Release Bulletin
Sybase® Replication Server® 15.5
for UNIX and Linux

1. Accessing updated release bulletin

A more recent version of this release bulletin may be available on the Web. To check for critical product or document information added after the product release, use the Sybase® Product Manuals Web site.

❖ **Accessing the release bulletin at the Sybase Product Manuals Web site**

1   Go to Product manuals at http://www.sybase.com/support/manuals/.

2   Select a product and language and click Go.

3   Select a product version from the Document Set list.

4   Select the Release Bulletins link.

5 From the list of individual documents, select the link to the release bulletin for your platform. You can either download the PDF version or browse the document online.

2. Product summary

Sybase Replication Server® version 15.5 is compatible with the following operating system configurations.

Platform	Supporting system and version
HP-UX Itanium (64-bit)	HP-UX 11.23 and 11.31 – patch level B11.23.0409
	Note The installer requires the gasp utility. Ensure that the path to gzip is set in the $PATH environment variable.

Linux x86 (32-bit and 64-bit)	• Linux x86 Red Hat Enterprise Linux 4.0 update: 5
	  • kernel-2.6.9-55.EL
	  • glibc-2.3.4-2.36
	• Red Hat Enterprise Linux 5.0 update: 1
	  • kernel-2.6.18-53.1.13.el5
	  • glibc-2.5-18
	• SuSE Linux Enterprise Server SLES 10
	  • kernel-smp-2.6.16.21-0.8
	  • glibc-2.4-31.2
	• SuSE Linux Enterprise Server SLES 11
	  • kernel-*-2.6.27.19-5.1
	  • glibc-2.9-13.2

Linux on IBM p-Series (Linux on Power) (64-bit)	• Linux x86 Red Hat Enterprise Linux 4.0 update: 5
	  • kernel-2.6.9-55.EL
	  • glibc-2.3.4-2.36
	• Red Hat Enterprise Linux 5.0 update: 1
	  • kernel-2.6.18-53.1.13.el5
	  • glibc-2.5-18
	• SuSE Linux Enterprise Server SLES 10
	  • kernel-smp-2.6.16.21-0.8
	  • glibc-2.4-31.2

Platform	Supporting system and version
IBM AIX (64-bit)	• AIX 5.3 – ML 07 or higher patch • AIX 6.1 Before you start Replication Server, you must install the IBM XL C/C++ Runtime for AIX and the SMP Runtime Libraries for AIX that is suitable for your version of AIX. Obtain the libraries from your IBM AIX operating system installation media. These libraries are also available from the IBM AIX Web site: • The IBM XL C/C++ Runtime for AIX is available on the Web site under "Latest updates for supported IBM C and C++ compilers". • The SMP Runtime Libraries for AIX is available on the Web site under "IBM XL C/C++ Enterprise Edition for AIX, Runtime Environment and Utilities".
Sun Solaris (SPARC) (64-bit)	Solaris 8, 9, and 10 – patch level 8_recommended
Sun Solaris x86-64 (64-bit)	Solaris 10 – patch level 10_recommended **Note** To run Replication Server 15.5 with an ERSSD on Sun Solaris x86-64 machines, install these patches: 118345-03 and 119964-07.

On Sun Solaris Install the latest Solaris recommended patch cluster appropriate for your system. In addition, install these patches if Sun has not yet included the patch in the latest Solaris recommended patch cluster.

Operating systems	Recommended patch cluster
Sun Solaris SPARC 8	111721-04
Sun Solaris SPARC 9	Not applicable
Sun Solaris SPARC 10	Not applicable
Sun Solaris 10 x86-64	Not applicable

On Linux Linux distribution vendors often provide errata packages, allowing you to upgrade and fix bugs within a release. Contact your Linux distributor for more information.

If your operating system requires patches, install the patches before you install Replication Server components.

Contact your operating system representative for patches recommended for Replication Server installed on your system. Do not use a patch that is older than the version suggested for your operating system. Use the patch recommended by the operating system vendor even if the patch version supersedes the listed patch.

For a complete list of supported operating systems, see the Sybase Platform Certification Web site at http://certification.sybase.com/ucr/search.do.

2.1 Replication Server

Linux

ERSSD requires Sybase SQL Anywhere® Server. Sybase SQL Anywhere is not available for Replication Server 15.5 for Linux on POWER. Therefore, ERSSD is not available for Replication Server 15.5 for Linux on POWER.

For detailed information about new features in Replication Server 15.5, see the *Replication Server New Features Guide*.

For information about administering Replication Server 15.5, see the *Replication Server Administration Guide Volume 1*.

2.2 Replication Manager

Replication Manager, a plug-in to Sybase Central™, Java Edition, is a component of Replication Server 15.5. Replication Manager is available as a separate program.

Note Replication Manager is not certified for use with Adaptive Server® Enterprise Cluster Edition.

For detailed information about Replication Manager, see the *Replication Server Administration Guide Volume 1*.

For information about commands used to manage replication, see *Replication Server Reference Manual*.

2.3 Replication Monitoring Services

Replication Monitoring Services (RMS) is a component of Replication Server 15.5. RMS allows you to monitor various servers and components in your environment, acting as a middle layer between the Replication Manager and the servers in the replication environment. RMS also provides the ability to control the flow of data and set the configuration parameters.

Note RMS is not certified for use with Adaptive Server Enterprise Cluster Edition.

For detailed information about RMS, see the *Replication Server Administration Guide Volume 1*.

2.4 ExpressConnect for Oracle

ExpressConnect for Oracle (ECO), which is available with Replication Server Options 15.5 and later, provides direct communication between Replication Server and a replicate Oracle data server. ECO eliminates the need for installing and setting up a separate gateway server, thereby improving performance and reducing the complexities of managing a replication system.

To use ECO, Replication Server must be installed using the REP_EC_ORA license.

For detailed information about ECO, see the *ExpressConnect for Oracle Installation and Configuration Guide* in Replication Server Options 15.5 release.

2.5 Support for Internet Protocol version 6

The operating systems and their versions that support Internet Protocol version 6 (IPv6) are:

• HP Itanium 11.23 and 11.31

• IBM AIX 5.3 and 6.1

• Linux RHEL 4.0 and 5.0

• Sun Solaris SPARC and Sun Solaris 10 x86-64.

2.6 Separately licensed features

Replication Server 15.5 is released as two product editions that contain different base and optional features that require separate licences:

• Enterprise Edition

• Real-time Loading Edition

Table 1 describes the base and optional features in each edition and lists the license names for each feature.

Note You cannot use the "Replication Server – Real-Time Loading Edition" to replicate to Adaptive Server®.

Table 1: Replication Server product edition features and licenses

Edition	Feature type	Features	Description	License
Enterprise	Base	Replication Server		REP_SERVER
	Optional	Advanced Services Option	Replication Server performance enhancements, including the ability to replicate to Adaptive Server. See "Replication Server – Advanced Services Option" on page 8.	REP_HVAR_ASE
		ExpressConnect for Oracle	Provides Replication Server with the capability to connect directly to Oracle. See the Replication Server Options 15.5 documentation.	REP_EC_ORA
Real-time Loading Edition	Base	Replication Server		REP_SERVER
		Real-time Loading (RTL)	Allows replication to Sybase® IQ.	REP_RTL_IQ
		Advanced Services Option	Replication Server performance enhancements, excluding the ability to replicate to Adaptive Server. See "Replication Server – Advanced Services Option."	REP_HVAR_ASE
	Optional	None		

To purchase licensed options, contact your Sybase sales representative.

2.6.1 Replication Server – Advanced Services Option

Replication Server 15.5 includes the Replication Server – Advanced Services Option containing these enhancements:

- High Volume Adaptive Replication (HVAR)

- Enhanced Data Server Interface (DSI) efficiency

- Enhanced RepAgent executor thread efficiency

- Enhanced distributor thread read efficiency

- Enhanced memory allocation

- Increasing queue block size

2.6.2 Sybase ExpressConnect for Oracle, Replication Agent, and Enterprise Connect Data Access

Sybase ExpressConnect for Oracle, Replication Agent™, and Enterprise Connect™ Data Access are available as a product called Replication Server Options. You must have Replication Server to obtain Replication Server Options.

Replication Server Options provides bidirectional replication across distributed, heterogeneous systems.

Replication Server Options is available in three data-source-specific versions: Microsoft SQL, Oracle, and IBM DB2 UDB. See the *Release Bulletin for Replication Server Options 15.5 for Linux, Microsoft Windows, and UNIX* for details about supported platforms and compatible Replication Server versions.

2.7 Replication Server 15.5 64-bit for HP Itanium

The 64-bit version of Replication Server for HP Itanium is compiled with the 64-bit Sybase Open Client/Server™. Therefore, the 64-bit version of Replication Server for HP uses the *libtcl64.cfg* file for HP Itanium, instead of the 32-bit *libtcl.cfg* file.

Note Consider all references to *libtcl.cfg* in the Replication Server documentation as *libtcl64.cfg* for HP Itanium.

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3. Special installation instructions

This section includes special installation instructions that are not in the installation guide for your operating system.

3.1 Revised installation instructions for Replication Server 15.5 for Linux on POWER

The Replication Server 15.5 for Linux on POWER installation process does not include starting a sample Replication Server because ERSSD is unavailable. Therefore the following information in the *Replication Server Installation Guide for UNIX* is not relevant:

• Installation steps related to starting a sample Replication Server in the "Installing Replication Server" in Chapter 2, "Installing Replication Server."

• The "Start the sample Replication Server" in Chapter 3, "Post-Installation Tasks."

3.2 Selecting an installation directory for Replication Server

Consider carefully whether to install Replication Server in its own product directory or in a directory with other Sybase products. *Do not* install Replication Server 15.5 in an existing Sybase installation directory if that directory contains any of these Sybase products:

• Replication Server version 12.5 or earlier

• Adaptive Server version 12.5.0.x or earlier

• Open Client/Server version 12.5.0 or earlier

• OpenSwitch™ version 12.5 or earlier

• DirectConnect™ version 12.5 or earlier

Warning! Installing Replication Server 15.5 along with any of the products listed above disables the older versions of these products. You cannot reverse these effects by uninstalling Replication Server 15.5.

3.2.1 Installing Replication Server in an existing directory

Installing Replication Server 15.5 in an existing directory that contains other Sybase products might result in Replication Server and the other Sybase products not working correctly. Before you install Replication Server in an existing directory, consider these points:

- You can install Replication Server 15.5 in an existing Sybase installation directory if that directory contains Adaptive Server Enterprise 15.0.*x* or Open Client/Server version 15.0. If you have newer versions of the *locales* or *charset* files, the installation program prompts you to specify whether to install older *locales* or *charset* files on top of newer files. To ensure that you have the latest version of these files, select "No to all."

- Replication Server 15.5 includes a new version of Replication Server and many of its supporting components. Other Sybase products may contain earlier versions of the same components. Installing Replication Server 15.5 into the same directory containing these existing products will not impact the products.

  However, if you are using other Sybase products, installing Replication Server 15.5 can cause some environment variables to change. Reset the environment variables to make the individual products work. For information about setting environment variables, see the *Replication Server Installation Guide* for your operating system.

  Note You can install Replication Server 15.5 in the same directory as Adaptive Server and Open Client/Server versions 12.5.1 or later.

  However, if you have installed Replication Server 15.5 and other Sybase products versions earlier than 15.5 in the same directory, Sybase recommends that you do not uninstall any of these products from this common directory. Otherwise, these products can no longer be used after uninstallation.

- If you install Replication Server 15.5 on a system that has Replication Server 15.0.1, Replication Server version 15.5 replaces version 15.0.1. If you require version 15.0.1, create a copy of the Replication Server 15.0.1 directory and subdirectories before installing version 15.5.

- You can install Replication Server 15.5 on top of Replication Server 12.6 or later, in the same *$SYBASE* directory. Installing version 15.5 on top of Replication Server 12.6 or later creates a duplicate entry in the *interfaces* file for SAMPLE_RS, which is the sample Replication Server. rs_init warns you about the duplicate entry and uses the first instance of SAMPLE_RS found in the *interfaces* file.

- If you have installed Replication Server 15.5 and Replication Server 12.6 or later in the same directory, Sybase recommends that you do not uninstall either version from this common directory.

  Note When you uninstall Replication Server version 15.5, or version 12.6 or later, the uninstallation program prompts you to specify whether you want to delete files that have been modified since installation. Select "No to all."

3.2.2 Installing Replication Server in a unique directory

You can install Replication Server in a unique directory without affecting existing Sybase environment variables. Follow the standard installation instructions in the *Replication Server Installation Guide for UNIX*.

Note When you install Replication Server in a unique installation directory, you must maintain two *interfaces* files. One *interfaces* file is required for Replication Server components and another for your other Sybase applications.

3.3 Coexisting with older versions of SySAM

Replication Server version 15.5 uses a newer version of Sybase Software Asset Management System (SySAM) and an updated license format. You can run only one instance of a license server on a computer. To use earlier versions of Sybase products with Replication Server 15.5, you must modify SySAM.

For instructions on migrating a license server, see *Sybase Software Asset Management Users Guide*.

3.4 Enabling asynchronous disk I/O

HP-UX

To enable asynchronous I/O, install the HP asynchronous I/O driver from the SAM Kernel Configuration menu:

1   Close Replication Server.

2   Click Kernel Configuration.

3   Click Drivers.

4   Set the Pending State for asyncdisk to In.

5   From the Actions menu, rebuild the kernel, and restart the system.

6   At the UNIX command prompt, run the following statements as "root".

```
/etc/mknod /dev/async c 101 4
chmod 0660 /dev/async
chown sybase /dev/async
```

The user who starts Replication Server must be the owner of the */dev/async* directory, or must have write permission on the directory.

Contact your operating system administrator or HP technical support for help with installing this driver.

3.5 Other sources of installation information

For installation and configuration information other than what the Replication Server 15.5 release bulletin provides, see:

*   *Replication Server Installation Guide for UNIX*. This guide contains instructions for installing Replication Server version 15.5.

    If you are using Adaptive Server Enterprise, see the sections of *Adaptive Server Enterprise Installation Guide* for your platform that are related to using Replication Server and upgrading replicated databases.

*   *Replication Server Configuration Guide for UNIX*. This guide contains general information about installing Replication Server and instructions for using rs_init utility to configure Replication Server.

4. Special upgrade and downgrade instructions

Replication Server Configuration Guide for UNIX contains detailed upgrade and downgrade instructions. Sybase strongly recommends that you read this information before you upgrade or downgrade Replication Server.

This section provides special upgrade and downgrade instructions for Replication Server version 15.5.

Warning! Before upgrading the user database to support Replication Server 15.5, upgrade Adaptive Server Enterprise to version 12.5 or later. Otherwise, the upgrade fails.

4.1 Using Replication Server 15.5 with SQL Anywhere 11

If you are upgrading to Replication Server 15.5 on Sun Solaris SPARC, Sun Solaris 10 x86-64, or IBM AIX, and using ERSSD, platforms must be *64-bit* for the upgrade to function properly. For these operating systems, ERSSD can only be run on 64-bit machines. This is a restriction of the underlying SQL Anywhere database.

4.2 Upgrading and mixed-version requirements

If a replication system domain has Replication Server 15.5 and later, then the system version and route versions in the replication system domain must be version 12.6 and later. With Replication Server 15.5, mixed-version environments containing versions earlier than 12.6 are not supported.

You can upgrade directly to Replication Server 15.5 from versions 12.6, 15.0, 15.0.1, and 15.2 and subsequent ESDs.

If the Replication Server version, the site version, and the route version are earlier than 12.6, you must upgrade Replication Server to version 12.6 or later, set site version to 12.6 or later, and upgrade routes to 12.6 or later, before you can install Replication Server 15.5.

Note Upgrading from any earlier version requires an intermediate upgrade. See Chapter 3, "Upgrading or Downgrading Replication Server" in the *Replication Server Configuration Guide* for your platform.

4.3 Using enhanced monitors and counters

To use enhanced monitors and counters, perform the following steps:

❖ **Using enhanced monitors and counters**

1   Load this script into the RSSD after upgrading to Replication Server 15.5:

```
$SYBASE/$SYBASE_REP/scripts/rs_install_statreport_v1510_[ase|asa].sql
```

2 Run the rs_stat_populate and rs_stat_genreport stored procedures to
   produce the following information:

   • Replication Server performance overview, such as the Distributor
      (DIST) processing, DSI processing, and so on.

   • Replication Server performance analysis and tuning suggestions
      based on the critical Replication Server counters.

4.4 Updating Log Transfer Language version

When the Replication Agent connects to the Replication Server, a Log Transfer
Language (LTL) version is returned.

When you upgrade to Replication Server version 15.5, the Replication Agents
are still connected to Replication Server using the older negotiated LTL
version. Restart the Replication Agents to use the new LTL version.

5. New and modified functionality

For detailed descriptions of new features and functionality in Replication
Server 15.5, see the *Replication Server New Features Guide*.

6. Known problems

This section describes known problems in Replication Server version 15.5 and
workarounds where available. These problems are marked with the
corresponding Change Request (CR) numbers. Mention the appropriate CR
number when you contact Sybase Technical Support regarding Replication
Server issues.

Replication Server version 15.2 and later do not include these problem report
files:

• *spr_rs*

• *cpr_rs*

• *spr_rms*

• *cpr_rms*

6.1 Known issue for IBM AIX licensing

Starting with Replication Server 15.2 on IBM AIX, there is a change to the process of how Replication Server determines the number of CPUs available to it. Customers running Replication Server on IBM AIX with logical partitions may find that the number of CPUs reported has changed with 15.5. This happens because Replication Server now counts the total number of CPUs available to the partition. This may result in the product defaulting to grace period (of 30 days) or the product may fail to start if grace period had elapsed.

Currently, Sybase Replication Server does not support sub-capacity licensing for IBM LPAR. If you believe you may encounter this issue, please contact Sybase Customer Support to raise a support incident. Sybase will send an appropriate solution to workaround the issue.

6.2 Replication Server problems

This section describes problems identified in Replication Server.

6.2.1 Unable to upgrade RSSD in Replication Server from version 15.2 to version 15.5

[CR #622028]   When upgrading from Replication Server 15.2 to Replication Server 15.5, the rs_init encounters this error:

```
Cannot drop the table 'rs_updown_status', because it doesn't exist in the
system catalogs.
```

Workaround: Create a dummy table, rs_updown_status in the RSSD.

6.2.2 Replication Server is unable to connect to LDAP on 64-bit platforms

[CR #621751]   If the *libsybdldap.so* and *libsybdldap64.so* are not specified in the Directory section in *libtcl.cfg*, Replication Server is unable to connect to the LDAP.

Workaround: Manually edit the *libtcl.cfg* in *$SYBASE/$SYBASE_OCS/config* directory to include *libsybdldap.so* and l*ibsybdldap64.so*.

For example:

```
[DIRECTORY]
ldap32=libsybdldap.so ldap://sylvester:3389
/dc=Sybase,dc=com??one??bindname=cn=Manager,dc=Sybase,dc=com??secret
ldap64=libsybdldap64.so ldap://sylvester:3389
/dc=Sybase,dc=com??one??bindname=cn=Manager,dc=Sybase,dc=com??secret
```

The entry name has changed from ldap to ldap32. To start the LDAP session with dscp utility:

open *ldap32*

6.2.3 Incremental compilations are not handled properly in HVAR

[CR #621246]   The mechanism for incremental compilation involving groups of transactions having more commands than what is set with dsi_compile_max_cmds, is not working correctly.

Workaround: Set dsi_compile_max_cmds to a very large value, avoiding incremental compilation from occurring.

6.2.4 Unable to use *rs_init* to configure Replication Server with an existing RSSD

[CR #620380]   When configuring Replication Server 15.5 using the rs_init with an existing RSSD, an error occurs in rs_init.

Workaround: Drop the RSSD before configuring the Replication Server.

6.2.5 Partial update support for Microsoft SQL Server to Microsoft SQL Server replication

[CR #619438]   Replication Server 15.5 does not support partial updates for large-objects (LOB) data including text, ntext, image and varchar(max), nvarchar(max), varbinary(max), in Microsoft SQL Server 2005 and later. Using Replication Server 15.5, LOB data can only be changed as full update in Microsoft SQL Server database.

Workaround: None

6.2.6 Insufficient number of threads in Replication Server

[CR #618624]   If you increase the number of client connections and did not increase the number of Open Server™ threads that the Replication Server can use, this may cause the Replication Server to shut down.

Workaround:

1   Log in to RSSD.

2   Increase the value of num_threads.

3   Restart Replication Server.

6.2.7 Stack tracing error at startup when sort order is not in the *objectid.dat* file

[CR #616941]   If the sort order is not set correctly in the [*collate*] section of *$SYBASE/config/objectid.dat*, a stack trace error occurs at Replication Server startup.

Workaround:

1   Make sure that the character set and set order have been set correctly in *Rep_Server_name.cfg* file. For example:

  •   RS_charset=cp850

  •   RS_sortorder=scannocp

2   Go to *$SYBASE/charsets/<character set>* directory; for example, *$SYBASE/charsets/cp850* directory.

3   Locate and open corresponding sort order file; for example, *scannocp.srt*.

4   Check the line that has an "id" and find the sort order ID, for example,

```
    id = 0x30; Unique ID # (48) for the sort order
```

Note that the sort order ID is *48*.

5   In *$SYBASE/config/objectid.dat*, check that there is a line for that sort order under the [*collate*] section:

```
    1.3.6.1.4.1.897.4.9.3.48 = scannocp
```

The last number is the sort order ID (*48*), all other numbers are identical for all lines. If you have a custom sort order, add this line for it.

6   Restart Replication Server.

6.2.8 Issue with different character set on Replication Server and Adaptive Server

[CR #616158]   If Replication Server uses the utf8 character set and the target Adaptive Server uses the gb18030 character set, an error occurs if a table has text and image column with dsi_bulk_copy or dsi_compile_enable parameter set to "on". The DSI will shut down.

Workaround: Set the dsi_bulk_copy and dsi_compile_enable parameters to "off".

6.2.9 Issues with *parallel_dsi* parameter

[CR #614717]   When you change the value of the parallel_dsi parameter using the alter connection command or configure replication server command, Replication Server changes the existing configuration values of these parameters:

- dsi_num_threads

- dsi_num_large_xact_threads

- dsi_serialization_method

- dsi_sqt_max_cache_size

This may impact your replication performance.

Workaround: You should set the parallel_dsi parameter first, and then manually set the desired values for the above-mentioned parameters for your environment if you do not want to use the default values.

6.2.10 SQT thread fails during ERSSD defragment process

[CR #611876]   When the ERSSD is being defragmented using the sysadmin erssd command and the defrag parameter, and the Stable Queue Transaction (SQT) thread tries to access it, the SQT thread fails and this error is stored in the log file.

```
"SQT (103:1) could not get sqm_reader=8"
```

This also causes the distributor to shutdown.

Workaround: Wait until the defragmentation process finishes and then resume the distributor.

6.2.11 *rs_helprep* on preASE15 RSSD fails

[CR #607273]   When the RSSD is loaded in an Adaptive Server 12.5.4 x server, rs_helprep fails when the *repdef_name* is greater than 30 characters.

Workaround:

- Use single quote (') or double quote(") around the long *repdef_name*.

- Use a truncated *repdef_name*. Truncate the *repdef_name* to the first 29 characters when issuing the rs_helprep request. The rs_helprep then appends the % wildcard at the end when it queries the RSSD tables.

- Upgrade RSSD data server to Adaptive Server 15.*x*.

6.2.12 Query failure when using quoted identifiers with custom function string containing a quoted constant

[CR #571435]   During subscription materialization, using quoted identifiers with a custom function string that includes a quoted constant, causes a query failure. The failure occurs because the replicate data server identifies the quoted constant as a column instead of a constant.

Workaround: Create the subscription without a quoted constant or create the subscription without materialization.

6.2.13 Parallel DSI threads may cause deadlock with Adaptive Server

[CR #452806]   An application deadlock involving Replication Server and Adaptive Server may occur when Replication Server is configured to use parallel DSI while applying transactions to a table containing text and image columns.

Workaround: Suspend and resume the DSI connection. If the DSI thread does not suspend, restart the Replication Server.

6.3 Replication Agent problem

This section documents a problem identified in Replication Agent.

6.3.1 Owner information is not supported in function replication for Oracle warm standby

[CR #596321, CR #596320]   Replication Server does not support specifying owner information of stored procedures in the function replication definition for Oracle. As such, Replication Agent does not send that information to Replication Server. Because the owner information is not available, the replicated stored procedure fails to execute at the Oracle standby database.

Workaround: For each stored procedure replicate from active to standby database, you need to create a corresponding function string for this procedure. You can specify owner information of the target stored procedure.

To alter the function string class of the standby connection to a customized function string class, which is inherited from rs_oracle_function_class:

```
alter connection to dco2stb.ordb (standby connection)
set function string class to my_oracle_function_class
go
```

6.4 Sybase Central problem

This section documents a problem identified in Sybase Central.

6.4.1 Users must have write privileges to home directory

[CR #343973]   Sybase Central writes a registry file in the user's home directory, and uses this registry file to store environment information from the Replication Manager. You must have write privileges on the user's home directory, or Sybase Central cannot save the environment information.

Workaround: Ensure that each user has write privileges on the user's home directory.

6.5 Replication Manager problems

This section documents problems identified in Replication Manager.

6.5.1 *block_size* configuration parameter is not supported

[CR #616057]   The Replication Manager plug-in (RMP) does not support configuration of the new "block_size" parameter. Configuring this parameter in RMP displays this error:

```
"Option WITH SHUTDOWN required for block size change"
```

6.5.2 Cannot select roman8 character set

[CR #611031]   You cannot select the roman8 character set in Replication Manager because Java does not support the roman8 character set.

Workaround: When adding a server to an environment:

- Enter a user name and password that will let you access the environment.

- Do not select roman8 in the Character Set field for a server connection.

- Do not select "default" in the Character Set field for a server connection if the server default is roman8.

You must select another character set such as, iso_1, utf8, or cp850, that is compatible with the server and Replication Manager.

6.5.3 Unable to display the newer Replication Server parameters in a three-tier environment

[CR #606691] In a three-tier replication environment, RMP does not display the newer Replication Server parameters.

Workaround:

• Add the replication environment in a normal two-tier Replication Manager environment.

• Add the servers for which you want to access the configuration parameters in this new environment.

6.6 RMS problem

This section documents a problem identified in RMS.

6.6.1 RMS does not support Replication Server dynamic configuration of parameters

[CR #616051] RMS does not support dynamic configuration of parameters from Replication Server. Executing the configure server command or the configure component command may not return all parameters from a Replication Server. The new parameters are also not displayed correctly in the RMP when using a three-tier environment.

Workaround: When configuring a Replication Server or its components, use a two-tier environment in RMP to connect and configure.

6.7 Problems with replication to Sybase IQ

This section documents known problems when replicating to Sybase IQ from Adaptive Server using real-time loading (RTL) in Replication Server.

6.7.1 NULL *text* or *unitext* replication can lead Sybase IQ to core dump

[CR #622322]   In some circumstances, replication of tables containing text or unitext columns into Sybase IQ causes a Sybase IQ core dump. Until Sybase addresses this issue, replication of text or unitext columns into Sybase IQ replicate database is not supported.

Note This is specific to Sybase IQ replicate databases and text or unitext columns. Replication of tables into other supported replicate databases, such as Adaptive Server, is expected to work.

Workaround: Do not mark tables containing text or unitext columns for replication into Sybase IQ until this issue is addressed.

6.7.2 Incremental compilations are not handled properly in RTL

[CR #621246]   The mechanism for incremental compilation involving groups of transactions having more commands than what is set with dsi_compile_max_cmds, is not working correctly.

Workaround: Set dsi_compile_max_cmds to a very large value, avoiding incremental compilation from occurring.

6.7.3 Data corruption when replicating data to Sybase IQ 15.*x* in RTL

[CR #620097]   When RTL replicates data to Sybase IQ 15.*x*, data inserted into time and timestamp columns may be corrupted. There is no warning nor error message indicating that the data is corrupted.

Workaround: Select one of:

- If there is no text or image in the table, this table can be marked as non-compilable. RTL uses the function string to process instead of insert-location. Issue this command:

```
alter connection to data_server.database for replicate table named
table_name set dsi_compile_enable "off"'
```

This will effectively slow down the process.

- If there is text or image in the table, apply Sybase IQ 15.1 ESD #3 or use Sybase IQ 12.7 ESD #4 and later.

6.7.4 Truncated *text* and *image* column values

[CR #619358]   Text and image column values get truncated when inserted into a Sybase IQ 15.1 database. This problem occurs in Sybase IQ 15.1 GA, ESD #1, and ESD #2.

Workaround: Apply Sybase IQ 15.1 ESD #3 or use Sybase IQ 12.7 ESD #4 and later.

6.7.5 Right string truncation error

[CR #594620]   When inserting data from Replication Server to Sybase IQ 15.0 and later using the insert-location, the right truncation of string data error may occur.

Workaround: On Sybase IQ system, apply this command:

```
set option public.STRING_RTRUNCATION = "OFF"
```

By default, the STRING_RTRUNCATION option is set to "on" in Sybase IQ 15.0 and later.

6.8 Installer problems

This section describes the known problems with the installer you might encounter when installing Replication Server or Replication Manager.

6.8.1 Installation fails on Sun Solaris SPARC

[CR #620755]   Sun Solaris only – When the file descriptor limit is set to "unlimited", the installer fails with this message:

```
awk: insufficient memory for string storage  Context is:
>>>              <<<
```

Workaround: Set the "hard" file descriptor limit to a number.

6.8.2 Avoiding an installation failure

[CR #619817]   If the df command fails, the installer stops responding before the preinstallation summary pane appears.

Workaround: Execute strace -e statfs, statfs64 df to identify the NFS mounts that have a problem. Then execute umount -l <path> to unmount all trouble NFS mounts. Re-run the installer.

6.8.3 Cannot navigate the Choose Product Features window with a keyboard

[CR #619793]   You cannot use the Tab and arrow keys to navigate the Choose Product Features window of the installation or uninstallation program.

Workaround:

•   Uninstaller – Use the mouse to click the Choose Product Features window. This sets the focus on the window and you will be able to use your keyboard.

•   Installer – Use the mouse to select the features in the Choose Product Features window.

6.8.4 Unable to run installer with default *tar* tool

[CR #619784]   You see this error when the installer uses the GNU tar tool to extract files from the Replication Server suite archive:

```
The included VM could not be unarchived (TAR). Please
try to download the installer again and make sure that
you download using 'binary' mode.  Please do not attempt
to install this currently downloaded copy.
```

Workaround: Define */usr/bin/tar* in $PATH.

6.8.5 Installer fails to launch when path to *setup.bin* contains ".."

[CR #619779]   The installer fails to launch if you specify a path to *setup.bin* that contains "..".

Workaround: Ensure that the path to *setup.bin* does not contain "..".

6.8.6 Uninstallation process stops responding

[CR #619771]   The uninstallation program stops responding when you select Delete from the Delete User Files screen and then click Previous from the Uninstall Complete screen. Delete User Files and Uninstall Complete are the last two screens shown in the uninstallation program.

Workaround: Do not return to the Delete User Files screen after you have selected Delete.

6.8.7 Interactive installation using response file does not work

[CR #618722]   When installing Replication Server in an interactive mode using a response file, the installer does not use the values stored in the file. The response file will work as expected in silent mode.

6.8.8 "./setup.bin: !: not found" message appears

[CR #617650]   *Sun Solaris only* – You see this error message when you install Replication Server and Replication Manager on a Sun Solaris SPARC or Sun Solaris 10 x86-64 machine:

```
Preparing to install...
./setup.bin: !: not found
Extracting the JRE from the installer archive...
Unpacking the JRE...
```

Where *setup.bin* is the name of the installer setup file. The installer setup file in Replication Manager is:

- On Sun Solaris SPARC – *setupsolarisSparc.bin*

- On Sun Solaris 10 x86-64 – *setupsolarisx86.bin*

Workaround: Ignore the message and continue. A case has been opened with Flexera to address this issue.

6.8.9 UAF issue when installing Adaptive Server into the same directory as Replication Server

[CR #613393]   If you install Adaptive Server 15.0.3 before you install Replication Server 15.5 and into the same top directory, the environment variable SYBASE_UA is set to *$SYBASE/UAF-2_0* instead of *$SYBASE/UAF-2_5*. To use the Replication Monitoring Service for Replication Server 15.5, the environment variable must be set to *$SYBASE/UAF-2_5*.

Workaround: Select one of:

- Install Replication Server 15.5 last

- Reinstall Replication Server

- Reset the SYBASE_UA environment variable to *$SYBASE/UAF-2_5* in these files:

  - *$SYBASE/SYBASE.sh*

  - *$SYBASE/SYBASE.csh*

• *$SYBASE/SYBASE.env*

6.8.10 Unable to start Sybase Central when installing Sybase IQ Plug-In and Replication Manager in the same directory

[CR #612737] If you install Sybase IQ plug-in and Replication Manager in the same directory, regardless which was installed first, you see this error when starting Sybase Central:

```
The library "dbput11_r" could not be loaded. Please ensure that this file
exists as part of your installation.
```

```
And the IQ plug-in was not loaded when the Sybase Central was started.
```

Workaround: None.

6.9 Unsupported operations

These Adaptive Server operations may cause incorrect replication:

• Disabling the secondary truncation point with dbcc settrunc and then truncating the log can cause lost transactions.

• Replication Server does not support nested transactions within replicated stored procedures.

When you enable replication for a stored procedure using sp_setrepproc or sp_setreplicate, Adaptive Server always runs the stored procedure within a transaction. If you have not explicitly run the replicated stored procedure within a transaction, Adaptive Server places an implicit begin transaction command at the start of the procedure.

If the replicated stored procedure contains nested transaction commands such as begin transaction, commit transaction, or rollback transaction, you might get errors when you run the procedure. For example, a rollback transaction command rolls back to the start of the stored procedure, rather than to the nested begin transaction command, which was the intended rollback point.

• Data that is inserted into a primary table using an unlogged bulk copy operation is not replicated.

• To use the atomic method of subscription materialization:

• The user who enters the create subscription command or the database owner must own the primary table. Alternatively, you must use user-defined function strings for select operations at the primary database.

- If the database owner or maintenance user does not own the replicate table, use user-defined function strings for select operations at the replicate database. If the owner of the replicate table is different from the owner of the primary table, create a unique function string by using a distinct function-string class.

7. Product compatibility

This section contains information about products that are compatible with Replication Server version 15.5.

7.1 Adaptive Server

Replication Server version 15.5 is fully compatible with both 32-bit and 64-bit versions of Adaptive Server Enterprise version 12.5 and later on HP-UX, IBM AIX, and Sun Solaris. However, on Linux, Replication Server version 15.5 is fully compatible with Adaptive Server Enterprise version 15.0.*x*.

A replication system can include Adaptive Servers, Replication Servers, DirectConnect products, and RepAgents on multiple operating systems.

Note SQL Server versions 11.0.x and Adaptive Server 12.0 and earlier are no longer supported.

7.2 Interoperability of Adaptive Server, Open Client/Server, Replication Server, and Sybase IQ

Table 2 shows the interoperability of Adaptive Server, Open Client/Server products, Replication Server, and Sybase IQ across versions.

Table 2: Interoperability between Adaptive Server, Open Client/Server, Replication Server, and Sybase IQ

Operating systems	Adaptive Server			Open Client/Server			Replication Server					Sybase IQ		
	15.5	15.0.x	12.5.x	15.5	15.0	12.5.1	15.5	15.2	15.1	15.0.1	12.6	15.1	15.0	12.7
HP-UX Itanium 64-bit	x	x	x	x	x	x	x	x	x	n/a	n/a	x	n/a	x
IBM AIX POWER 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a	x	n/a	x
Linux x86 32-bit	x	x	x	x	x	x	x	x	x	x	x	x	n/a	x

Operating systems	Adaptive Server			Open Client/Server			Replication Server					Sybase IQ		
	15.5	15.0.x	12.5.x	15.5	15.0	12.5.1	15.5	15.2	15.1	15.0.1	12.6	15.1	15.0	12.7
Linux x86-64 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a	x	n/a	x
Linux POWER 32-bit	n/a	n/a	n/a	x	x	x	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Linux POWER 64-bit	x	x	x	x	x	x	x	x	x	n/a	n/a	x	n/a	x
Sun Solaris SPARC 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a	x	n/a	x
Sun Solaris x86-64 64-bit	x	x	x	x	x	x	x	n/a	n/a	n/a	n/a	x	n/a	x
Microsoft Windows x86 32-bit	x	x	x	x	x	x	x	x	x	x	x	x	n/a	x
Microsoft Windows x86-64 64-bit	x	x	n/a	x	x	n/a	x	n/a	n/a	n/a	n/a	x	n/a	x

LEGEND: x = compatible; n/a = product not available or does not work with Replication Server on that platform.

Replication Server is available as 32-bit and 64-bit application. The 32-bit Replication Server on Linux and Windows have been certified on both the 32-bit and 64-bit versions of Linux and Windows operating systems listed in Table 2. The 64-bit version of Replication Server on Linux and Windows are *not* certified on the 32-bit version of Linux and Windows operating systems listed in Table 2.

Even though two or more products may be interoperable, features introduced in a newer version of a product are not likely to be supported by older versions of the same products.

8. Documentation updates and clarifications

This section contains updates and clarifications to Replication Server and Replication Manager documentation.

8.1 SQL Anywhere Replication support

For information on SQL Anywhere support as a primary or a replicate database, see the SQL Anywhere documentation at http://www.sybase.com/support/manuals/.

8.2 Replication Server Configuration Guide

8.2.1 No requirement for upgrading RSSD to version 15.0 and later

You do not need to upgrade the Adaptive Server containing the RSSD to version 15.0 or later, before you can install Replication Server 15.5.

Disregard the following text in "Requirements for upgrading to version 15.5 and later," in Chapter 3, "Upgrading or Downgrading Replication Server":

You must upgrade the Adaptive Server containing the RSSD to version 15.0 or later, before you can install Replication Server 15.5.

8.2.2 Correction to the directory names specified in the example log file for the *erssd_start_cmd* and *erssd_ra_start_cmd* parameters

The directory names specified in the example log file for the erssd_start_cmd and erssd_ra_start_cmd parameters in the "Upgrading an RSSD or an ERSSD" procedure in "Upgrading a RSSD or an ERSSD" in Chapter 3, "Upgrading or Downgrading Replication Server" are incorrect.

These directory names are:

As documented	Should be
REP-15_5	*REP-15_1*
ASA11	*ASA9*
dbsrv11	*dbsrv9*

In step 5b, the example of the erssd_start_cmd parameter in the log file should be:

```
erssd_start_cmd=/sybase/REP-15_1/ASA9/bin/dbspawn
-f -q /sybase/REP-15_1/ASA9/bin/dbsrv9
-ct- -ti 0 -x "tcpip(PORT=11751;DOBROAD=NO;BLISTENER=NO)"
-o /sybase/REP-15_1/samp_repserver/errorlog/SAMP_REPSERVER.out
/sybase/REP-15_1/samp_repserver/dbfile/SAMP_REPSERVER.db
```

In step 6b, the example of the erssd_ra_start_cmd parameter in the log file should be:

```
erssd_ra_start_cmd=/sybase/REP-15_1/ASA9/bin/dbltm
-ud -S SAMP_RS_ERSSD_ra
-C /sybase/REP-15_1/samp_repserver/SAMP_RS_ERSSD_ra.cfg
-ot /sybase/REP-15_1/samp_repserver/SAMP_RS_ERSSD_ra.out
-I /sybase/interfaces
```

8.3 Replication Server Heterogeneous Replication Guide

8.3.1 Corrections to the procedures in the scenarios for Oracle database resynchronization

The sequence of steps in the procedures for these scenarios documented in "Database resynchronization scenarios," in Chapter 13, "Resynchronizing Oracle Replicate Databases" are incorrect:

- Resynchronizing one or more replicate databases directly from a primary database

- Resynchronizing using a third-party dump utility

- Resynchronizing the active and standby databases in a warm standby application

The correct procedures are:

❖ **Resynchronizing directly from a primary database**

1   Stop replication processing by Replication Agent. Do not alter the truncation point. In Replication Agent, execute:

        suspend

2   Suspend the Replication Server DSI connection to the replicate database:

        suspend connection to *dataserver*.*database*

3   Instruct Replication Server to remove data from the replicate database outbound queue and wait for a resync marker from the primary database Replication Agent:

        resume connection to *data_server*.*database* skip to
        resync marker

4   If the truncation point has not been moved, proceed to step 5. Otherwise, reinitialize the Replication Agent repository before you obtain a dump of the primary database contents. In the Replication Agent, execute:

        ra_init force
        go

5   Obtain a dump of the primary database contents. See your database
    documentation. If you use the Recovery Manager (RMAN) for Oracle,
    obtain the last System Change Number (SCN) of the RMAN backup using
    the Oracle list backup command. In Replication Agent, set this SCN as the
    value of lr_dump_marker:

```
lr_dump_marker oracle scn
```

6   Instruct Replication Agent to start in resync mode and send a resync
    marker to Replication Server:

```
resume resync
go
```

7   In the Replication Server system log, verify that DSI has received and
    accepted the resync marker from Replication Agent by looking for this
    message:

```
DSI for data_server.database received and processed
Resync Database Marker. Waiting for Dump Marker.
```

    After DSI processes the resync marker for the replicate database, you can
    apply the dump to the replicate database.

    Note If you are resynchronizing multiple databases, verify that the DSI
    connection for each of the databases you want to resynchronize has
    accepted the resync marker.

8   Apply the dump of the primary database to the replicate database. See your
    database documentation.

9   Verify that Replication Server has processed the dump database marker by
    looking for this message in the Replication Server system log:

```
DSI for data_server.database received and processed
Dump Marker. DSI is now suspended. Resume after
database has been reloaded.
```

    When Replication Server receives the dump marker, the DSI connection
    automatically suspends.

10 After you apply the dump to the replicate database, resume DSI using:

```
resume connection to data_server.database
```

❖   **Resynchronizing after using a third-party utility to create a dump**

1   Stop replication processing by Replication Agent. Do not alter the truncation point. In Replication Agent, execute:

```
suspend
```

2   Suspend the Replication Server DSI connection to the replicate database:

```
suspend connection to dataserver.database
```

3   Instruct Replication Server to remove data from the replicate database outbound queue and wait for a resync marker from the primary database Replication Agent:

```
resume connection to data_server.database skip to
resync marker
```

4   If the truncation point has not been moved, proceed to step 5. Otherwise, reinitialize the Replication Agent repository before you obtain a dump of the primary database contents. In the Replication Agent, execute:

```
ra_init force
go
```

5   Obtain a dump of the primary database contents using the third-party dump utility.

6   Determine the dump point based on information from the primary database when you took the dump, or information from the third-party tool. With a third-party tool, you are responsible for determining the dump point. For example, if you are using a disk replication tool, you can temporarily halt activity at the primary database to eliminate transactions in progress from the disk snapshot, and then use the "end of transaction log" point as the dump database marker.

7   Execute the stored procedure on the primary database for Replication Agent to mark the end of the dump position that you obtained in step 5:

```
lr_dump_marker oracle scn
```

8   Instruct Replication Agent to start in resync mode and send a resync marker to Replication Server:

```
resume resync
go
```

Replication Agent automatically generates a dump database marker at a time based on the end of dump position that you obtained in step 6 and set in step 7, and sends the dump database marker to Replication Server.

9   Verify that DSI has received and accepted the resync marker from Replication Agent by looking for this message in the Replication Server system log:

```
DSI for data_server.database received and processed
Resync Database Marker. Waiting for Dump Marker.
```

10   Apply the dump of the primary database from the third-party tool to the replicate database. See your database and third-party tool documentation.

11   Verify that Replication Server has processed the dump database marker by looking for this message in the Replication Server system log:

```
DSI for data_server.database received and processed
Dump Marker. DSI is now suspended. Resume after
database has been reloaded.
```

When Replication Server receives the dump marker, the DSI connection automatically suspends.

12   After you apply the dump to the replicate database, resume DSI:

```
resume connection to data_server.database
```

❖   **Resynchronizing the active and standby databases when the warm standby environment is the replicate site**

1   Stop replication processing by both the primary database Replication Agent and the warm standby active database Replication Agent. Do not alter the truncation point. In Replication Agent, execute:

```
suspend
```

2   Suspend the Replication Server DSI connection to the active and standby databases:

```
suspend connection to dataserver.database
```

3   Instruct Replication Server to remove data from the outbound queue of the active and standby databases, and wait for a resync marker from the primary database Replication Agent:

```
resume connection to data_server.database skip to
resync marker
```

4   If the truncation point has not been moved, proceed to step 5. Otherwise, reinitialize the Replication Agent repository before you obtain a dump of the primary database contents. In the primary Replication Agent, execute:

```
ra_init force
go
```

5   Obtain a dump of the primary database contents. See your database
     documentation. If you use the Recovery Manager (RMAN) for Oracle,
     obtain the last System Change Number (SCN) of the RMAN backup using
     the Oracle list backup command. In Replication Agent, set this SCN as the
     value of lr_dump_marker:

```
lr_dump_marker oracle scn
```

6   Instruct the primary Replication Agent to start in resync mode and send a
     resync marker to Replication Server:

```
resume resync
go
```

7   Verify that DSI for the active database has received and accepted the
     resync marker from the primary database Replication Agent by looking for
     this message in the Replication Server system log:

```
DSI for data_server.database received and processed
Resync Database Marker. Waiting for Dump Marker.
```

8   Verify that the Replication Server DSI for the active database has
     processed the dump database marker by looking for this message from the
     active database In the Replication Server system log:

```
DSI for data_server.database received and processed
Dump Marker. DSI is now suspended. Resume after
database has been reloaded.
```

9   Apply the dump of the primary database to the active database. See your
     database documentation.

10   Move the truncation point to the end of the transaction log for the active
     database. In Replication Agent, execute:

```
pdb_xlog move_truncpt
go
```

11   Reinitialize Replication Agent repository based on the latest system data
     from the active database:

```
ra_init force
go
```

12   Instruct Replication Agent for the active database to start in resync mode
     with the init option. In Replication Agent, execute:.

```
resume resync, init
```

13 Verify that DSI for the standby database has received and accepted the resync marker from the active database Replication Agent by looking for this message In the Replication Server system log:

```
DSI for data_server.database received and processed
Resync Database Marker. DSI is now suspended. Resume
after database has been reloaded.
```

When Replication Server receives and processes the resync database with init marker, the DSI connection suspends.

14 Obtain a dump of the active database contents and apply the dump to the standby database. You can also apply the dump of the primary database from step 5 if the dump does not include database configuration information.

15 Resume DSI to the active and standby databases:

```
resume connection to data_server.database
```

8.4 Replication Server Installation Guide

8.4.1 No requirement for upgrading RSSD to version 15.0 and later

You do not need to upgrade the Adaptive Server containing the RSSD to version 15.0 or later, before you can install Replication Server 15.5

Disregard the following text in "Upgrading and mixed-version requirements," in Chapter 1, "Before You Begin":

You must upgrade the Adaptive Server containing the RSSD to version 15.0 or later, before you can install Replication Server 15.5.

8.5 Replication Server Reference Manual

8.5.1 Correction to the trace option for *alter connection* and a*lter connector*

The *trace* parameter in alter connection and *trace option* in alter connector documented in Chapter 3, "Replication Server Commands" are incorrect.

Changes to set trace clause in alter connection include:

• *trace_value* parameter is now *value*.

• Revision to the *value* parameter description.

There is a change to the description of *value* in the *option* parameter of alter connector.

alter connection

Syntax

alter connection to *data_server.database* {...

  set trace [to] '*value'*}

Parameters

trace

Allows ExpressConnect tracing at the DSI level.

value

A character string containing a new value for the option.

If you are using the trace option, the syntax for *value* takes the form *"module, condition,[on|off]"*, where:

•   *module* – Specifies the module type. Valid value is *econn*.

•   *condition* – Specifies the trace condition to set.

•   *on* or *off* – Specifies the state of the condition that is desired.

Note The trace parameter in the alter connection command allows empty string. For example:

```
alter connection to data_server.database
set trace to ''
```

An empty string disables ExpressConnect tracing values after the connection or when the Replication Server is restarted.

---

alter connector

Parameters

option

Provides you with choices for various trace options for a connector.

The supported options are:

•   trace

•   trace_logpath

value

A character string containing a new value for the option.

If you are using the trace option, the syntax for *value* takes the form *"module, condition,[on|off]"*, where:

• *module* – Specifies the module type. Valid value is *econn*.

• *condition* – Specifies the trace condition to set.

• *on* or *off* – Specifies the state of the condition that is desired.

See "alter connection" .

If you are using trace_logpath option, the syntax for the *value* parameter is *full_path_name*.

9. Language and globalization issues

This section describes language and globalization issues for Replication Server.

9.1 Hankaku Katakana conversion

In general, Japanese character sets are compatible. However, Hankaku Katakana characters, although they exist in both the eucjis and sjis character sets, cannot be converted. Converting data that contains Hankaku Katakana characters between eucjis and sjis does not work. This conversion problem occurs with character datatypes and the text datatype and is documented in Chapter 10, "Configuring Client/Server Character Set Conversions," of the *Adaptive Server Enterprise System Administration Guide Volume 1*.

This conversion problem affects both Adaptive Server and the Sybase Open Client™ and Open Server libraries. Because Replication Server uses these libraries for all conversions, this problem also affects Replication Server.

In Replication Server, this type of failure is treated in the same way as is the case of a single character missing from the target character set. The remainder of the conversion succeeds and replication proceeds, and problem characters are replaced by question marks in the target data area. There is currently no way to escape this restriction with the Sybase connectivity libraries. However, in Adaptive Server, if you turn on trace flag number 2402, you can remove this restriction.

9.1.1 Using trace flag 2402

Generally, Sybase recommends that you set up your replication system so that Replication Server handles all character set conversions at the replicate Replication Server and prevents the replicate data server from performing any conversions. In this case, you can work around the Hankaku Katakana restriction if you set up your system so that the replicate data server performs the conversion.

The following table shows how this might look if the primary data server used the sjis character set and the replicate data server used eucjis. Communication in this system is between each data server and its Replication Server and between the two Replication Servers.

Primary Replication Server	sjis
Replicate Replication Server	sjis
Primary data server	sjis
Replicate data server	eucjis

The primary and replicate Replication Servers are configured to use the same character set as the primary data server. (If only one Replication Server manages the primary and replicate data servers, configure it with the character set of the primary data server.)

In this configuration, when the replicate Replication Server connects to the replicate data server with character set sjis, the replicate data server detects this condition and converts data into its own character set, eucjis. If trace flag 2402 is activated in the replicate data server, then the conversion includes the Hankaku Katakana characters.

❖ **Setting up this workaround**

1　Configure your system as suggested.

2　Turn on trace flag 2402 in the replicate data server (Adaptive Server) by including -T2402 on the command line when you start Adaptive Server.

9.2 Changing default date format for a language

If you modify the *common.loc* file to change the default date format for a given language, make the corresponding change to the syslanguages table on all affected Adaptive Servers.

10. 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.

11. Other sources of information

Use the Sybase Getting Started CD and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD is included with your software and contains release bulletins, installation guides in PDF format, and other documents or updated information. 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.

  You can also access the documents available on the Getting Started CD from the Sybase Product Manuals Web site.

- The Sybase Product Manuals Web site, which can be accessed using a standard Web browser, includes the Replication Server documents that are not included in the Getting Started CD. 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/.

11.1 Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

1   Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.

2   Click Partner Certification Report.

3   In the Partner Certification Report filter select a product, platform, and timeframe and then click Go.

4   Click a Partner Certification Report title to display the report.

❖   **Finding the latest information on component certifications**

1   Point your Web browser to Availability and Certification Reports at
     http://certification.sybase.com/.

2   Either select the product family and product under Search by Base
     Product; or select the operating system and product under Search by
     Platform.

3   Select Search to display the availability and certification report for the
     selection.

❖   **Creating a personalized view of the Sybase Web site (including support
     pages)**

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

1   Point your Web browser to Technical Documents at
     http://www.sybase.com/support/techdocs/.

2   Click MySybase and create a MySybase profile.

11.2 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.

12. Accessibility features

This document is available in an HTML version that is specialized for accessibility. You can navigate the HTML with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Replication Server and the HTML documentation have been tested for compliance with U.S. government Section 508 Accessibility requirements. Documents that comply with Section 508 generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.

Note You might need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

For information about how Sybase supports accessibility, see Sybase Accessibility at http://www.sybase.com/accessibility. The Sybase Accessibility site includes links to information on Section 508 and W3C standards.