C 11.11.10 ANSI HP ANSI C++ B3910B A.03.10 | Not available | Not available | Netscape LDAP 4.1 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |

| Platform | Operating system level | C and C++ compilers | COBOL compilers | Kerberos version | *Light-weight Directory Access (LDAP) | Secure Sockets Layer (SSL) |
|------------------------------|-------------------------------|---|------------------------|---------------------------------------|--|------------------------------------|
| HP Itanium 32-bit | HP-UX 11.23 | C/C++ aCC HP aC++/ANSI C B3910B A.05.05 | Not available | Not available | Netscape LDAP 4.1 | Not available |
| HP Itanium 64-bit | HP-UX 11.23 | C/C++ aCC HP aC++/ANSI C B3910B A.05.05 | Not available | Not available | Netscape LDAP 4.1 | Not available |
| IBM 32-bit | AIX 5.2 | C++ 5.0.22 | MF Server Express 4.0 | CyberSafe Trust Broker 2.1 | Netscape LDAP 4.1 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| IBM 64-bit | AIX 5.2 | C++ 5.0.22 | Not available | Not available | OpenLDAP 2.2.23 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Linux x86 32-bit | Red Hat EL 3.0 | gcc 3.2.3-42 | Not available | MIT 1.4.1 | Netscape LDAP 4.1 | Certicom SSL Plus 5.0.4 |
| Linux on POWER 32-bit | Red Hat EL 3.0 | xlc 7.0.0-1 | Not available | Not available | Not available | Not available |
| Linux on POWER 64-bit | Red Hat EL 3.0 | xlc 7.0.0-1 | Not available | Not available | Not available | Not available |
| Linux AMD64 (Opteron)/EM64T | Red Hat EL 3.0 | gcc 3.2.3-47 | Not available | MIT 1.2.7 | Not available | Not available |
| Sun Solaris 8 (SPARC) 32-bit | Solaris 8 | Sun C/C++ 6.2 | MF Server Express 4.0 | CyberSafe Trust Broker 2.1, MIT 1.4.1 | Netscape LDAP 4.0 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Sun Solaris 8 (SPARC) 64-bit | Solaris 8 | Sun C/C++ 6.2 | Not available | CyberSafe Trust Broker 2.1, MIT 1.4.1 | Netscape LDAP 4.1 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Sun Solaris 10 x64 32-bit | Solaris 10 | Sun Studio 10 | Not available | MIT 1.4.1 | OpenLDAP 2.2.26 | Certicom SSL Plus 5.0.4 |
| Sun Solaris 10 x64 64-bit | Solaris 10 | Sun Studio 10 | Not available | MIT 1.4.1 | OpenLDAP 2.2.26 | Certicom SSL Plus 5.0.4 |

| Platform | Operating system level | C and C++ compilers | COBOL compilers | Kerberos version | *Light-weight Directory Access (LDAP) | Secure Sockets Layer (SSL) |
|---------------------------|-------------------------------|---|------------------------|----------------------------|--|------------------------------------|
| Windows 2000 (x86) 32-bit | Service Pack 4 | MS C 6.0 (Microsoft Developers Studio; unoptimized, development only) | NetExpress 4.0 | CyberSafe Trust Broker 4.0 | Netscape LDAP 4.0 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Windows 2003 (x86) 32-bit | Service Pack 1 | MS C 6.0 (Microsoft Developers Studio; unoptimized, development only) | NetExpress 4.0 | CyberSafe Trust Broker 4.0 | Netscape LDAP 4.0 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Windows XP (x86) 32-bit | Service Pack 2 | MS C 6.0 (Microsoft Developers Studio; unoptimized, development only) | NetExpress 4.0 | CyberSafe Trust Broker 4.0 | Netscape LDAP 4.0 | Certicom SSL Plus 5.0.4, SBGSE 2.0 |
| Windows 2003 (x64) 64-bit | Service Pack 1 | MS C 8.0 (Microsoft Developers Studio; unoptimized, development only) | Not available | Not available | OpenLDAP 2.2.26 | Not available |

7.1 Open Client and Open Server compatibility

Open Server version 15.0 on Windows 2000, 2003, and XP is certified to work with the Client-Library and Adaptive Server products shown in Table 2:

Table 2: Open Client and Open Server compatibility

| Open Server 15.0 platform | Client-Library 15.0 | Client-Library 12.5.1 | Adaptive Server 15.0 | Adaptive Server 12.5.3 |
|---|----------------------------|------------------------------|-----------------------------|-------------------------------|
| HP-UX 11.11 (or HP-UX 11iv1.0) on PA-RISC 32-bit and 64-bit | x | x | x | x |
| HP-UX 11.23 on Itanium 32-bit and 64-bit | x | x | x | x |
| IBM RS/6000 AIX 5.2 32-bit and 64-bit | x | x | x | x |
| Linux RH 3.0 x86 32-bit | x | x | x | x |
| Linux RH 3.0 on POWER 32-bit and 64-bit | x | x | x | x |
| Linux RH 3.0 on AMD64 (Opteron)/EMT64 | x | x | x | x |
| Sun Solaris 8 (SPARC) 32-bit and 64-bit | x | x | x | x |
| Sun Solaris 10 x64 32-bit and 64-bit | x | x | x | x |
| Windows x86 (2000, 2003, XP) | x | x | x | x |
| Windows x64 (2003) | x | x | x | x |

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

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

7.2 Interoperability matrix

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

Although two or more products can be interoperable, remember that new features introduced in a newer version of a product may not 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 15.0 | SDK and Open Server | | Replication Server | | | |
|---|---------------------|------|--------------------|------|------|------|
| | 12.5.1 | 15.0 | 12.5.1 | 12.6 | 12.5 | 12.1 |
| HP-UX 11.11 (or HP-UX 11iv1.0) on PA-RISC 32-bit and 64-bit | x | x | x | x | x | x |
| HP-UX 11.23 on Itanium 32-bit and 64-bit | x | x | x | x | x | x |
| IBM RS/6000 AIX 5.2 32-bit and 64-bit | x | x | x | x | x | x |
| Linux RH 3.0 x86 32-bit | n/a | x | x | x | n/a | n/a |
| Linux RH 3.0 on POWER 32-bit and 64-bit | x | x | x | n/a | n/a | n/a |
| Linux RH 3.0 on AMD64 (Opteron)/EMT64 | x | x | x | n/a | n/a | n/a |
| Sun Solaris 8 (SPARC) 32-bit and 64-bit | x | x | x | x | x | x |
| Sun Solaris 10 x64 32-bit and 64-bit | x | x | x | x | n/a | n/a |
| Windows x86 (2000, 2003, XP) | x | x | x | x | x | x |
| Windows x64 (2003) | x | x | x | x | x | x |

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

Note The Open Client and Open Server compatibility information shown in Table 3 is relevant only if the compatible products are installed in different %SYBASE% directories.

7.2.1 Guidelines for installing SDK with other Sybase products

Below are guidelines for installing version 15.0 of SDK on the same server with other Sybase products:

- On the Windows platform, installing SDK 15.0 on the same server as Adaptive Server 12.5.0.3 causes Adaptive Server to fail to start. To configure this configuration, either upgrade Adaptive Server to 15.0, or follow the directions in the SDK and Open Server 15.0 *Installation Guide* for Microsoft Windows.
- In general, Sybase recommends that you place the new installation of SDK 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 version of SDK.

- Sybase does not recommend mixing versions of SDK and Open Server in the same directory. For example, do not install SDK 15.0 in a directory containing Open Server 12.5.1 — in this case, upgrade both SDK and Open Server to 15.0.

7.3 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.

7.4 DB-Library compatibility with Client-Library

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, HA Failover, bulk copies into DOL 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 are not added to this DB-Library.
- Minimal features are added to this version of DB-Library. To know more about these features, see *New Features Open Server and SDK 15.0 for Microsoft Windows, Linux, and UNIX*.

- 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*.

8. Programming issues

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

8.1 General issues

This section describes programming issues for all Open Client products.

8.1.1 Upgrading to a new release

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

- For statically linked applications, you must do a complete rebuild of the applications with the new version of software. You must recompile and relink the applications with the new header files and libraries.
- For dynamically linked applications, Sybase recommends a recompile and relink with the SDK libraries that have changed to include “syb” in library names.

Note If you have made any changes to the application files, 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 System path restriction

Do not create a system path larger than 1K.

8.2 Client-Library issues

This section describes programming issues of Client-Library version 15.0.

8.2.1 Asynchronous operations

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 2000. For more information, see “Asynchronous Programming” in the *Open Client Client-Library/C Reference Manual* version 15.0.

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 Embedded SQL issues

This section describes programming issues specific to:

- Embedded SQL/C version 15.0 and later
- Embedded SQL/COBOL version 15.0 and later

8.3.1 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 by 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.

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

8.3.2 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 from circumventing Client-Library protocol (which inserts NULL strings).

8.3.3 Error or warning prevents with *select into* statements

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, 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.

8.3.4 Embedded SQL/C sample programs

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

8.3.5 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`.

9. Document updates and clarifications

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

9.1 ASE ADO.NET Data Provider's User Guide

In Chapter 1 of the *ASE ADO.NET Data Provider's User Guide*, do the following:

- In the section titled, "Using Publishers Policy Files," delete the sub-sections titled "Publisher policy file provided with 1.15" and "Rebuilding the application using the new assembly."
- Replace the deleted section with the following new section, "Upgrading to ASE ADO.NET Data Provider version 1.15"

Upgrading to ASE ADO.NET Data Provider version 1.15

This release of SDK ships ASE ADO.NET Data Provider version 1.15. The previous shipping version was 1.1. Since the update is not of the same release (major plus minor version), Sybase does not provide a publisher policy file that will automatically migrate applications to use the Data Provider version 1.15.

To migrate your applications to use the new version of the Data Provider, do one of the following steps:

- Create an Application configuration file, as described in Chapter 1 of the *ADO.NET Data Provider's User Guide* to redirect your applications to use the version 1.15 of the Data Provider.
- Rebuild and redeploy your application against the version 1.15 of the Data Provider. Sybase recommends this step.

10. 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.

11. 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/>.

11.1 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 Document Types under Technical Documents from the navigation bar on the left. Then, click Certification Report.
- 3 In the Certification Report filter, select Product, Platform, and Timeframe. 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 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.

11.2 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.

12. 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.