Release Bulletin
Open Client/Server™ Products Version 10.0.4
for Digital Open VMS Alpha

1. Accessing Current *Release Bulletin* Information

A more recent version of this *Release Bulletin* **may** be available on the World Wide Web. To check for critical product or document information added after the release of the product CD, use SyBooks™-on-the-Web.

To access the *Release Bulletin* from SyBooks-on-the-Web:

1. Open the Sybase® home page (http://www.sybase.com).

2. Choose Documentation.

3. Choose Release Bulletins.

4. Choose the product from the product list.

5. Choose the latest version of the *Release Bulletin* for your platform.

6. Look for the heading "Product Update" or "Document Update" at the top of the file. If this heading does not exist, the release bulletin has not been updated since the release of the product CD.

2. Product Summary

Enclosed is Sybase® Open Client/Server Products Release 10.0.4, which is compatible with the following operating system configuration:

• Digital OpenVMS 6.2

2.1. Release Contents

• Open Client™/C version 10.0.4

• Open Server™ version 10.0.4

• Embedded SQL™ version 10.0.4

2.2. Libraries and Utilities

Table 1 lists the libraries and utilities included with each Sybase Open Client/Server product.

Table 1: Libraries and Utilities

Open Client	Open Server	Embedded SQL
Client-Library™	Client-Library	Client-Library
CS-Library	CS-Library	CS-Library
DB-Library™	Server-Library	**cpre** utility
Bulk Library	Bulk Library	**cobpre** utility
isql utility	**isql** utility	
bcp utility		
defncopy utility		

2.3. Configuration Changes for UCX Protocol

If you use the UCX network protocol, you must load the INET device emulator (provided with the UCX kit) before you start an Open Client/Server product. Open Client/Server products do not work if the INET driver is not loaded.

Use the *SYS$MANAGER:UCX$LOAD_INETDRIVER.COM* command file to load the INET emulator.

3. Special Installation Instructions

This section provides information about special installation issues. See the *Open Client/Server Installation Guide for Digital VAX OpenVMS and Digital AXP OpenVMS* for complete instructions on installing the software.

3.1. Using *sybinit*

The /language option of the sybinit utility is not enabled for French or German, so sybinit produces only English messages. Localization is not affected for Open Client, Embedded SQL, or Open Server applications for which language modules are available.

3.2. Software Loading Time

Loading the software can take one hour or more. How long it takes depends on media positioning time and the number and size of the products you are loading. Do not interrupt the installation. vmsinstal displays a list of installed products when the installation is complete.

3.3. Mounting the Sybase CD-ROM on an InfoServer

If you mount your Sybase CD-ROM on an InfoServer, you may get a message similar to this:

```
%MOUNT-I-OPRQST, Device _DAD52: is not available for mounting.
```

where DAD52 is the logical name pointing to the device on the InfoServer.

To avoid this error, include a period (.) at the end of the volume name when you bind the logical to the device name using LAD:

```
LADCP>bind sybase.
LADCP>exit
```

The period distinguishes the volume name SYBASE from the logical name SYBASE.

3.4. Software Media Formats

The software media formats are incorrectly listed in the *Open Client/Server Installation Guide for Digital VAX OpenVMS and Digital AXP OpenVMS*. Your software is shipped on one of the media types shown in Table 2.

Table 2:   Media Types

Type of Media	Format
Tape	TK50 cartridge tape
Tape	4 mm
CD	ISO-9660

4. Changed Functionality in This Version

There is no new functionality for the Open Client/Server products in version 10.0.4. However, version 10.0.4 of the Open Client/Server products is Year 2000 compliant. Refer to these product-specific reference manuals for information on version 10.0 functionality:

*   *Open Client Client-Library/C Reference Manual*

*   *Open Client DB-Library/C Reference Manual*

*   *Open Server Server-Library/C Reference Manual*

*   *Open Client Embedded SQL/C Programmer's Guide*

*   *Open Client Embedded SQL/COBOL Programmer's Guide*

4.1. Privilege Mode Libraries

Privilege mode libraries are shipped with this version of Open Client/Server products and are located in *SYBASE_SYSTEM:[SYBASE.PRIVLIB]*. If you want to install applications in privilege mode (using the VMS install command with

the */priv* switch), you must link them with these libraries and **not** the standard libraries in *SYBASE_SYSTEM:[SYBASE.LIB]*.

These libraries are available in *PRIVLIB*:

- Client-Library
- CS-Library
- DB-Library
- Bulk Library
- Server Library

➤ *Note*

Privilege mode libraries do not produce stack traces if an application crashes.

5. Product Compatibilities

Note these compatibility issues:

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

- Embedded SQL applications built with the 10.0 precompiler must use SQL Server™ version 10.0. Embedded SQL applications built with the 10.0.1 or later precompiler must use SQL Server version 10.0.1 or later.

- version 10.0.x Embedded SQL sample programs are not compatible with SQL Server version 10.0.

- Bulk copy routines cannot be embedded in applications that call 2.x Open Server routines.

- versions 4.x and 5.0 of Sybase SQL Toolset™ (APT-Library™ and Report-Library applications) are not compatible with 10.x Open Client libraries.

6. Programming Issues

This section describes programming issues that concern Open Client/C, Open Server, and Embedded SQL.

6.1. Client Library/C

This section describes programming issues that concern Client Library/C.

6.1.1. Compatibility Issues

Open Client version 10.0.4 overwrites the library files required by SQL Toolset if both products are installed in the same directory. If SQL Toolset and Open Client are installed in the same directory, reinstall SQL Toolset in a separate directory before you upgrade to or install version 10.0.4.

6.1.2. LANG Symbol

Do not use a LANG logical name. If you do, a naming conflict generates this error message:

```
The context allocation routine failed when it
tried to load localization files!!
```

6.1.3. Network I/O and Operating System Signals

On Digital Open VMS Alpha, Client-Library uses interrupt-driven I/O for all network I/O modes, including synchronous mode. This can affect the coding of some applications.

On Digital Open VMS Alpha, Client-Library applications that require their own signal handler must install needed signal handlers with **ct_callback**.

6.1.4. Dynamic SQL and Database Permissions

To issue dynamic SQL commands against a SQL Server, the application user must have create procedure permission in the database or the **ct_dynamic** (CS_PREPARE) command will fail. See Chapter 17, "Granting Permissions on Objects and Commands," of the *Transact-SQL User's Guide* for more information about command permissions.

6.1.5. *ct_poll*

Do not call **ct_poll** from any Client-Library callback function or from any other function that can execute at the system-interrupt level. The

Client-Library Reference Manual already prohibits a ct_poll call from callback types other than completion or signal callbacks.

Calling ct_poll at the system-interrupt level can cause corruption of Open Client/Server internal resources and unplanned recursion in the application.

6.1.6. Asynchronous Programming

To properly clean up 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 clean up Client-Library. This is true even with the CS_FORCE_EXIT option.

Client-Library provides fully asynchronous support on Digital Open VMS Alpha. For more information, see the "Asynchronous Programming" topics page in the *Open Client Client-Library/C Reference Manual.*

6.1.7. Registered Procedure Notifications

The CS_ASYNC_NOTIFS connection property controls how a Client-Library application receives registered procedure notifications from an Open Server application. It can be set with ct_con_props.

Open Server sends a notification to the client as one or more TDS packets. 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.

If CS_ASYNC_NOTIFS is set to CS_FALSE, Client-Library triggers notification callback only when the application reads from the connection. If the connection is idle when a notification is sent, notification callback is not triggered until the application calls a Client-Library routine that reads from the connection.

If CS_ASYNC_NOTIFS is set to CS_TRUE, Client-Library triggers notification callback as soon as notification is received from the server. Client-Library triggers notification callback immediately even if the connection is idle when notification arrives.

The default value for CS_ASYNC_NOTIFS is CS_FALSE. If the Client-Library connection is used only to receive notifications from a server, CS_ASYNC_NOTIFS must be set to CS_TRUE. Otherwise, the client will not receive the notifications from the server.

6.1.8. CS_NOINTERRUPT Connection Property

In Client-Library version 10.0.4, CS_NOINTERRUPT does not
prevent notification events from occurring.

6.1.9. Documentation Issues

The header file in Chapter 3 of the *Open Client/Server Supplement*
shows EX_USERNAME set to "user" and EX_PASSWORD set to
"server_password." In the actual header file, EX_USERNAME is set
to "sa" and EX_PASSWORD is set to " ".

6.1.10. Known Problems

Sample Program Issues

Sample program *i18n.c*, which demonstrates the localization features
available in Client-Library, is not described in the *Open Client/Server
Supplement*. See the comments in the program for a description.

Sample program *i18n.c* is not in the makefile "all" target list. The
"all" target list for
SYBASE_SYSTEM:[SYBASE.SAMPLE.CTLIBRARY.MAKEFILE]
reads:

```
all:   $(TARGET1) $(TARGET2) $(TARGET3) $(TARGET4)
       $(TARGET5) $(TARGET6)
```

Edit the "all" target list as follows before you run the sample
program:

```
all:   $(TARGET1) $(TARGET2) $(TARGET3) $(TARGET4)
       $(TARGET5) $(TARGET6) $(TARGET7)
```

Required Logical Names

The Client-Library *README* file excludes SYBASE_SYSTEM from
the list of logical names needed to build examples. See the *Open
Client/Server Installation Guide for Digital VAX OpenVMS and Digital
AXP OpenVMS* for instructions on defining SYBASE_SYSTEM.

Problem Reports

For complete listings of known problems and fixed bugs, see the
following files in the *SYBASE_SYSTEM:[SYBASE.INSTALL.SPR]*
directory:

- *spr_ctlib* – system problem reports
- *cpr_ctlib* – closed problem reports

6.2. DB-Library

This section describes programming issues that concern DB-Library.

6.2.1. *dbrpcparam* Warning

The *Open Client DB-Library/C Reference Manual* contains this warning:

> An application must not write over **value* (the pointer to the
> RPC parameter) until after it has called **dbrpcsend** to send the
> remote procedure call to the server.

In earlier versions of DB-Library 10.0.x, you could ignore this
warning. However, in version 10.0.4, the RPC fails or gives incorrect
results if **value* is changed before **dbrpcsend** is called.

6.2.2. Recompile 4.x and 10.0 DB-Library Applications

Applications written for DB-Library version 4.x and 10.0 must be
recompiled to use DB-Library version 10.0.x.

6.2.3. Known Problems

Header File in Sample Programs

Before you run the sample programs, modify the USER and
PASSWORD definitions in the *SYBDBEX.H* sample header file.

Sample Programs Issues

Example 2 contains a coding error in line 132, which reads:

```
dbfcmd(dbproc,"values('%s') /n", (char *)cmdbuf);
```

Before you run the sample program, edit line 132 to read:

```
dbfcmd(dbproc,"values(%s) /n", (char *)cmdbuf);
```

Example 12 requires SQL Server version 4.2 or later, the *interpubs*
database, and does not work with double-byte character sets in
French. Use the **installintpubs** script to install the database. The
installintpubs script is supplied with SQL Server and is located in the
SYBASE_SYSTEM:[SYBASE.SCRIPTS.ISO_1] directory.

For examples 3, 9, 10, and 11, the *pubs2* database must be installed on the server. For more information, see the *README* file in the *SYBASE_SYSTEM:[SYBASE.SAMPLE.DBLIBRARY]* directory.

Problem Reports

For complete listings of known problems and fixed bugs, see these files in the *SYBASE_SYSTEM:[SYBASE.INSTALL.SPR]* directory:

*   *spr_dblib* – system problem reports
*   *cpr_dblib* – closed problem reports

6.3. Open Server

This section contains information specific to version 10.0.4 of Open Server Server-Library. For a list of Open Server components, see "Libraries and Utilities" on page 2.

6.3.1. Compatibility Issues

To configure and run Open Server 2.0 applications in a 10.0 environment, see the "Migration from 2.0 to 10.0" topic page in Chapter 2 of the *Open Server Server-Library/C Reference Manual.*

6.3.2. Known Problems

Error Messages

Server messages 5703 and 5704 are incorrectly reported as errors. They are informational only.

lang Sample Program

Do not confuse the *LANG.LOG* file with the *LANGUAGE.LOG* file. *LANG.LOG* is the *lang* sample program log file. *LANGUAGE.LOG* records the language entered by the user when the program is run.

The log files are written to the directory from which the sample program starts.

6.3.3. Problem Reports

For complete listings of known problems and fixed bugs, see these files in the *SYBASE_SYSTEM:[SYBASE.INSTALL.SPR]* directory:

- *spr_srvlib* – system problem reports
- *cpr_srvlib* – closed problem reports

6.4. Embedded SQL

This section contains information about version 10.0.4 of Embedded
SQL. For a list of Embedded SQL components, see "Libraries and
Utilities" on page 2.

6.4.1. Compatibility Issues

The COBOL version of this product is compatible with the VMS
COBOL compiler.

6.4.2. New Functionality

No new functions were added for Embedded SQL in version 10.0.4.
The next section describes new features added in versions 10.0.1 and
10.0.2. See the 10.0 *Open Client Embedded SQL/C Programmer's Guide*
and *Open Client Embedded SQL/COBOL Programmer's Guide* for
information on version 10.0 functionality.

6.4.3. Embedded SQL: New Features

select into Statement

The Transact-SQL® select into statement is fully supported.

Execute Stored Procedure into Host Variable Lists

If a stored procedure returns exactly one row of data, it can accept an
into *host variable list* clause.

For example:

```
create stored procedure emp_salary (emp_id int)
   as
       select salary from employees
           where emp_no = @emp_id
   exec sql exec emp_salary (:this_emp)
       into : salary; printf ("salary is /n % f /n",
           salary);
```

/GENERATE Option

The **/GENERATE** option allows a generated **isql** file to drop generated stored procedures automatically. You do not need to drop them manually.

6.4.4. Embedded SQL/C: New Features

Storage Class Specifiers

You can use these storage class specifiers: auto, extern, register, and static.

Zero-Length Strings

In Embedded SQL/C 10.0 and 10.0.1, an input host variable containing a zero-length string appeared to SQL Server as NULL. In version 10.0.2 and later, it appears to SQL Server as a single space character.

For example:

```
hv = "";
exec sql insert into T1 (C1) values (:hv);
```

In versions 10.0 and 10.0.1, this statement produces a NULL value for C1. In version 10.0.2 and later, this statement produces a value of a single space character for C1.

Structure and Pointer Variables

Typedefs are legal if declared in an Embedded SQL declare section.

6.4.5. Embedded SQL/COBOL: New Features

COBOL Datatypes

Host variables with usage COMP (and COMP-5 for UNIX platforms) can now have the letter "v" in their PICs. Unsigned COMP (with no letter "s" in their PICs) are supported.

All level numbers, including 78 and 88, are allowed.

Declaration clauses (PIC, USAGE, SIGN, and SYNC) can be given in any order.

Sequence Numbers

Sequence numbers are legal in columns 1–6 except inside an exec sql or a declare section statement.

6.4.6. Known Problems

These functions are not supported in this version:

- SQLSTATE
- Update or insert columns of *text* or *image* datatypes
- Multiple result sets

Connecting with SQL Server Version 10.0

Disregard SQLCODE error -3807, which reads:

```
The datastream specifies a wrong option or
command. The datastream is MULTARG. This is an
internal error.
```

The connection will be established.

Character String Host Variable

10.0 and 10.0.1 SQL Servers read a character string comprised of all spaces as "NULL" if the string is sent as:

- An input host variable to a statement for which a stored procedure is generated, or
- A parameter to a stored procedure executed with EXEC SQL EXEC stproc.

To prevent errors, set string right truncation to "off" by executing one of the following options immediately after making the connection:

EXEC SQL SET STRING_RTRUNCATION OFF ;

or

EXEC SQL SET STRING_RTRUNCATION OFF END-EXEC

Dynamic SQL and Database Permissions

To issue dynamic SQL commands against SQL Server, the application user must have create procedure permission in the database, or the ct_dynamic (CS_PREPARE) command will fail. See Chapter 17, "Granting Permissions on Objects and Commands," in

the *Transact-SQL User's Guide* for more information about command permissions.

Shared Libraries

Shared libraries for Embedded SQL/COBOL are not supported in this version.

Sample Programs

Before you compile the two samples, edit the *sybsqlex.h* file to provide legal values for user ID and password.

6.4.7. Documentation Issues

Examples 3 and 4 mentioned in the *Open Client/Server Supplement* are not included with the software.

The **-w** flag for **cpre** is not documented in the *Open Client/Server Supplement*. The **-w** flag disables the display of precompiler warning messages to the screen or a listing file.

The example in Chapter 6 of the *Open Client Embedded SQL/C Programmer's Guide* section entitled "Using Cursors to Update and Delete Rows," is missing a **break** statement, resulting in an infinite loop. The example should read as follows:

```
exec sql declare c1 cursor for
    select title_id, royalty, ytd_sales
    from titles
    where royalty < 25;

exec sql open c1;

for (;;)
{
    exec sql fetch c1 into :title, :roy, :sales;
    if (sqlcode == 100) break;
    if (sales > 10000)
        exec sql update titles
            set royalty = royalty + :delta
            where current of c1;
}
exec sql close c1;
```

Problem Reports

For complete listings of known problems and fixed bugs, see these files in the *SYBASE_SYSTEM:[SYBASE.INSTALL.SPR]* directory:

- *spr_esqlc* – system problem reports
- *cpr_esqlc* – closed problem reports

7. Standalone Utilities

This section contains information about the Open Client/Server utility programs.

7.1. Bulk Copy Sample Program

The *blktxt* sample program, which uses bulk copy routines, must be built statically.

7.2. *isql*

When you use **isql** to select a national language, make sure that the language you select supports the character set used by the client connection.

For example, if the client logged in with the character set iso_1 and the national language us_english, you can change the national language to French, but not to Japanese, since Japanese does not support the iso_1 character set.

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 SyBooks and SyBooks-on-the-Web online resources to learn more about your product:

- SyBooks documentation is on the CD that comes with your software. The DynaText browser, also included on the CD, allows you to access technical information about your product in an easy-to-use format.

  Refer to the *SyBooks Installation Guide* in your documentation package for instructions on installing and starting SyBooks.

- SyBooks-on-the-Web is an HTML version of SyBooks that you can access using a standard Web browser.

  To use SyBooks-on-the-Web, go to http://www.sybase.com, and choose Documentation.

9.1. Sybase Certifications on the Web

The Technical Support information on the Sybase Web site is updated frequently.

For the latest information on product certifications and/or the EBF Rollups:

1. Point your Web browser to the Technical Information Library at the following Web site:

   http://techinfo.sybase.com

2. In the Browse section, click on the Hot entry.

3. Explore your area of interest: Hot Docs covering various topics, or Hot Links to Technical News, Certification Reports, Partner Certifications, and so on.

If you are a registered Support*Plus* user:

1. Point your Web browser to the Technical Information Library at the following Web site:

    http://techinfo.sybase.com

2. In the Browse section, click on the Hot entry.

3. Click on the EBF Rollups entry.

   You can research EBFs using the Technical Information Library, and you can download EBFs using Electronic Software Distribution (ESD).

4. Follow the instructions associated with the Support*Plus*^{SM} Online Services entries.

If you are not a registered Support*Plus* user and you want to become one:

You can register by following the instructions on the Web.

To use Support*Plus,* you need:

• A Web browser that supports the Secure Sockets Layer (SSL), such as Netscape Navigator 1.2 or later

• An active support license

• A named technical support contact

• Your user ID and password

Whether or not you are a registered Support*Plus* user:

You can use Sybase's Technical Information Library. Certification Reports are among the features documented at this site.

1. Point your Web browser to the Technical Information Library at the following Web site:

   http://techinfo.sybase.com

2. In the Browse section, click on the Hot entry.

3. Click on the topic that interests you.