Release Bulletin
Software Developer's Kit 15.0
for Mac OS X

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2. Product summary

Enclosed is the Sybase Software Developer's Kit (SDK) version 15.0 products, which are available on APPLE Mac OS X version 10.5 or later, running on Intel, 32-bit. This version of SDK is based on SDK 15.0 ESD #15. See the subsequent sections for a list of components supported in this version.

For more information regarding these platforms and the features supported, refer to Table 1 on page 6.

2.1 Product components

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

• Open Client™, version 15.0, which includes the core functionalities and samples of these libraries:

  • Client-Library

  • DB-Library™

  • Bulk-Library

  Open Client requires the APPLE Mac OS X Xcode Developer Tools 3.0 or later.

- Sybase Adaptive Server® Enterprise (ASE) ODBC Driver by Sybase, version 15.0

- jConnect™ for JDBC™, version 6.05

- Language modules 15.0

Note Extended Architecture (XA) Interface Library, Embedded SQL™/C, Embedded SQL/COBOL, and Open Server™ are not available on this release.

2.2 Utilities

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

2.3 Security

This platform supports CSI-SSL (OpenSSL).

2.4 POSIX threads and pthreads libraries

Open Client uses POSIX threads. The APPLE Mac OS X on Intel, 32-bit system libraries include APIs for creating and implementing POSIX threads.

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

2.5 Sample files

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

3. Special installation instructions

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

For instructions on configuring the Open Client environment, see the Open Client *Configuration Guide* for Mac OS X. For configuring ODBC, see Adaptive Server ODBC Driver *User's Guide*.

For information on 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 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 *Installation Guide* for Mac OS X to install the software. When the installation has completed without errors and the software has loaded successfully, the products are ready to use and you can configure your environment.

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 15.0 is described in *New Features* SDK 15.0 and Open Server 15.0 for Microsoft Windows, Linux, UNIX, and Mac OS X.

5. Known problems

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

5.1 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.

5.1.1 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.

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 and $SYBCSI_PROVIDER_DIRECTORY environment variables.

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.

6. Product compatibilities and interoperability

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

- APPLE Mac OS X 10.5 or later on Intel, 32-bit

- HP-UX 11.11 (or HP-UX 11iv1.0) on PA-RISC

- HP-UX 11.23 on Itanium

- IBM RS/6000 AIX 5.2

- Linux RH 3.0 x86

- Linux RH 4.0 on Itanium 64-bit

- Linux RH 3.0 on POWER

- Linux RH 3.0 on AMD64 (Opteron)/EMT64

- Sun Solaris 8 (SPARC) 32-bit and 64-bit

- Sun Solaris 10 x64 32-bit and 64-bit

- Windows 2003 (x64) Service Pack 1

- Windows 2000 x86

Table 1 lists the platforms, compilers and third-party products Open Client is built and tested on:

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)
APPLE Mac OS X 10.5.4 on Intel 32-bit	Mac OS X 10.5.4 (Darwin Kernel version 9.4.0)	gcc-4.0.1	Not available	Not available	Not available	OpenSSL 0.9.7m
HP-UX 11.11 32-bit	HP-UX 11i	HP C 11.00.00 ANSI HP ANSI C++ B3910B A.06.00	MF Server Express 4.0	CyberSafe Trust Broker 2.1, MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	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-UX 11.11 64-bit	HP-UX 11i with Patch bundle 99OP	HP C 11.00.00 HP ANSI C++ B3910B A.06.00	Not available	MIT 1.4.3	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4, SBGSE 2.0
HP Itanium 32-bit	HP-UX 11.23	C/C++ aCC HP aC++/ANSI C B3910B A.05.05	MF Server Express 4.0 SP2	MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.6f
HP Itanium 64-bit	HP-UX 11.23	C/C++ aCC HP aC++/ANSI C B3910B A.05.05	Not available	MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.6h
IBM 32-bit	AIX 5.2	C++ 5.0.22	MF Server Express 4.0	CyberSafe Trust Broker 2.1, MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4, SBGSE 2.0
IBM 64-bit	AIX 5.2	C++ 5.0.22	Not available	MIT 1.4.3	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4, SBGSE 2.0
Linux x86 32-bit	Red Hat EL 3.0	gcc 3.2.3-42	MF Server Express 4.0 SP2	MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4
Linux on Itanium 64-bit	Red Hat EL 4.0 Update 4	gcc version 3.4.6-3 20060404 glibc-2.3.4-2.25	Not available	Not available	Not available	SSL not available
Linux on POWER 32-bit	Red Hat EL 3.0	xlc 7.0.0-1	Not available	MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	OpenSSL 0.9.71

Platform	Operating system level	C and C++ compilers	COBOL compilers	Kerberos version	*Light-weight Directory Access (LDAP)	Secure Sockets Layer (SSL)
Linux on POWER 64-bit	Red Hat EL 3.0	xlc 7.0.0-1	Not available	MIT 1.4.1	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	OpenSSL 0.9.71
Linux AMD64 (Opteron)/ EM64T	Red Hat EL 3.0	gcc 3.x	Not available	MIT 1.4.3	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4m
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	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	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	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4, SBGSE 2.0
Sun Solaris 10 x64 32-bit	Solaris 10	Sun Studio 10	Not available	MIT 1.4.2	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.6f
Sun Solaris 10 x64 64-bit	Solaris 10	Sun Studio 10	Not available	MIT 1.4.2	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Certicom SSL Plus 5.0.4
Windows 2000 (x86) 32-bit	Windows 2000	MS C 6.0 (Microsoft Developers Studio; unoptimized, development only)	Net Express 4.0	CyberSafe Trust Broker 4.0, MIT 2.6.5	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	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)
Windows Opteron 64-bit	Windows 2003	C/C++ compiler 14.00.40310.41	Not available	Not available	OpenLDAP 2.3.27 including OpenSSL 0.9.8c	Open SSL 0.9.8d

6.1 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 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, and Mac OS X.

- 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. 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 release

For statically and dynamically linked Open Client applications (dblib and ctlib), 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 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 on Intel, 32-bit.

Be certain 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 version 15.0.

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 your UNIX platform. For more information, see "Asynchronous Programming" in the Open Client *Client-Library/C Reference Manual*.

8. Utility issues

This section describes issues that concern the standalone utilities.

8.1 Utility messages changed

With this release, messages generated by the bcp, defncopy, and isql utilities have changed. If you process these messages with scripts (such as with awk or grep) that parse specific strings, you may need to change the search patterns of the scripts to accommodate the new messages.

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.

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10.1 Sybase certifications on the Web

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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.

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2   Click MySybase and create a MySybase profile.

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1   Point your Web browser to the Sybase Support Page at
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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
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      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.

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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.