Release Bulletin
Software Developer's Kit 15.5
for Mac OS X

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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

Enclosed is Sybase Software Developer's Kit (SDK) version 15.5, which is available on Apple Mac OS X Intel.

For the most current list of supported operating systems, see the Sybase platform certifications page at http://certification.sybase.com/ucr/search.do. For a list of platforms, compilers, and third-party products on which SDK is built and tested, see *New Features Open Server and SDK for Windows, Linux, UNIX, and Mac OS X.*

2.1 Product components

For a list of SDK components and the platforms on which these components are supported, see *Open Server and SDK New Features for Microsoft Windows, Linux, UNIX, and Mac OS X.*

2.2 Utilities

bcp, isql, and defncopy are available on Mac OS X. There are two versions of these utilities—nonthreaded and native-threaded. The native-threaded version names have "*_r*" suffixes.

2.3 Security

Mac OS X supports CSI-SSL (OpenSSL).

2.4 POSIX threads and pthreads libraries

Open Client™ uses POSIX threads. The Apple Mac OS X Intel system libraries include APIs for creating and implementing POSIX threads.

Note DB-Library™ does not support any type of thread interface.

2.5 IPv6 support

Sybase SDK version 15.5 on Mac OS X platforms support IPv6.

This is a sample *interfaces* file entry:

```
BARNARD_OS
   master tcp ether barnards.sybase.com 18200
   query tcp ether barnards.sybase.com 18200
   master tcp ether barnards.v6.sybase.com 18200
   query tcp ether barnards.v6.sybase.com 18200
   master tcp ether
     fd77:55d:59d9:165:203:baff:fe68:aa12 18200
   query tcp ether
     fd77:55d:59d9:165:203:baff:fe68:aa12 18200
```

Note All master and query lines in the *interfaces* file must begin with a tab.

2.6 Sample files

You can find sample source code files in the SDK installation directory *$SYBASE/$SYBASE_OCS/sample*.

3. Special installation and configuration instructions

See the *Software Developer's Kit Installation Guide for Mac OS X* for instructions about how to install the software.

For instructions about configuring the Open Client environment, see the *Open Client Configuration Guide for Mac OS X*. For configuring ODBC, see *Adaptive Server ODBC Driver Users Guide*.

For information about compiling and executing SDK applications, including the sample programs, see the *Open Client Programmers Supplement for Mac OS X*.

3.1 Installing EBFs

To ensure that your installation is the most current, Sybase strongly recommends that, after you install SDK version 15.5, you download and install the corresponding latest available EBF. You can download product updates from Sybase Downloads at http://downloads.sybase.com.

To verify that you are using the correct version of SDK, enter the following command to check the version string of the SDK library:

```
isql -v
```

A sample SDK version string might be *Client-Library/15.5/P-EBF17930*. In this version string, 17930 identifies the Client-Library file and the other SDK files.

3.2 Installing SDK 15.5 on top of SDK 15.0

SDK version 15.5 is a shelf replacement for version 15.0. When you install SDK 15.5 into an existing SDK 15.0 directory, version 15.5 files overwrite the 15.0 files. Sybase recommends that you back up your SDK 15.0 directory before you install SDK 15.5.

3.3 Modifying *interfaces* file entries

Use a text editor of your choice to modify directory service entries in the *interfaces* file. For information about setting the correct environment variables, see the *Open Client Configuration Guide for Mac OS X*.

4. Changed functionality in this version

Changed functionality for Sybase SDK 15.5 is described in the *Open Server and SDK New Features for Microsoft Windows, Linux, UNIX, and Mac OS X*.

5. Known problems

This section describes all of the known issues that exist in this version.

5.1 Adaptive Server Enterprise ODBC Driver issues

This section describes the known problems and workarounds, if any, for Adaptive Server® Enterprise ODBC Driver.

5.1.1 Limitations when used with Adaptive Server 12.0.*x*

The following are limitations of Adaptive Server ODBC Driver when used with Adaptive Server version 12.0.*x*:

*   You cannot use server-side cursors that are invoked when UseCursor property is set to 1. The workaround is to ensure that UseCursor is set to 0.

*   You cannot use Prepared statements that are invoked when DynamicPrepare connection property is set to 1. The workaround is to ensure that DynamicPrepare is set to 0.

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

*   The 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.

5.1.2 Environment variables required to use SSL encryption and extended password encryption

[CR #547920 and CR #548785]   If your ODBC Driver uses SSL encryption or extended password encryption to pass the password to Adaptive Server, you need to set the $SYBASE environment variable to the Sybase installation directory, and the $SYBCSI_PROVIDER_DIRECTORY environment variable to a directory with suitable cryptographic providers. Typically, $SYBCSI_PROVIDER_DIRECTORY is set to *$SYBASE/DataAccess/ODBC/lib/csi*, unless you have defined $SYBCSI_PROVIDER_DIRECTORY to point to the location of a different but compatible provider.

5.1.3 Behavior change when *datetime* parameter is out of range

When you use Adaptive Server ODBC Driver 15.0 or earlier, or connect to Adaptive Server version 15.0.*x* or earlier, and the application binds a datetime parameter to an invalid datetime range, such as 01-01-0001, the Adaptive Server ODBC Driver returns error 30122, `Invalid datetime field. Year is out of range.`

For an Adaptive Server ODBC Driver 15.5 that is connected to Adaptive Server 15.5, this behavior has changed. In the 15.5 versions, Adaptive Server ODBC Driver sends the date to Adaptive Server, and Adaptive Server returns an error. The error code returned is 247, `Arithmetic overflow during implicit conversion of BIGDATETIME value 'Jan 1 0001 12:00AM' to a DATETIME field`, or something similar.

6. Product compatibility and interoperability

This section contains information about products that are compatible with SDK 15.5. For a list of platforms, compilers, and third-party products SDK is built and tested on, see the *New Features Open Server and SDK for Windows, Linux, UNIX, and Mac OS X*.

6.1 Interoperability matrix

Table 1 shows the interoperability matrix of SDK, Open Server, Adaptive Server, and Replication Server® that are installed on the same machine. For specific platform 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.

Table 1: Interoperability matrix

SDK 15.5	Open Server			Adaptive Server			Replication Server				
	15.5	15.0	12.5.1	15.5	15.0.x	12.5.x	15.5	15.2	15.1	15.0.1	12.6
Apple Mac OS X Intel	n/a	n/a	n/a	n/a	n/a	x	n/a	n/a	n/a	n/a	x
HP HP-UX PA-RISC 32-bit	x	x	x	n/a	n/a	x	n/a	n/a	x	x	x
HP HP-UX PA-RISC 64-bit	x	x	x	x	x	x	n/a	n/a	n/a	n/a	n/a

SDK 15.5	Open Server			Adaptive Server			Replication Server				
	15.5	15.0	12.5.1	15.5	15.0.x	12.5.x	15.5	15.2	15.1	15.0.1	12.6
HP HP-UX Itanium 32-bit	x	x	x	n/a	n/a	n/a	n/a	n/a	n/a	x	x
HP HP-UX Itanium 64-bit	x	x	x	x	x	x	x	x	x	n/a	n/a
IBM AIX POWER 32-bit	x	x	x	n/a	n/a	x	n/a	x	x	x	x
IBM AIX POWER 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a
Linux x86 32-bit	x	x	x	x	x	x	x	x	x	x	x
Linux x86-64 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a
Linux POWER 32-bit	x	x	x	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Linux POWER 64-bit	x	x	x	x	x	x	x	x	x	n/a	n/a
Sun Solaris SPARC 32-bit	x	x	x	x	x	x	n/a	x	x	x	x
Sun Solaris SPARC 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a
Sun Solaris x86-64 32-bit	x	x	x	n/a	n/a	x	n/a	x	x	n/a	x
Sun Solaris x86-64 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a
Microsoft Windows x86 32-bit	x	x	x	x	x	x	x	x	x	x	x
Microsoft Windows x86-64 64-bit	x	x	x	x	x	n/a	x	n/a	n/a	n/a	n/a

LEGEND: x = interoperable; n/a = product not available or does not work with SDK on that platform.

6.1.1 Guidelines for installing SDK with other Sybase products

In general, Sybase recommends that you place the new installation of SDK in separate directories from other Sybase products, such as Replication Server and Adaptive Server, unless Sybase Tech Support has specifically recommended installation in the same directory to address an issue.

6.2 DB-Library compatibility with Client-Library

DB-Library compatibility issues include:

- Support for new features in Open Client or Adaptive Server have been made primarily to the Client-Library API. This includes support for SSL, high availability failover, bulk-copies into DOL tables, and so on. For this reason, Sybase strongly recommends that you create all new applications using the Client-Library API. You may also need to migrate, to Client-Library, older applications written in DB-Library that can be run against Adaptive Servers that offer newer technology.

- Support for new features are not added to the DB-Library.

- Although DB-Library and Client-Library calls can 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, see the *Open Client Client-Library Migration Guide*.

7. Programming issues

This section describes programming issues relevant to Sybase Software Developer's Kit.

7.1 General issues

This section describes programming issues for all Open Client products.

7.1.1 Upgrading to a new version

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

- Rebuild all statically linked Open Client applications (dblib and ctlib) using the new version of software. Recompile and relink the applications using the new header files and libraries.

- For dynamically linked Open Client applications, recompile and relink with the SDK libraries that now include "syb" in the library names.

Note Existing Mac OS X on PowerPC applications from SDK 12.5.1 and earlier should be recompiled in order to run these applications natively on Mac OS X Intel.

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

7.2 Client-Library issues

This section describes programming issues of Client-Library.

7.2.1 ct_poll

Do not call ct_poll from within any Client-Library callback function or from within any other function that can execute at the system-interrupt level. Calling ct_poll at the system-interrupt level corrupts Open Client and Open Server internal resources and causes recursion in the application.

7.2.2 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 UNIX platforms. See "Asynchronous Programming" in the *Open Client Client-Library/C Reference Manual*.

8. 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.

9. 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/.

9.1 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 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.

9.2 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.

10. 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.

SDK 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.