

Release Bulletin Mainframe Connect Client Option for CICS Version 12.6

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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

Enclosed is Mainframe Connect Client Option for CICS 12.6, which is a programming environment that enables you to develop mainframe client applications that access LAN (UNIX and Windows) applications and data.

The Client Option for CICS runs on an IBM z/Series or plug-compatible mainframe computer. It uses the LU 6.2 or TCP/IP communications protocol and a CICS host transaction processor.

2.1 Product name changes

The following table describes new names for products in the 12.6 release of the Mainframe Connect IPS.

Old product names	New product name
<ul style="list-style-type: none"> • Open ClientConnect™ for CICS • Open ClientCONNECT for CICS 	Mainframe Connect Client Option for CICS
<ul style="list-style-type: none"> • Open ClientConnect for IMS and MVS • Open ClientCONNECT for IMS and MVS 	Mainframe Connect Client Option for IMS and MVS
<ul style="list-style-type: none"> • Open ServerConnect™ for CICS • Open ServerCONNECT for CICS 	Mainframe Connect Server Option for CICS

Old product names	New product name
<ul style="list-style-type: none"> • Open ServerConnect for IMS and MVS • Open ServerCONNECT for IMS and MVS 	Mainframe Connect Server Option for IMS and MVS
<ul style="list-style-type: none"> • MainframeConnect™ for DB2 UDB • MainframeCONNECT for DB2/MVS-CICS 	Mainframe Connect DB2 UDB Option for CICS
<ul style="list-style-type: none"> • DirectConnect™ for OS/390 • DirectCONNECT for DB2/MVS 	Mainframe Connect DirectConnect for z/OS Option

The new product names are used throughout this document.

2.2 Hardware and software requirements

The following hardware and software are compatible with the Client Option for CICS 12.6:

- Hardware:
 - IBM mainframe: z/Series or plug-compatible
- Software:
 - IBM z/OS version 1.4 or later

Note The Client Option for CICS works with earlier z/OS releases that are no longer supported by IBM.

- CICS Transaction Server 1.3 or later
- IBM TCP/IP

For planning, installation, and configuration information, see the Mainframe Connect Client Option for CICS *Installation and Administration Guide*.

2.3 Product media

The following table lists the Client Option for CICS 12.6 distribution media.

Table 1: Client Option for CICS 12.6 media

Media title	Media ID
Mainframe Connect Client Option for CICS 12.6	CD68187-55-1260-01
Mainframe Connect 12.6 Technical Library CD	CD00222-55-1260-01

Note For directory and file information, see the *CONTENTS* member of the *JCL* data set for your Client Option 12.6 installation.

2.4 Product documentation

The following table lists all documentation for the Client Option for CICS 12.6. Although not all documents are shipped as paper copy, all documents are available on the Web and on the Technical Library CD or the SyBooks™ CD.

Table 2: Client Option for CICS 12.6 documentation

Document title	Document ID
Mainframe Connect Client Option for CICS <i>Installation and Administration Guide</i>	DC34012-01-1260-01
Mainframe Connect Client Option <i>Programmer's Reference for C</i>	DC35396-01-1260-01
Mainframe Connect Client Option <i>Programmer's Reference for COBOL</i>	DC36470-01-1260-01
Mainframe Connect Client Option <i>Programmer's Reference for PL/I</i>	DC36460-01-1260-01
Mainframe Connect Client Option and Server <i>Option Messages and Codes</i>	DC36450-01-1260-01
Mainframe Connect Client Option for CICS <i>Release Bulletin</i>	DC71770-01-1260-01

3. Changed functionality in this version

For information on new features and functionality in the Client Option for CICS 12.6, see *Mainframe Connect IPS New Features* (DC00182-01-1260-01).

3.1 Compiler upgrade

The Client Option and Server Option are now built with the IBM LE/370 C compiler. These products are now compatible with the IBM Language Environment. The compiler used in the previous release, the IBM V2.1 C compiler, is no longer supported.

3.2 Unicode support

The current version of the Client Option for CICS contains support for Unicode based on the Unicode support provided by IBM z/OS, including the conversion environment and conversion services. With the conversion environment and services installed and set up, the Client Option can convert character streams from one Coded Character Set Identifier (CCSID) to another. This support is provided in addition to the support for language and character sets offered in previous versions.

For details on Unicode, refer to IBM documentation.

3.2.1 Using the IBM z/OS conversion environment and services

❖ Installing Unicode support

- 1 Create an *IMAGE* member in *SYS1.PARMLIB* using the CUNMIUTL utility.
- 2 Copy the *CUNIMG01* member from *WORK.IMAGE* to *SYS1.PARMLIB*.
- 3 The *CUNIMG01* member is loaded into z/OS using the SET UNI=01 command.
- 4 The DISPLAY UNI, ALL command displays the current active image and the character set conversions defined for that image.

To enable Unicode support, set the USEIBMUNICODE configuration parameter to Y. The USEIBMUNICODE is specified in the SYGWMCMST macro in the SYGWXCPH customization module. The Client Option uses the newly defined unichar, univarchar, and unitext internal datatypes and performs conversions between UTF-8, UTF-16, and other CCSIDs.

For information on installing Unicode support for IBM z/OS, see “Support for Unicode Using Conversion Services” (SA22-7649-01).

3.2.2 SYGWXCPH customization module changes

The character set translation routines in the Client Option use tables in the *SYGWXCPH* customization module for the conversion of character sets. IBM Unicode support requires the CCSIDs of the character sets involved in conversion, so the translation tables in the *SYGWXCPH* customization module and the SYGWMCXL macro have been modified to contain CCSIDs.

SYGWMCST

The USEIBMUNICODE parameter has been added to the SYGWMCST customization macro. The following are valid values for the USEIBMUNICODE parameter:

- Y – Use IBM support for character set conversions.
- N – Use the original Client Option support.

SYGWMCXL

The SYGWMCXL macro has been modified to include the following parameters, which are used for character conversion:

- CCSID – the CCSID for the character set.
- CHARSETTYPE – the character set type. A indicates ASCII, and E indicates EBCDIC.
- CHARSIZE – the maximum length of a character, between 1 and 4 bytes.
- PAD – the padding character. This parameter value depends on the type of character set. For ASCII, the padding character is 20. For EBCDIC, the padding character is 40.

Example 1

```
SYGWMCXL TYPE=ENTRY,
          CHARSET=cp939,CHARSETBYTES=D,
          CCSID=939,CHARTYPE=E,CHARSIZE=2,PAD=40
```

Example 2

```
SYGWMCXL TYPE=ENTRY,
          CHARSET=Russian,CHARSETBYTES=S,
          CCSID=1025,CHARTYPE=E,CHARSIZE=1,PAD=40
```

3.2.3 New datatypes for Unicode support

Components of the Mainframe Connect IPS have two new datatypes using the UTF-16 encoding of the Unicode character. The new unichar and univarchar datatypes are independent of the existing char and varchar datatypes but behave similarly. Like the char datatype, unichar is a fixed-width, non-nullable datatype. Like the varchar datatype, univarchar is a variable-width, nullable datatype. Each unichar or univarchar character requires 2 bytes of storage, so a unichar or univarchar column consists of 16-bit Unicode values.

Note Components of the Mainframe Connect IPS also have a unitext datatype defined, but there is no special support for it.

3.2.4 Unicode support in the Client Option for CICS

The unichar, univarchar, and unitext datatypes have been added for Unicode support in the Client Option. These three datatypes are mapped to TDS_LONGBINARY with a user type of 34, 35, or 36, as shown in Table 3.

Table 3: Unicode datatype mappings

SQL datatype	TDS datatype	User type	Comment
unichar	TDS_LONGBINARY	34	Fixed-length UTF-16 data
univarchar	TDS_LONGBINARY	35	Variable-length UTF-16 data
unitext	TDS_LONGBINARY	36	UTF-16 encoded data

The Client Option has the following three datatypes to support unichar, univarchar, and unitext:

- CS_UNICHAR_TYPE – Internal type 21
- CS_UNIVARCHAR_TYPE – Internal type 22
- CS_UNITEXT_TYPE – Internal type 23

Note Currently, there is no special support for CS_UNITEXT_TYPE.

The following API calls have been changed in the Client Option to accommodate support for Unicode:

- CTBCONPROPS
- CTBDESCR

- CTBBIND
- CTBFETCH

Note COBOL API names are used here to illustrate use. The C API names are different but behave the same as those for COBOL.

CTBCONPROPS

The CHARSETCNV property of the CTBCONPROPS API call is used to change the default character set sent to the server at login. The CHARSETCNV is a login property and must be specified before a connection is established for its value to be effective. If the value of the CHARSETCNV property is not specified before the CTBCONNECT API call, the connection is established with the default communication character set, iso_1.

The following properties are new for the CTBCONPROPS API call:

- CS_CLIENT_CCSD – defines the CCSID to which the Client Option converts server data.
- CS_SERVER_CCSD – defines the CCSID to which the Client Option converts client data.
- CS_PROG_CCSD – controls the conversion of data from the client character set to the character set used by the client application program. For example, a client application program may use CCSID=500 while the client data, received from the server, is in UTF-8.
- CS_DATA_CCSD – controls the conversion of metadata.

CTBCONPROPS may specify values for these properties any time after a connection has been established. The default values for these properties depend on the character set established for the connection at login.

Note For a connection established with the UTF-8 character set, the default values for the CS_CLIENT_CCSD, CS_SERVER_CCSD, CS_PROG_CCSD, and CS_DATA_CCSD parameters are 1208, 1208, 500, and 500, respectively.

Example 1

The following COBOL example changes the login character set from the default iso_1 to UTF-8:

```
MOVE 'utf8' to CHARSET.  
MOVE 4 to BUFLLEN.
```



```
CALL 'CTBCONPR' USING CON RET-CODE CS-SET
CS-CHARSETCNV CHARSET BUFLen CS-FALSE OUTLEN.
```

Thereafter, the Client Option automatically converts all character datatypes to and from UTF-8, unless otherwise specified.

Example 2

The following COBOL example illustrates how the value of CS_PROG_CCSID can be changed from 500 to 1208:

```
05 PF-CCSID          PIC S9(9) COMP VALUE +0.
05 PF-CCSID-SIZE     PIC S9(9) COMP VALUE +4.
.....
MOVE 1208 TO PF-CCSID.
CALL 'CTBCONPR' USING CSL-CON-HANDLE
                        CSL-RC
                        CS-SET
                        CS-PROG-CCSID
                        PF-CCSID
                        PF-CCSID-SIZE
                        CS-FALSE
                        OUTLEN.
```

Thereafter, all program data is presented to the application in UTF-8 as it is received by the Client Option.

Note The Client Option does not reset any CCSID property values set by an application program. Once an application changes a CCSID property value, the setting remains for all API calls until it is reset by the application.

CTBDESCR

The CTBDESCR API call now returns CS_UNICHAR_TYPE, CS_UNIVARCHAR_TYPE, and CS_UNITEXT_TYPE instead of CS_LONGBINARY_TYPE when the user type is 34, 35, or 36, respectively.

CTBBIND

The CTBBIND API call allows the implicit conversion between the CS_UNICHAR, CS_UNIVARCHAR, and CS_UNITEXT datatypes and the CS_CHAR, CS_VARCHAR, and CS_TEXT datatypes. The CCSIDs used in this conversion are 1200 (UTF-16) and CS_PROG_CCSID (the CCSID used by the client application).

CTBFETCH

The CTBFETCH API call automatically converts incoming CS_UNICHAR, CS_UNIVARCHAR, and CS_UNITEXT data to the datatype specified by CTBBIND.

3.3 Client Option and Server Option application programs relink

The Client Option for CICS and Server Option for CICS version 12.50.01 and 12.50.02 changed the SYGWCAAC, SYGWCAAS, SYGWCACC, and SYGWCACS user application stubs. These stubs are linked with Client Option for CICS or Server Option for CICS user application programs. These application programs must be relinked if any of the following situations apply:

- EXEC CICS HANDLE CONDITION conditions are handled incorrectly in application programs.
- Application programs are running under any version of z/OS after having been migrated from OS/390.
- There is insufficient CICS storage (below 16MB).

Note You do not need to relink existing Client Option for CICS or Server Option for CICS applications with the 12.6 version if you have already relinked with version 12.50.02.

3.4 Updated sample programs

Sample programs, source code, and JCL compile and link modules provided with the Client Option for CICS and the Server Option for CICS have been changed to accommodate compiler changes. Sybase provides these updated *SOURCE* and *JCL* libraries.

4. Known issues

The following section describes known issues in the Client Option for CICS 12.6.

4.1 InstallShield license-key strings

License keys containing sequences of multiple consecutive dollar signs (\$\$\$) entered in the InstallShield installation wizard are rendered in the resulting install job, *IxLIC*, with only one dollar sign instead of a sequence.

For example, a license-key string entered in the InstallShield installation wizard as A\$\$\$B\$\$C is rendered in the install job as A\$B\$C.

To correct your license key, edit the license string in the *IxLIC* install job after you have run the InstallShield installation wizard.

4.2 InstallShield wizard temporary space requirement

The InstallShield wizard, which runs only on Windows, requires a maximum of 800KB of free disk space for temporary files.

5. Product compatibilities

For full functionality with the current release, use these Sybase components, as available at your site:

Table 4: Sybase product release compatibility

Component	Release level
Mainframe Connect Client Option	12.6
Mainframe Connect Server Option	12.6
Mainframe Connect DB2 UDB Option	12.6
DirectConnect Option for z/OS	12.6

6. 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.

7. 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/>.

7.1 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 Select Products from the navigation bar on the left.
- 3 Select a product name from the product list and click Go.
- 4 Select the Certification Report filter, specify a time frame, and click Go.
- 5 Click a Certification Report title to display the report.

❖ **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.

7.2 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.

