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Although the SAP® Sybase® IQ 16 New Features Summary describes all new SAP Sybase IQ functionality, some features may require additional action on your part to take advantage of the new architecture.

Load Performance Configuration Issues
Customers upgrading from a previous release, for example, may need to change some initial compatibility options or rebuild wide columns to accommodate different datatypes. The new load engine provides better performance, but requires changes to the default memory allocation to use all available hardware resources efficiently.

This topic highlights migration issues and features which impact load performance. See the appropriate topics in the SAP Sybase IQ core documentation set for details. *Migration (Linux and UNIX)* and *Migration (Windows)* are new administration manuals in 16.0, describing the steps for upgrading your database, steps to install maintenance releases, and information on upgrading to the role-based security model. *Administration: Load Management* is also new in 16.0, describing data import and export procedures.

NBit
Continuous `NBit` dictionary compression replaces 1, 2, and 3 byte dictionary compression as the default column storage mechanism in 16.0. All datatypes except LOB (character and binary) and BIT datatypes can be `NBit` columns.

The `IQ UNIQUE` column constraint determines whether a column loads as `Flat FP` or `NBit FP`. An `IQ UNIQUE` n value set to 0 loads the column as `Flat FP`. An n value greater than 0 but less than the `FP_NBIT_AUTOSIZE_LIMIT` creates a `NBit` column initially sized to *n*. Columns without an `IQ UNIQUE` constraint implicitly load as `NBit` up to the auto-size limit.

Using `IQ UNIQUE` with an *n* value less than the auto-size limit is not necessary. The load engine automatically sizes all low or medium cardinality columns as `NBit`. Use `IQ UNIQUE` in cases where you want to load the column as `Flat FP` or when you want to load a column as `NBit` when the number of distinct values exceeds the value of the **FP_NBIT_AUTOSIZE_LIMIT** option.

Loads and Large Memory
Large memory represents the maximum amount of memory that SAP Sybase IQ can dynamically request from the OS for temporary use. Because some load operations may require more large memory than the 2GB default provides, adjust the startup options that control large and cache memory allocation based on the total amount of available physical memory.

As a general rule, large memory requirements represent one third of the total available physical memory allocated to SAP Sybase IQ. To ensure adequate memory for the main and temporary IQ stores, set the **–iqlm**, **–iqtc**, and **–iqmc** startup parameters so that each parameter receives one third of all available physical memory allocated to SAP Sybase IQ.

In most cases, you should allocate 80% of total physical memory to SAP Sybase IQ to prevent SAP Sybase IQ processes from being swapped out. Adjust actual memory allocation to accommodate other processes running on the same system. For example, on a machine with 32 cores and 128GB of total available physical memory, you would allocate 100GB (approximately 80% of the 128GB total) to SAP Sybase IQ processes. Following the general rule, you would set the **–iqlm**, **–iqtc**, and **–iqmc** parameters to 33GB each.

See *-iqlm iqsrv16 Server Option* and *-iqmc iqsrv16 Server Option* in the *Utility Guide*.

Index Changes

Changes to FP and HG indexes take advantage of the new column compression mechanism and improve load performance.

Index	Description
New Fast Projection (FP) Indexes	Take advantage of the new continuous NBit dictionary compression, which replaces 1, 2, and 3 byte dictionary compression. FP(1), FP(2), and FP(3) indexes roll over to NBit(8), NBit(16), and NBit(24) respectively.
	If FP_NBIT_IQ15_COMPATIBILITY='OFF', IQ UNIQUE constraints applied to the column determine whether the column loads as Flat FP or NBit.
	See *Fast Projection (FP) Index* in *Administration: Database*.
New tiered HG index structure	Decouples load performance from HG index size. In 15.x, load throughput could degrade as the amount of data in an HG index increased. As the index grew, loading the same amount of data could take more time. The new tiered structure decouples load performance from the HG index size to increase throughput.
	The CREATE_HG_WITH_EXACT_DISTINCTS option determines whether newly created HG indexes are tiered or non-tiered. This option is ON in all new 16.0 databases and all 16.0 databases migrated from 15.x. To take advantage of the new structure, set this option to OFF. See *CREATE_HG_WITH_EXACT_DISTINCTS Option* in *Reference: Statements and Options*.
	Use **sp_iqrebuildindex** to convert non-tiered HG indexes to tiered HG and vice-versa.

Stored Procedures

New stored procedures return information about column indexes and constraints.

Procedure	Description
sp_iqindexmetadata	Returns details about column indexes, including the index types (`Flat FP`, `NBit`, `HG`, and tiered `HG`), distinct counts, `IQ UNIQUE` *n* value, and `NBit` dictionary size. See *sp_iqindexmetadata Procedure* in *Reference: Building Blocks, Tables, and Procedures*.
sp_iqcolumnmetadata	Returns `FP` index metadata for one or more user tables or all tables in the database. See *sp_iqcolumnmetadata Procedure* in *Reference: Building Blocks, Tables, and Procedures*.
sp_iqindexrebuildwidedata	Identifies wide columns that you must rebuild before they are available for read/write activities. Output includes statements that you can use with **sp_iqrebuildindex** to rebuild the columns. See *sp_iqindexrebuildwidedata Procedure* in *Reference: Building Blocks, Tables, and Procedures*.
sp_iqrebuildindex	Rebuilds `FP` indexes (`Flat FP` as `NBit`, or `NBit` as `Flat FP`) and `HG` indexes (single `HG` as tiered `HG`, or tiered `HG` as single `HG`). Before you can insert or update new data, you must rebuild all columns greater than 255 bytes wide. The `index_clause` can reset `IQ UNIQUE` n to an explicit value from 0 (to recast an `NBit` column to `Flat FP`) up to the limits defined in the `FP_NBIT_AUTOSIZE_LIMIT` and `FP_NBIT_LOOKUP_MB` options. **sp_iqrebuildindex** also enables read-write access to columns that contain large object (LOB) data. LOB columns migrated from 15.x databases are read-only until you run **sp_iqrebuildindex**. The estimated cardinality for `NBit` columns with an `IQ UNIQUE` value below or equal to the `FP_NBIT_AUTOSIZE_LIMIT` is stored as 0 regardless of the `FP_NBIT_IQ15_COMPAT-IBILITY` setting. This affects the value returned from **sp_iqindexmetadata**. See *sp_iqrebuildindex Procedure* in *Reference: Building Blocks, Tables, and Procedures*.

Database Options

Some database options are not enabled to take advantage of 16.0 features. Maintaining limited compatibility after a database upgrade provides some flexibility to transition existing applications.

Option	Description
FP_NBIT_IQ15_COMPATIBILI-TY	Provides tokenized `FP` support similar to that available in 15.x. This option is ON by default in all 16.0 databases upgraded from 15.x and OFF in all newly created 16.0 databases. • If this option is ON, the database engine uses the `MINI-MIZE_STORAGE`, `FP_LOOKUP_SIZE`, and `FP_LOOKUP_SIZE_PPM` options to optimize column storage. These options are ignored in 16.0. • If this option is OFF, the database engine ignores 15.x options and columns conform to SAP Sybase IQ `NBit` storage options. Set this option to OFF to take advantage of `NBit` column compression.
CREATE_HG_WITH_EX-ACT_DISTINCTS	Determines whether new `HG` indexes explicitly created with a **CREATE INDEX** command, or implicitly creating or altering a table with a PRIMARY KEY or a FOREIGN KEY declaration, are tiered or non-tiered. This option is ON 16.0 databases upgraded from 15.x and all newly created 16.0 databases. If this option is ON, all new `HG` indexes are non-tiered. To take advantage of the new tiered `HG` index structure, set this option to OFF. Use **sp_iqrebuildindex** to convert non-tiered `HG` indexes to tiered `HG` and vice-versa.
CRE-ATE_HG_AND_FORCE_PHYSI-CAL_DELETE	Governs 16.0 delete behavior for tiered `HG` indexes. This option determines whether SAP Sybase IQ performs a physical delete immediately or defers the delete to a point later in the load. `CREATE_HG_AND_FORCE_PHYSICAL_DELETE` is ON by default, which instructs SAP Sybase IQ to perform physical deletes.

Option	Description
REVERT_TO_V15_OPTIMIZER	`REVERT_TO_V15_OPTIMIZER` forces the query optimizer to mimic SAP Sybase IQ 15.x behavior. `REVERT_TO_V15_OPTIMIZER='ON'` by default in all 16.0 databases upgraded from 15.x. `REVERT_TO_V15_OPTIMIZER='OFF'` by default in all newly created SAP Sybase IQ 16.0 databases. If you plan to use SAP Sybase IQ hash partitioning features, set the `REVERT_TO_V15_OPTIMIZER ='OFF'` in databases upgraded from 15.x to 16.0.

Read Me First

Product Summary

This release bulletin provides late-breaking information about SAP Sybase IQ. A more recent version may be available on the Web.

For information about compatible platform and operating system configurations and minimum patch levels, see the *Installation and Configuration Guide*.

For information about new features and behavior changes in this version, see the *SAP Sybase IQ New Features Summary*.

For information about accessibility, see *Accessibility Features* in this release bulletin.

Product Compatibilities

Information about the compatibility of SAP Sybase IQ with other products.

These SAP Sybase products are certified with this version of SAP Sybase IQ:

- jConnect™ for JDBC™ 7.0
- SAP Sybase IQ InfoPrimer 15.3
- Sybase Control Center (SCC) 3.2.8

These SAP Sybase products are certified to work as backends in CIS functionality with this version of SAP Sybase IQ:

- SQL Anywhere® 16.0
- Adaptive Server® Enterprise 15.5

See *Sybase Product and Component Certifications* for instructions on accessing the latest online certification information.

Network Clients and ODBC Kits

SAP Sybase IQ Network Clients and ODBC kits for development are available on the SAP Sybase download site. A Network Client is available for each platform supported by this version of SAP Sybase IQ. A Linux 32-bit client is also available.

The SAP Sybase download site is *http://www.sybase.com/downloads*.

SAP Sybase IQ 16.0 does not require an upgrade of the 32-bit ODBC kits, if you use SAP Sybase IQ 15.2 32-bit ODBC kits.

Installation and Upgrade

This section provides last-minute information about installation and upgrading that was omitted from or incorrect in your installation guide, or that needs special emphasis.

For detailed information about installing and upgrading SAP Sybase IQ, see the *Installation and Configuration Guide*.

Before you run a new version of SAP Sybase IQ, see *Restrictions* for the most current requirements. This section includes installation and migration information that is new for this release or needs emphasis.

SAP Sybase IQ 16.0 Requires a License

SAP Sybase IQ 16.0 uses the SAP Sybase Software Asset Management (SySAM) licensing mechanism that lets system administrators enable and monitor their site's use of SAP Sybase products.

SAP Sybase IQ includes separate SySAM licenses for each product edition and separate licenses for any optional features available for that edition. See *Installation and Configuration Guide > Licensing Your Software*.

Extract and Install Installation Packages on the Same Machine [CR #728377]

The SAP Sybase Product Download Center is an online software delivery service that provides easy access to the latest versions of your software. When you download your software, uncompress the downloaded image and run the installer on the same machine where you install SAP Sybase IQ. Do not copy an uncompressed installation archive to a secondary machine and run the install.

Avoid Using Relative Path to Launch Installer [CR #691212]

SAP Sybase IQ installation fails if you launch the installer using a relative path. During GUI installation, the installer fails to prompt for the license file information and does not install properly.

For example, when launched from the console using a command line:

```
Installer files directory :  /system1/users/jones/installdir
$SYBASE dir : /system1/users/jones/IQ160
```

```
cd $SYBASE
../installdir/setup.bin
```

- **Workaround** – Launch the installer from the directory where it is located, or use an absolute path.

Sybase Partners with v3 UDFs Must Specify a License Key When Upgrading to v4 [CR #688135]

If you are an SAP Sybase design partner using v3 UDFs, your UDFs will not continue to work after you upgrade your libraries to v4 unless you specify the SAP Sybase-provided license key in the `a_v4_extfn_license_info` structure. You must implement the `extfn_get_license_info` method, and the method must return a valid key. See the *User-Defined Functions* guide for information on upgrading to the v4 API, and adding the `extfn_get_license_info` method.

SySAM Licensing Checkout [CR #628594]

If SAP Sybase IQ was licensed using a per-processor license type in previous releases, the license quantity was determined at startup. In this release, SAP Sybase IQ periodically checks the number of processors it can use and attempts to check-out additional licenses for any increase. SAP Sybase IQ shuts down after 30 days, if additional licenses are not made available within this period. See the *SySAM Users Guide* for details regarding license grace.

ALTER DATABASE UPGRADE PROCEDURE ON Required

To install new system tables, you must run **ALTER DATABASE UPGRADE PROCEDURE ON** on existing databases after installing SAP Sybase IQ 16.0.

For syntax, see *Reference: Statements and Options*.

Using Remote Server Classes for ASE [CR #615420]

Component Integration Services (CIS) connectivity from SAP Sybase IQ to Adaptive Server® Enterprise (ASE) is available using server class aseodbc. The aseodbc server class uses the Adaptive Server ODBC driver. The Adaptive Server ODBC driver requires a separate installation of SDK 15.5 ESD #8 or higher which can be downloaded from the SAP Sybase EBF download site.

Sun OS Patch Required for IQ/CIS/ASE Using 15.7 ASEODBC Driver [CR #694467]

Customers using SAP Sybase IQ/CIS on SunOS version 5.10 Generic_144488-04 to access remote ASE tables using the 15.7 ASE ODBC driver will get the following message:

```
Unable to connect to server 'MYASE': [Sybase][ODBC Driver Manager]
Unable to load driver
```

To connect, install the June 30, 2011 OS patch bundle. Kernel version: SunOS 5.10 Generic_144488-17

Problem Solutions from Earlier Versions

SAP Sybase IQ includes solutions to problems that were solved in post-release updates to earlier versions.

SAP Sybase IQ 16.0 contains solutions to problems fixed up to and including these versions:

- SAP Sybase IQ 15.1 ESD #3 (N off #7 - SAP Sybase IQ 15.1 ESD #3.7)
- SAP Sybase IQ 15.2 ESD #1 (N off #8 - SAP Sybase IQ 15.2 ESD #1.8)
- SAP Sybase IQ 15.2 ESD #2 (N off #3 - SAP Sybase IQ 15.2 ESD #2.3)
- SAP Sybase IQ 15.2 ESD #3
- SAP Sybase IQ 15.3
- SAP Sybase IQ 15.4 ESD #2

Sub-Capacity Licensing

SAP Sybase offers sub-capacity licensing options for SAP Sybase IQ Enterprise Edition. Sub-capacity licensing refers to licensing an SAP Sybase product on a subset of the CPUs available on a physical machine.

Platform Support
Sub-capacity licensing is supported on the following platforms:

Table 1. Sub-Capacity Licensing Vendor Support

Vendor	Product	Platform Support	Virtualization Type
HP	nPar	HP IA 11.31	Physical Partition
	vPar		Virtual Partition
	Integrity Virtual Machines with Resource Manager		Virtual Machine
	Secure Resource Partitions		OS Containers
IBM	LPAR	AIX 6.1, AIX 7	Virtual Partition
	dLPAR		Virtual Partition
SUN	Dynamic System Domains	Solaris 10	Physical Partition
	Solaris Containers/Zones with Solaris Resource Manager		OS Partition

Vendor	Product	Platform Support	Virtualization Type
INTEL/AMD	VMWare ESX Server [1] Guest OS: Windows	VMWare ESX Server 3.5, 4.0, and 4.1, ES-Xi4.1, ESXi5.0, Guest OS: Windows 2008 R2, Windows 7	Virtual Machine
	VMWare ESX ServerGuest OS: Linux, Sun Solaris x64	VMWare ESX Server 3.5, 4.0 and 4.1, ES-Xi4.1, ESXi5.0, Guest OS: RH 5.5, RH 6.1, SuSE 11, Sun Solaris x64	Virtual Machine
	Xen[2], KVM, DomainU: Windows	Windows 2008 R2, Windows 7	Virtual Machine
	Xen, KVM, DomainU: Linux	RH 5.5, RH 6.1, SuSE 11	Virtual Machine
	Hyper-V	Windows 2008 R2, Windows 7, SuSE 11, RHEL 6.1	Virtual Machine
	[1] VMWare excludes VMWare Workstation and VMWare Server [2] Xen excludes Sun Solaris x64		

How to Enable SAP Sybase Sub-Capacity Licensing

You must have a sub-capacity licensing agreement with SAP Sybase before you can enable sub-capacity licensing. If you choose to use SAP Sybase IQ in a sub-capacity environment, see the *SySAM Quick Start Guide* for instructions for generating your license key.

Note: Keep your license server up-to-date.

Although the installation media includes a copy of the most recent SySAM license server, SAP Sybase recommends that you periodically check for license server updates on the *SySAM Standalone License Server Install site*.

Database Upgrades

Important information about database upgrades.

For detailed information about installing and upgrading SAP Sybase IQ, see the *Installation and Configuration Guide*.

CR#	Description
726782	• **Drop Servers of Type asejdbc Before Migrating SAP Sybase IQ 12.7 Databases to SAP Sybase IQ 16.0** – The `asejdbc` server class is deprecated. Servers of type `asejdbc` must be dropped prior to running iqunload. SAP Sybase IQ 12.7 databases with remote server definitions based on the `asejdbc` driver will not have these definitions migrated to by the **iqunload** tool and will not give an error at the beginning of an unload saying that you need to drop any asejdbc servers (if there are any present).
702052	• **Drop all JOIN and all LD indexes. On multiplex, drop all logical servers named AUTO, COORDINATOR, ALL or DEFAULT** – If you do not drop these objects and try to run an **ALTER DATABASE UPGRADE** in SAP Sybase IQ 16.0, the upgrade fails and the server returns a message that indicates that a database upgrade is not possible when these objects are in use. • **Recovery Infomation** – To recover from a failed upgrade, shutdown the 16.0 server, open the database with SAP Sybase IQ 15.x, and drop all LD and all JOIN indexes as well as any named logical servers before proceeding with the migration.
732621	• **Cannot Enable Row-level Versioning in Upgraded Database** – If you upgrade a database from 15.x to 16.0, you cannot enable row-level versioning (using the **ALTER TABLE** statement), or perform **LOAD**, **INSERT** or **UPDATE** statements on any IQ base table containing a **CHAR**, **VARCHAR** or **VARBINARY** column of width greater than 255. If your upgraded database contains a table having a column with these criteria, run the **sp_iqrebuildindex** procedure. After you run this procedure, you can enable row-level versioning and perform DML statements on these large-column tables.

SAP Sybase IQ and Other SAP Sybase Products

Issues you should know when you install SAP Sybase IQ with other SAP Sybase Products.

CR #	Description
| 727411 | • **The SAMPLE_RS will fail to start when installing Replication Server 15.7.1 into the same directory as SAP Sybase IQ 16.0** – Replication Server startup returns errors:<br><br>```
CONNECTIVITY ERROR: CT-Library error:
'ct_connect(): protocol specific layer:
internal Client Library error: There is a tds
login error. The installed
encryption handler returned a status that was
not CS_SUCCEED.'.
CONNECTIVITY ERROR: Login attempt failed:
server = 'SAMPLE_RS_ERSSD'.
Unable to connect to the RSSD SQL Server
'SAMPLE_RS_ERSSD'.Make sure that the
SQL Server is running, and the 'sa' password
is correct.
Task failed: check the RSSD SQL Server. Ter-
minating configuration.
```<br><br>• **Workaround** – Install Replication Server in its own directory, separate from SAP Sybase IQ. |
| 736702 | • **GUI install hangs with `.com.zerog.registry.xml` file** – InstallAnywhere uses a temporary registry file (`.com.zerog.registry.xml`) to track software installations. InstallAnywhere normally deletes this file, but in some cases, the registry may become corrupt and cause the installer/uninstaller to hang.

• **Workaround** – If this occurs, force quit InstallAnywhere, rename `.com.zerog.registry.xml`, and rerun the install/uninstall.

On Unix-like operating systems, the location of the `.com.zerog.registry.xml` is determined by who performs the install/uninstall. For root users, this file is located in `/var` directory; for other users, the `$HOME` directory. On Windows, this file is located on the `C:\` or `D:\` root directory. |

Known Issues

Review known issues and workarounds, listed by Change Request (CR) number.

Find issues by Change Request (CR) number.

Note: You can search the Sybase Web site for solved cases. Choose **Support > Solved Cases** or go to *http://search.sybase.com/search/simple.do?mode=sc*. You need a MySybase account to view solved cases in the archive.

Restrictions

Consider information about restrictions to avoid unexpected results from your system.

This information applies to servers and databases of this version of SAP Sybase IQ16.0 that have been upgraded from any earlier version of SAP Sybase IQ, unless specified otherwise.

CR#	Restriction
365281	• **Database Name Length Restriction** – The **dbbackup** utility truncates the database name to 70 characters and creates a target file with a truncated name. SAP Sybase IQ uses **dbbackup** when synchronizing secondary servers. Due to **dbbackup** restrictions, database names must be less than 70 characters long.
n/a	• **Dbspace Management and File Placement** – When you allocate file system files for dbspaces (System, IQ main, or IQ temporary), do not place the files on a file system that is shared over a local area network. Doing so can lead to poor I/O performance and other problems, including overloading the local area network. Do not place IQ dbspace files on network drives or Network File System (NFS) file systems. To avoid conflicts, Sybase recommends that dbspace management be performed by a single database administrator on a single connection.

CR#	Restriction

561366	• **Dbspace Naming in RESTORE Command –** If the dbspace name contains a file extension such as `.iq`, `.iqtmp`, or `.iqloc`, you must enclose the dbspace name in double quotation marks when specifying the name in a **RESTORE** command **RENAME** clause. For example:
	
	```RENAME local1 TO '/work/local1_res.iqloc.iq-loc'```
	```DBSPACENAME "local1_res.iqloc"```
	
	 or
	
	 ```RENAME "test_prod2.iq" TO '/test/test_prod7.iq'```

n/a	• **Unexpected Query Results –** In a few unusual circumstances, differences in semantics between SQL Anywhere and SAP Sybase IQ may produce unexpected query results. These circumstances are: • A query is issued from inside a user-defined function • A **SELECT** statement has no **FROM** clause • A **FROM** clause contains some tables that were created **IN SYSTEM** and others that were not created **IN SYSTEM** In these circumstances, subtle differences between the semantics of SQL Anywhere and SAP Sybase IQ may be exposed. These differences include: • SAP Sybase IQ treats the `CHAR` and `VARCHAR` data types as distinct and different; SQL Anywhere treats `CHAR` data as if it were `VARCHAR`. • When the **RAND** function is passed an argument, the behavior is deterministic in SAP Sybase IQ and nondeterministic in SQL Anywhere.

Known Issues for Installation and Configuration

Descriptions of known issues and workarounds for SAP Sybase IQ installation.

Table 2. Installer issues

CR#	Description

665300	• **Installer stops responding on some UNIX-like platforms** – On some UNIX-like operating systems, a network resource may cause the installer to stop responding and return the error "syntax error near unexpected token 'fi'." The **df** command also stops responding in this situation.
	
	• **Workaround** –
	
	  1. Identify the network file system (NFS) mounts that may have problems:
	  `strace -e statfs, statfs64 df`
	  2. Use the **umount** command to unmount an identified NFS mount:
	  `umount -l <path>`
	  3. Repeat the above steps until there are no more NFS mounts that have stopped responding.
	
	Note: The **umount** command requires root permission. If **umount** unmounts the NFS, you may have to restart your machine.

653194	• **Installer shows Simplified Chinese as an option in Traditional Chinese environments** – Even if the LANG environment variable is set to **LANG=zh_HK.UTF-8** (Traditional Chinese), the installer does not support Traditional Chinese as an installation language. When prompting you for a language during IQ installation, the IQ installer provides **Simplified Chinese** (the default) and **English** as options. You may not want **Simplified Chinese** to appear as a language option. • **Workaround** – Modify the LANG environment variable before starting the installer so that English is the only option. Either set **"LANG=en"** before invoking **setup.bin**, or invoke **"setup.bin -l en"**. During installation, the IQ installer displays English as the only language option available.

CR#	Description
641873, 652690, 652696, 652866, 643106	• **Do not install SAP Sybase IQ16.0 into the same directory as older Sybase products** – Installing Sybase SAP Sybase IQ16.0 into the same directory with older SAP Sybase Products may render some or all of these products unusable. • **Workaround** – Install SAP Sybase IQ16.0 into a different directory than the one you use for older products.

Known Issues for SySAM Licensing

Descriptions of known issues and workarounds for SySAM licensing. These issues affect users who generate the license file from either SPDC or SMP.

Table 3. SySAM licensing issues

CR#	Description

656626	• **SySAM issue may cause SAP Sybase IQ install to fail on some Solaris machines** – On some Solaris machines, the SAP Sybase IQ installer may terminate prematurely and display the message:
	
	`Failed to connect to logical domain manager: Connection refused.`
	
	• **Workaround** – Use this command to reset the *SYBASE_SAM_CPUINFO* environment variable, then rerun the installation:
	
	`Set SYBASE_SAM_CPUINFO=OSCMDFORK`

Known Issues for SAP Sybase IQ Operations

Descriptions of known issues and workarounds for SAP Sybase IQ operations.

Table 4. Open Client issues

CR#	Description
662422	• **Remote query performance degrades with DATETIME column –** SAP Sybase IQ16.0 and the default Open Client/Server included with SAP Sybase IQ16.0 support the TDS BIGDATETIME data type for remote queries. When an SAP Sybase IQ server executes a remote query using Open Client and fetches a DATETIME column on an IQ/SA remote server, the return data type is BIGDATETIME, instead of DATETIME. This may degrade performance. This performance degradation may not occur, when the remote server is an ASE server. To prevent the return of BIGDATETIME values, apply this work-around. • **Workaround –** Add these lines to the Open Client and Open Server configuration file $SYBASE/$SYBASE_OCS/config/ocs.cfg to prevent the return of BIGDATETIME values: ``` [SAP Sybase IQ] CS_CAP_RESPONSE = CS_DATA_NOBIGDATETIME ``` See also *Open Server 15.0, Open Client 15.0, and SDK 15.0 > Open Client Client-Library/C Reference Manual > Client-Library Topics > Using the runtime configuration file.*

Table 5. Server startup issues

CR#	Description
663054	• **Database recovery fails if server started with -iqro 1 flag –** A 15.2 database that is archived cannot be recovered if you specify the read-only flag **-iqro 1** on the startup command in SAP Sybase IQ 16.0.

SAP Sybase IQ Operations Known Issues from Previous Versions

Descriptions of known issues and workarounds for SAP Sybase IQ operations from previous versions.

PHP Bound Parameters on Big Endian Platforms [CR #627872]

In SAP Sybase IQ 15.2, PHP: Hypertext Preprocessor (PHP) drivers on big endian platforms require bound parameters to be initialized before the call to **sasql_stmt_bind_param** for INT and BIGINT data types.

This example shows the values properly initialized before the call to **sasql_stmt_bind_param**:

```
$stmt = sasql_prepare($conn, "insert into
testdefault(c1, c2, c3, c5) values(?,?,?,?)");
#Binding parameters with statement prepared
$c1=22;  $c2=33;  $c3="col3data";  $c5="col5data";
sasql_stmt_bind_param
($stmt,"iiss", $c1, $c2, $c3, $c5);
#executing statement
sasql_stmt_execute($stmt);
```

sp_iqstatus Returns Error on Chinese and Japanese Locale Installations [CR #622928]

On SAP Sybase IQ servers that are set up for Chinese and Japanese locales, running sp_iqstatus returns an error similar to:

```
Could not execute statement.
Syntax error near '2010' on line 1
SQLCODE=-131, ODBC 3 State="42000"
Line 1, column 1
```

Workaround:

1. Run these commands:

   For Chinese locales:

   ```
   % cd $IQDIR16/res
   % rm dblgzh_iq11_eucgb.res
   % rm dblgzh_iq11_cp936.res
   ```

   For Japanese locales:

   ```
   % cd $IQDIR16/res
   % rm dblgja_iq11_eucjis.res
   % rm dblgja_iq11_sjis.res
   ```

2. Restart SAP Sybase IQ.

After this procedure, certain strings in the .iqmsg files and the output of **sp_iqmpxinfo**, **sp_iqstatistics**, and **sp_iqstatus** are in English, instead of Chinese or Japanese.

ASE Connections to SAP Sybase IQ with BIGDATETIME [CR #622007]
When a version 15.5 GA Adaptive Server Enterprise server uses Component Integration
Services (CIS) to connect to an SAP Sybase IQ server version that has BIGDATETIME and
BIGTIME capability, any chronological data type sent to the Adaptive Server server using
CIS results in the error:

```
Msg 7225, Level 16, State 4:
Line 1:
Unknown datatype token 188 'BIGDATETIME NULL'
encountered.
Exited passthru mode from server 'QA_IQ16_ASECIS'.
```

SAP Sybase IQ sends the data as BIGDATETIME and relies on Adaptive Server to convert
appropriately. The BIGDATETIME data type was implemented in CIS in Adaptive Server
Enterprise version 15.5 ESD #1, so this error occurs with Adaptive Server Enterprise 15.5
before any ESDs have been applied.

Workaround:

SET TEMPORARY OPTION RETURN_DATE_TIME_AS_STRING='ON' in SAP
Sybase IQ for each session. The SAP Sybase IQ server sends all chronological data as strings
and Adaptive Server completes the conversion. This workaround is for Adaptive Server
Enterprise 15.5 GA connecting to SAP Sybase IQ in passthrough mode.

You can also use this workaround in the definition of a remote stored procedure, but it is not a
solution for proxy tables created on Adaptive Server returning chronological data types from
SAP Sybase IQ.

RSA Certificate Creation Fails [CR #557702]
RSA certificate creation fails with the error createcert command not found
because the **createcert** utility is missing. The utility is currently available only on the AIX64,
LinuxAMD64, Sun64, Win32, and Win64 platforms. Please contact Technical Support if you
need this utility.

Known Issues for Interactive SQL

Descriptions of known issues for Interactive SQL.

Use **dbisql**, instead of **dbisqlc** , unless instructed to do otherwise for specific tasks. **dbisqlc** is
supported, but does not contain all the features of **dbisql**. **dbisqlc** will be deprecated in a future
release.

Table 6. Interactive SQL issues

CR#	Description
n/a	• **Creating output files in quiet mode –** If you run **dbisql** (Interactive SQL) with the **-q** (quiet mode) option, and the data extraction commands (primarily setting the option TEMP_EXTRACT_NAME1 to an output file) are in a command file, you must first set and make permanent the **dbisql** option "Show multiple result sets." If you do not set this option, the output file is not created.
n/a	• **Show multiple result sets –** To set the option "Show multiple result sets," click Tools | Options in the **dbisql** window, choose "SAP Sybase IQ," and select the "Results" tab. Under "Results Processing" and "For statements that return multiple result sets," select "Show all result sets."
n/a	• **Query plan on the Plan Viewer tab –** The query plan in the **dbisql** Plan Veiewer tab is a SQL Anywhere style query plan. For an SAP Sybase IQ query plan, refer to the IQ .iqmsg file.

n/a	• **Unable to initialize screen routines –** If you set the terminal type on UNIX and Linux systems to "dumb" or "unknown" and then start **dbisqlc**, SAP Sybase IQ returns an error. For example:
	```% setenv TERM dumb```
	```% dbisqlc```
	
	```error at line 1 Unable to initialize screen```
	```routines```
	• **Workaround –** To avoid problems, run **dbisql** (Interactive SQL) instead, or use an xterm window to run **dbisqlc** on UNIX and Linux systems. For example, to start an xterm window with a scroll bar, enter:
	```% xterm -sb```

Known Issues for Multiplex Environment

Descriptions of known issues and workarounds for the multiplex environment.

Table 7. Multiplex issues

CR#	Description
611990	• **Emergency shutdown on secondary servers after CREATE TEXT IN-DEX** – A secondary server goes into emergency shutdown, when: • It is started with the **-sf external_library_full_text** flag, which disables loading of external libraries, and • The user issues a **CREATE TEXT INDEX** statement on the coordinator with a text configuration that uses external libraries. All other servers replay the DDL successfully. • **Workaround** – Start secondary nodes in the multiplex without the **-sf external_library_full_text** flag.
557714	• **Emergency shutdown on secondary servers after creating a proxy table** – A timing problem may cause an emergency server shutdown when a user accesses a new proxy table on a secondary server. • **Workaround** – Either reconnect or wait for some time and start another transaction, before trying to use a newly-created proxy table.

Known Issues for Sybase Control Center

Descriptions of known issues for Sybase Control Center.

Table 8. Sybase Control Center Issues

CR#	Description
737595	• **Server error when trying to add a hash or hash-range partition to an existing unpartitioned table** – If you attempt to add a hash or hash-range partition to an existing unpartitioned table, an error message appears. If you unpartition a table with a hash or hash-range partition, you cannot re-add it. This behavior does not occur when adding a range partition to an existing unpartitioned table. • **Workaround** – Create a new table with a hash or hash-range partition. Migrate the data from the original table to the new table, and then drop the original table.

CR#	Description
736548	Behavior #1: • **Missing multiplex resource in the Perspective window. Only the original simplex resource appears** – After converting a simplex resource to a multiplex resource, though the wizard indicates success, the new multiplex resource does not appear in the Perspective window. Only the original simplex resource appears. If you open the Administration Console and click IQ server, the error message `Object detail load failed` appears. No objects for the simplex resource appear in the folders of the Administration Console. • **Workaround** – 1. Stop and restart the SCC Server. 2. Log in to SCC. 3. In the Perspective Resources view, re-authenticate the simplex resource. The simplex resource becomes a functioning multiplex resource. Behavior #2: • **Missing objects for the coordinator IQ server resource in Administration Console folders after creating a new multiplex resource** – After converting a simplex resource to a multiplex resource, no objects for the original simplex resource (now the coordinator resource) appear in the various folders in the administration console. • **Workaround** – 1. Stop and restart the SCC Server. 2. Log in to SCC. 3. In the Perspective Resources view, re-authenticate the multiplex resource. Objects now appear for the coordinator resource.

CR#	Description

735485	**Behavior #1:**
	
	 • **Server error when refreshing a text index –** When you click the **Refresh Now** button on the properties page of a text index, the process fails with the message:
	
	`Index name, object name and object owner must be`
	`either all null or all non-null`
	
	 • **Workaround #1 –**
	
	     1. In the left pane of the Administration Console, select **IQ Servers > Schema Objects > Tables > Tables**.
	     2. Select the table on which the text index is based in the right pane and either:
	         • Click the arrow to the right of the name and select **Properties**, or
	         • From the Administration Console menu bar, select **Resource > Properties**.
	     3. In the left pane, select **Text Indexes**.
	     4. In the right pane, select the text index and click **Refresh**.
	
	 • **Workaround #2 –**
	
	     1. In the left pane of the Administration Console, select **IQ Servers > Schema Objects > Text Indexes**.
	     2. Select the text index from the right pane and either:
	         • Click the arrow to the right of the name and select **Refresh Data**, or
	         • From the Administration Console menu bar, select **Resource > Refresh Data**.
	
	 Note: This workaround is available for all refresh types except Snapshot.
	
	 Behavior #2:
	
	 • **Server error when truncating a text index –** When you click the Truncate Now button on the properties page of a text index, the process fails with the message:
	
	`com.sybase.scc.jmx.ManagedObjectGateway.err_in-`
	`voke_op Access`
	
	 • **Workaround #1 –**
	
	     1. In the left pane of the Administration Console, select **IQ Servers > Schema Objects > Text Indexes**.
	     2. Select the text index from the right pane and either:
	         • Click the arrow to the right of the name and select **Truncate Data**, or

CR#	Description
	• From the Administration Console menu bar, select **Resource > Truncate Data**. • **Workaround #2 –** **1.** In the left pane of the Administration Console, select **IQ Servers > Schema Objects > Tables > Tables**. **2.** Select the table on which the text index is based in the right pane and either: • Click the arrow to the right of the name and select **Properties**, or • From the Administration Console menu bar, select **Resource > Properties**. **3.** In the left pane, select **Text Indexes**. **4.** In the right pane, select the text index, and click **Truncate**.

CR#	Description
732628	• **Some nodes in a multiplex shut down after adding a DB file to IQ_SYS-TEM_MAIN** – When adding a DB file to IQ_SYSTEM_MAIN, any node in the multiplex whose agent is not registered and authenticated becomes stopped. • **Workaround –** 1. In the left pane of the Administration Console, select **IQ Servers > Multiplex Management > Multiplex Servers**. 2. Select a stopped node from the right pane and either: • Click the arrow to the right of the name and select **Register Agent**, or • From the Administration Console menu bar, select **Resource > Register Agent**. 3. Accept the defaults displayed and click OK. 4. Select the same node from the right pane and either: • Click the arrow to the right of the name and select **Authenticate Agent**, or • From the Administration Console menu bar, select **Resource > Authenticate Agent**. 5. Type the SCC agent password and click OK. 6. Select the same node from the right pane and either: • Click the arrow to the right of the name and select **Synchronize Server**, or • From the Administration Console menu bar, select **Resource > Synchronize Server**. 7. Click Finish to start the synchronization. 8. Click Close when synchronization is complete. 9. Select the same node from the right pane and either: • Click the arrow to the right of the name and select **Start Server**, or • From the Administration Console menu bar, select **Resource > Start Server**. 10. Click Finish to start the server. 11. Click Close when the server is successfully started. 12. Repeat these steps for each stopped node in the multiplex.

CR#	Description
730793	• **In the Failover Wizard, if both the coordinator node (CN) and designated failover node (DFO) are stopped, and you select a new failover node, an error message appears, and the failover fails** – This behavior occurs because the CN must be running in order to select a different failover node. • **Workaround** – Use interactive SQL to stop the MPX node and restart it using the appropriate flags to bring the node online as the coordinator. Please contact technical support for further assistance.

729451	• **You cannot grant or revoke permissions on a proxy table** – The functionality to grant and revoke object-level permissions on a proxy table at the table level is not currently implemented in Sybase Control Center.
	• **Workaround** –
	    • Grant the object-level permissions at the user, group (15.3 and 15.4) or role (16.0) level.
	    • Use Interactive SQL to grant the object-level permissions at the table level.

727450	• **You cannot truncate data although you have the correct permissions (TRUNCATE permission on the materialized view)** – The Truncate Data option is unavailable. • **Workaround** – Use Interactive SQL to truncate.
724206	• **User impersonation does not work** – The functionality to configure one user to temporarily assume the roles and system privileges of another user (known as impersonation) is not currently implemented in SCC • **Workaround** – Use Interactive SQL.
721981	• **When you use a 64-bit version of Internet Explorer 9 to read SCC online help, graphics may fail to load** – Each missing graphic is replaced with a red X. The problem is most noticeable on the landing page when you first open the online help. • **Workaround** – Use an earlier or a 32-bit version of IE, or use another browser.

CR#	Description
721119	• **Script execution is not logged as expected on UNIX-like operating systems** – Alert-triggered script executions are not being recorded in `SCC-3_2\log\alert-server.log` as they are supposed to be. Information about the execution from the RemoteShell Service's Process-Runner is appearing in `SCC-3_2\log\agent.log`, but this is not the alert script execution code that we expect to see logged in `alert-server.log`. • **Workaround:** – None.
716431	• **Dual control password management does not work** – When the Change Password Dual Control option is enabled in a user's login policy, an error message appears if you attempt to change the user's password. This functionality is not implemented in Sybase Control Center. • **Workaround** – Use interactive SQL to change the user's password.
697145	• **You cannot use incremental backups of the Sybase Control Center repository to recover the database** – • **Workaround:** – 1. Shut down SCC. 2. Open this file in a text editor: `SCC-3_2/services/SccSA-Dataserver/service-config.xml`. 3. Delete this line: `<set-property property="com.sybase.asa.data-base.options" value="-m" />` 4. Save the changes and start SCC. You can restore the repository database using incremental backups taken after this change.
696767	• **Cannot set timeout and row count options in SCC Properties** – Administration Console options in the SCC Properties dialog (**Application > Administration > General Settings > Administration Console**) let you set timeout and row count thresholds for data retrieval. These settings have no effect in Sybase Control Center for SAP Sybase IQ. • **Workaround** – None.

CR#	Description
686963	• **If you use Server Properties to change the server configuration, and you also make changes at Request Logging or Options pages, the server configuration process runs but does not make the additional changes –** • **Workaround –** Make changes in Server Properties from individual pages and click **OK** for each page.

685207	• **The Liveness Timeout value for multiplex secondary servers always appears as 0 seconds in the INC Properties dialog –** Even if you leave the value at the default (120 seconds) or set it in the Configuration Editor and restart, the INC Properties dialog displays a Liveness Timeout of 0 seconds. The value is correct on the server; only the display is wrong.
	• **Workaround: –** In the SCC Administration Console:
	  1. In the left pane, expand **IQ Servers > Multiplex Management** and select **Multiplex Servers**.
	  2. In the right pane, select a server and click the drop-down arrow that appears to the right.
	  3. Select **Properties**.
	  4. In the left pane of the properties dialog, select **Server Properties**.
	  5. In the right pane, enter `liv` in the filtering field above the **Name** column. This filters out all the properties except Liveness Timeout.

CR#	Description
676665	• **If you change the database location, restart the server, and later try to change back to the previous location, the server fails to start** – The failure occurs because old database files remain in place when you change to a new location. If you change back to an old location, the server finds out-of-date files. To view or change the path to the database location: 1. In the Administration Console, select **IQ Servers**. 2. Select a server in the right pane and click the drop-down arrow that appears next to the server's name. 3. Select **Properties**. 4. In the left pane of the properties dialog, select **Configuration**. • **Workaround:** – Before changing back to the old location, remove the `.db`, `iqmsg`, and `.lmp` files from the old location. If they exist, also remove `params.cfg`, `start_server.sh`, and `stop_server.sh`. **Note:** Do not remove any other files. Take special care not to remove `.iq`, `.iqtmp`, and `.log` files. Doing so may prevent your server from starting.
676218	• **When you modify the Dbspace Properties dialog in the Administration Console, changes to dbspace properties that should propagate to the DB Files Properties dialog do not automatically do so** – • **Workaround:** – If your changes to the **Dbspace Properties** dialog do not appear in the DB Files Properties dialog: 1. Close the DB File Properties dialog. 2. Click **DB Files** in the left pane of the Administration Console. 3. In the Folder menu, select **Refresh**. 4. Select the dbfile in the right pane, click the drop-down arrow, and select **Properties**.
676079	• **In the Configuration File Editor, the Maximum Output File Size uses kilobytes as the default. There is no way to specify MB or GB** – • **Workaround:** – In the `params.cfg` file in the database directory, set the value with the **-zs** switch. Use K, M or G after the numerical value. For example: `-zs 4000K`, `-zs 240M`, or `-zs 30G`.

CR#	Description
676076	• **In the Debug page of the Configuration File Editor, the following logging levels are missing from the Debug Level drop-down: "other," "procedures," "triggers," "plan," "hostvars," "replace," and "blocks" –** • **Workaround:** – To set the debug level to any of the missing levels, set the **-zr** switch in the `params.cfg` file in the database directory. You can include more than one level. For example: `-zr procedures,triggers,plans`.
670173	• **The Database Options, Group Options, and User Options dialogs do not allow these actions provided in Sybase Central: Create Options, Remove Options, and Mark Options as Permanent –** • **Workaround:** – None.
669571	• **The Administration Console's Execute SQL window returns no status for successful queries that return no results** – Interactive SQL users expect a message like `Execution time: 0.01 seconds`. • **Workaround:** – None.
667667	• **Conversion to multiplex disregarded** – If an SAP Sybase IQ simplex server that is registered in Sybase Control Center is converted to a multiplex server using anything other than this instance of SCC (including another instance of SCC, Sybase Central, or the command line), the current SCC does not detect the conversion and continues to display the server as simplex. • **Workaround** – Reauthenticate the simplex resource so that SCC displays it as multiplex.
666382	• **Prolonged authentication** – Authentication can take a very long time, especially when the resource is a multiplex. In some cases, the authentication dialog fails to dismiss. • **Workaround** – You can safely click **Cancel** to dismiss the Authentication dialog at any time after you click **OK**.

CR#	Description
587717	• **Datatips in monitoring views and the statistics chart appear in fixed locations on the browser screen regardless of where the chart is located. If you move the chart on the screen, the datatips do not move with the chart –** (A datatip is a tooltip that displays the data value for a particular spot on a graph or chart when you mouse over that spot.) This occurs in all product module plug-ins. • **Workaround: –** None. This is an Adobe Flex SDK issue.
576129	• **Pressing F5 to refresh your browser logs you out of Sybase Control Center –** Browser refresh does not refresh data inside Sybase Control Center, but refreshes the loaded application or pages in the browser—in this case, the Adobe Flash on which Sybase Control Center is built. Consequently, pressing F5 logs you out of any servers you are currently logged in to, including Sybase Control Center. • **Workaround: –** Do not use F5 when you are logged in to Sybase Control Center.

560601	• **Cannot log in because the Sybase Control Center HTTP redirect fails when you use IPv6 format –** If you use an IPv6 HTTP URL for Sybase Control Center, it does not redirect to HTTPS as it should. For example, this URL does not work:
	`http://myscc64.v6:8282/scc`
	
	• **Workaround: –** Use a URL with the HTTPS format and port to connect to SCC in IPv6 networks. For example:
	`https://myscc64.v6:8283/scc`

Known Issues for In-Memory Row-Level Versioning

Descriptions of known issues for in-memory row-level versioning.

Table 9. In-Memory Row-Level Versioning (RLV) Issues

CR#	Description
737728	• **Server stops responding when async IO subsystem is enabled with RLV –** • **Workaround –** Disable the flusher thread by setting the **RV_Disable_Logging_Flusher** database option to ON. This could have a small impact on concurrent loads and inserts into the RLV store. If the problem persists, disable async IO by setting the **Enable_Async_IO** database option to OFF. This causes the real-time load and DML performance to be suboptimal, as these operations are dependent on IO subsystem performance. **Note:** Disabling the flusher thread or async IO options has no impact on the performance of any operations run against the IQ main store.

Known Issues

Documentation Changes

Updates, corrections, and clarifications to the documentation released with SAP Sybase IQ.

Please check the Free Download Terms document for more recent updates to third-party licensing details. The document is at: *http://www.sybase.com/softwarelicenses/ third_party_legal.*

Administration: Database

Read about updates to Administration: Database.

These changes affect *Appendix: SQL Statements and Options Reference*.

Table 10. SQL Statements

Topic	Section	Correction
CREATE DATABASE Statement	Syntax: ENCRYPTED clause	The ENCRYPTED clause incorrectly includes a reference to [TABLE]. The correct syntax fo r the clause is: … [**ENCRYPTED** { *algorithm-key-spec* | **OFF** }]

Administration: Globalization Documentation Changes

Read about updates to Administration: Globalization.

These changes affect *About International Language Data*.

Table 11. International Languages and Character Sets

Topic	Section	Correction
What is ICU, and when is it needed?	When is ICU needed on the database server? (all platforms except Windows Mobile)	When is ICU needed on the database server? (all platforms)

These changes affect *About International Language Data*.

Table 12. Locales

Topic	Section	Correction
Locale character set	1. If the SACHARSET environment variable is set, its value is used to determine the character set. The database server uses SACHARSET only when creating new databases, and then only if no collation is specified.	1. If the IQCHARSET environment variable is set, its value is used to determine the character set. The database server uses IQCHARSET only when creating new databases, and then only if no collation is specified.

Administration: Spatial Data Documentation Changes

Read about updates to Administration: Spatial Data.

Table 13. Tutorial: Experimenting with the spatial features

Topic	Section	Correction
Lesson 1: Install additional units of measure and spatial reference systems	1. Using Interactive SQL, start and connect to the sample database (demo.db). The sample database is located in %IQDIRSAMP16%.	1. Using Interactive SQL, start and connect to the sample database (iqdemo.db). The sample database is located in "%ALLUSERPROFILE%"\SybaseIQ \demo.

These changes affect *Spatial data*.

Table 14. SAP Sybase IQ support for spatial data

Topic	Section	Correction
Creating a spatial column (SQL)	Prerequisites:You must be the owner of the table, or have ALTER privilege on the table, or have the ALTER ANY TABLE or ALTER ANY OBJECT system privilege.	Prerequisites: • You must be the owner of the table, or have ALTER privilege on the table, or have the ALTER ANY TABLE or ALTER ANY OBJECT system privilege. • Table must be in the catalog store table created with the "IN SYSTEM" clause.

Programming Documentation Changes

Read about updates to Programming.

Using In-Database Analytics in Applications

Topic	Section	Correction
Hadoop Integration	• *Reading a File in a Hadoop Distributed File System as an In-Memory Table* • *Starting an External Hadoop MapReduce Job and Using Results in a Query*	These subtopics should include this note: **Note:** This sample code is primarily for illustration purposes and is not intended for production. Although effort was made to ensure reasonable error handling, the examples are not production-grade and will require additional safeguards and testing prior to using in production.

.NET API Reference

Topic	Section	Correction
.NET API Reference	All subtopics under *.NET API Reference* refer to the product as SQL Anywhere.	The product is SAP Sybase IQ. SQL Anywhere and SAP Sybase IQ use the same .NET API.

C/C++ API Reference

Topic	Section	Correction
SAP Sybase IQ Database API for C/C++	All subtopics under *SAP Sybase IQ Database API for C/C++* refer to the product as SQL Anywhere.	The product is SAP Sybase IQ. SQL Anywhere and SAP Sybase IQ use the same C/C++ API.

Reference: Building Blocks, Tables, and Procedures Documentation Changes

Read about updates to Reference: Building Blocks, Tables, and Procedures.

These changes affect *SQL Functions*.

Table 15. SQL Functions

Topic	Section	Correction
LOCATE Function [String]	Usage	The topic incorrectly states that if you give a long string as the second argument, the function returns a NULL value. The topic should read: The first string can be a long string (longer than 255 bytes), but the second is limited to 255 bytes.

These changes affect *Physical Limitations*.

Table 16. Physical Limitations

Topic	Section	Correction
Physical Limitations	Dbfile size	The topic incorrectly states that raw devices have a maximum size of 4 TB. There is no such limit for raw devices. The topic should read: File system device: Maximum size is 4 TB Operating system file: Maximum size supported by the operating system

These changes affect *System Views*.

Table 17. SYSUSER system view

Topic	Section	Correction
Alphabetical List of System Views	Column Name	lock_time is incorrectly listed as a column on the SYSUSER system view.

Documentation Changes

Obtaining Help and Additional Information

Use the Product Documentation site and online help to learn more about this product release.

- Product Documentation at *http://sybooks.sybase.com/* – online documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. The Web site also has links to other resources, such as white papers, community forums, and support content.
- Online help in the product, if available.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

Note: A more recent release bulletin, with critical product or document information added after the product release, may be available from the Product Documentation Web site.

Technical Support

Get support for Sybase products.

If your organization has purchased a support contract for this product, then one or more of your colleagues is designated as an authorized support contact. If you have any questions, or if you need assistance during the installation process, ask a designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

Information for Technical Support

Technical Support needs information about your environment to resolve your problem.

Before contacting Technical Support, run the **getiqinfo** script to automatically collect as much information as possible. You may also need to collect some information manually .

In this list, * indicates items collected by **getiqinfo**:

- SAP Sybase IQ version (for example, 16.0 GA or ESD level)
- Type of hardware, amount of memory, number of CPUs*
- Operating system and version (for example, Microsoft Windows 2008 Service Pack 1)*
- Operating system patch level
- Front-end tool used (for example, Business Objects Crystal Reports)
- Connectivity protocol used (for example, ODBC, JDBC, Tabular Data Stream™ (TDS))
- Open Client version
- Configuration type (single user or multiuser)

- (Important) Message log file* – by default, named `dbname.iqmsg` and located in the directory where you started the database server
- Stack trace file for the date and time the problem occurred (if applicable), by default named `stktrc-YYYYMMDD-HHMMSS_#.iq` and located in the directory where you started the database server*
- Command or query that produced the error
- Query plan* (recorded in `.iqmsg` file)

  The query plan is collected automatically by **getiqinfo**. If you manually collect information, enter these commands, then re-run the command that produced the error:

  ```
  SET TEMPORARY OPTION Query_Plan = 'ON'
  SET TEMPORARY OPTION Query_Detail = 'ON'
  SET TEMPORARY OPTION Query_Plan_As_Html= 'ON'
  SET TEMPORARY OPTION Query_Plan_As_Html_Directory=
  'ON'
  ```

  The plan is in the message log file.

  If you have performance problems, set this database option:

  ```
  SET TEMPORARY OPTION Query_Plan_After_Run = 'ON'
  ```

  This enables Technical Support to see which steps in the query processing used the time.
- Server logs
  - For UNIX and Linux: `IQ-16_0/logfiles/<servername>.nnnn.stderr` and `IQ-16_0/logfiles/<servername>.nnnn.srvlog`*
  - On Windows platforms: `%ALLUSERSPROFILE%SybaseIQ\logfiles\ <servername>.nnnn.srvlog`*

    For example, on Windows 2003, the server log files are located in `C:\Documents and Settings\All Users\SybaseIQ\logfiles`. On Windows 2008, the server log files are located in `C:\ProgramData\SybaseIQ\logfiles`.
- Startup and connection option settings, from the configuration file (by default, `dbname.cfg`)*
- Database option settings and output from **sa_conn_properties*** (if the server is still running)
- Schema and indexes for the database
- Output from **sp_iqstatus** and **sp_iqcheckdb**
- On multiplex databases, execute **getiqinfo** on each node (coordinator and secondary nodes)
- Screen snapshot of the problem, if possible

A checklist for recording this information for Technical Support is provided in this release bulletin.

See *System Administration Guide: Volume 1 > Troubleshooting Hints > Reporting Problems to Technical Support > Collecting Diagnostic Information Using getiqinfo*.

Checklist: Information for Technical Support

You can run the **getiqinfo** script to collect information.

Information Requested	Value
SAP Sybase IQ version (for example 16.0 GA or SP number)	
sp_iqlmconfig output	
Type of hardware	
Amount of memory	
Number of CPUs	
Operating system name and version (for example, Microsoft Windows 2008 Service Pack 1)	
Operating system patch level	
Front-end tool used (for example, Business Objects Crystal Reports)	
Connectivity protocol used (for example, ODBC, JDBC, TDS)	
Open Client version	
Configuration type (single node or multiplex)	
Message log file (`dbname.iqmsg`)	
Server log files (`server.nnnn.srvlog` and `server.nnnn.stderr`)	
Stack trace file (`stktrc-YYYYMMDD-HHNNSS_#.iq`)	
Command or query that produced the error	
Start up option settings	
Connect option settings	
Database option settings	
Schema and indexes for the database	
sp_iqstatus output	
Query plan: set options (Query_Plan, Query_Detail, Query_Plan_After_Run, Query_Plan_As_Html, Query_Plan_As_Html_Directory, Query_Timing), re-run command or query	
Screen snapshot of the problem, if possible.	

Downloading Sybase EBFs and Maintenance Reports

Get EBFs and maintenance reports from the Sybase Web site or the SAP® Service Marketplace (SMP). The location you use depends on how you purchased the product.

- If you purchased the product directly from Sybase or from an authorized Sybase reseller:
  a) Point your Web browser to *http://www.sybase.com/support*.
  b) Select **Support > EBFs/Maintenance**.
  c) If prompted, enter your MySybase user name and password.
  d) (Optional) Select a filter, a time frame, or both, and click **Go**.
  e) Select a product.

     Padlock icons indicate that you do not have download authorization for certain EBF/ Maintenance releases because you are not registered as an authorized support contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click **My Account** to add the "Technical Support Contact" role to your MySybase profile.
  f) Click the **Info** icon to display the EBF/Maintenance report, or click the product description to download the software.
- If you ordered your Sybase product under an SAP contract:
  a) Point your browser to *http://service.sap.com/swdc* and log in if prompted.
  b) Select **Search for Software Downloads** and enter the name of your product. Click **Search**.

Sybase Product and Component Certifications

Certification reports verify Sybase product performance on a particular platform.

To find the latest information about certifications:

- For partner product certifications, go to *http://www.sybase.com/detail_list?id=9784*
- For platform certifications, go to *http://certification.sybase.com/ucr/search.do*

Creating a MySybase Profile

MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1. Go to *http://www.sybase.com/mysybase*.
2. Click **Register Now**.

SAP Sybase IQ Developer Center

The SAP Sybase IQ Developer Center provides a forum for users to exchange information about SAP Sybase IQ.

You can visit the SAP Sybase IQ Developer Center at *http://scn.sap.com/community/developer-center/analytic-server*.

Accessibility Features

Accessibility ensures access to electronic information for all users, including those with disabilities.

Documentation for this product is available in an HTML version that is designed for accessibility.

Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. 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 may 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 the Sybase Accessibility site: *http://www.sybase.com/products/accessibility*. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.

Obtaining Help and Additional Information