

Release Bulletin Replication Server® Heterogeneous Edition 15.2 for Linux, Microsoft Windows, and UNIX

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1. Accessing current release bulletin information

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

❖ Accessing release bulletins 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

Enclosed is Replication Server® Heterogeneous Edition (RSHE) version 15.2, which includes:

- Replication Server® 15.2
- Replication Agent™ 15.2
- Enterprise Connect™ Data Access (ECDA) 15.0

Note For RSHE 15.2, you must download and apply ECDA ESD #3. See “Updating ECDA 15.0 to ECDA 15.0 ESD #3” on page 10.

RSHE also supports and includes PowerDesigner® as a development and modeling tool. Download PowerDesigner separately.

RSHE is compatible with the same platform and operating system configurations as Replication Server 15.2, Replication Agent 15.2, and ECDA 15.0. For specific hardware and software requirements, see release bulletin for each product.

2.1 Software features

For a list of features supported by RSHE components for heterogeneous replication, see the new features guide for each product. In addition, the following is a list of new features that are “supported” for heterogeneous replication in RSHE 15.2:

- Oracle 11g support (except for SecureFiles, virtual columns, encrypted tablespace, and encrypted columns)
- Real Application Clusters (RAC) Oracle 11g

- Automatic Storage Management (ASM) Oracle 11g

For detailed information about Oracle feature support, see the *Replication Agent 15.2 New Features Bulletin*.

The following is a limited list of features that are “not supported” for heterogeneous replication in RSHE 15.2:

- Microsoft SQL Server Cluster
- Microsoft SQL Server 2008
- Oracle index-organized tables
- Oracle materialized views
- Oracle packaged stored procedures and functions (stand-alone procedures and functions are supported)
- Oracle procedures and functions having a BOOLEAN or SIMPLE_INTEGER parameter
- Oracle Flashback, Recycle Bin, and Flashback Recovery Area
- Oracle SecureFile large objects (LOBs)
- Oracle virtual columns
- Oracle RMAN utility
- Oracle encrypted columns
- Oracle encrypted partitions
- Oracle schema objects in encrypted tablespaces
- IBM DB2 Universal Database data-definition language (DDL) commands
- IBM DB2 Universal Database stored procedures
- Replication Server parallel DSI (for non-ASE databases)
- Replication Server warm standby (for non-ASE databases)
- Replication Server rs_init utility (for non-ASE databases)
- Replication Server rs_subcomp utility (for non-ASE databases)
- Replication Server automatic materialization (for non-ASE databases)
- Replication Server when replicating in an environment where other vendors are replicating (for non-ASE databases)

2.2 Datatypes

The following identifies the list of supported and not supported datatypes for ECDA ESD #3.

2.2.1 Support for replicating datatypes into IBM DB2 Universal Database datatypes

ECDA 15.0 ESD #3 supports replicating these Sybase datatypes into IBM DB2 UDB:

- bigint
- unsigned bigint
- unsigned integer
- unsigned smallint
- unsigned tinyint
- unichar
- univarchar

ECDA 15.0 ESD #3 does not support replicating these Sybase datatypes into IBM DB2 UDB:

- text
- image
- unitext

ECDA 15.0 ESD #3 supports replicating these IBM DB2 UDB datatypes:

- bigint
- graphic
- vargraphic

ECDA 15.0 ESD #3 does not support replicating these IBM DB2 UDB datatypes:

- blob
- clob
- dbclob

None of the replication components (Replication Agent, Replication Server, or ECDA) supports replicating these DB2 UDB datatypes:

- DATALINK
- DECFLOAT
- XML
- large identifier
- user-defined types

2.2.2 Support for replicating datatypes into Microsoft SQL Server datatypes

ECDA 15.0 ESD #3 supports replicating these Sybase datatypes:

- bigint
- unsigned bigint
- unsigned integer
- unsigned smallint
- unsigned tinyint
- unichar
- univarchar
- unitext

ECDA 15.0 ESD #3 supports replicating these Microsoft SQL Server datatypes:

- bigint
- nchar
- nvarchar
- ntext
- varbinary(max)
- varchar(max)
- nvarchar(max)
- sql_variant

Note The varbinary(max), varchar(max), nvarchar(max), and sql_variant datatypes are supported only in a replication environment (not for gateway or any other ECDA use).

None of the replication components (Replication Agent, Replication Server, or ECDA) supports replicating these Microsoft SQL Server datatypes:

- cursor
- table
- xml

2.2.3 Support for replicating certain datatypes into Oracle datatypes

ECDA 15.0 ESD #3 supports replicating these Sybase datatypes:

- bigint
- unsigned bigint
- unsigned integer
- unsigned smallint
- unsigned tinyint
- unichar
- univarchar
- unitext

ECDA 15.0 ESD #3 supports replicating the Oracle nclob datatype.

None of the replication components (Replication Agent, Replication Server, or ECDA) supports replicating these Oracle datatypes:

- UROWID
- REF
- MLSLABEL
- VARRAY
- Nested Tables
- Associative arrays
- Oracle-supplied datatypes
 - “Any” Types (SYS.ANYTYPE, SYS.ANYDATA, SYS.ANYDATASET)
 - XML Types (XMLType, URIType, DBURIType, XDBURIType, HTTPURIType)

- Spatial Types (MDSYS.SDO_GEOMETRY, SDO_TOPO_GEOMETRY, SDO_GEORASTER)
- Media Types (ORDSYS.ORDAudio, ORDSYS.ORDImage, ORDSYS.ORDImageSignature, ORDSYS.ORDVideo, ORDSYS.ORDDoc, SI_StillImage, SI_Color, SI_AverageColor, SI_ColorHistogram, SI_PositionalColor, SI_Texture, SI_FeatureList)
- Expression Filter Type
- User-defined datatypes (UDDs) that contain a LOB column.
- UDDs that are not final

2.3 Supported databases

Table 1 describes the various database server versions supported by RSHE.

Table 1: Database servers supported by RSHE

Database	Version	RSHE component version	
Adaptive Server® Enterprise	12.5.x, 15.0.x	Replication Server 15.2.	
Oracle	10g, 11g	Replication Server 15.2, Replication Agent 15.2, ECDA Option for Oracle 15.0 ESD #3 and later.	
Microsoft SQL Server	2005	Replication Server 15.2, Replication Agent 15.2, ECDA Option for ODBC 15.0 ESD #3 and later.	
IBM DB2 UDB	DB2 (UNIX, Linux, Windows)	8.2.2, 9.1, 9.5 ^a	Replication Server 15.2, Replication Agent 15.2, ECDA Option for ODBC 15.0 ESD #3 and later.
	DB2 (zSeries)	8, 9	ECDA Option for ODBC 15.0 ESD #3 and later. RSHE supports replication into mainframe DB2 as the replicate database, but does not support replication out of mainframe DB2 as the primary database. For this functionality, you must purchase a separate Replication Agent for DB2 z/OS.
	DB2 (iSeries) - AS/400	V5r4	ECDA Option for ODBC 15.0 ESD #3 and later. RSHE supports replication into iSeries (AS/400) DB as the replicate database, but does not support replication out of iSeries DB2 as the primary database.

- a. Replication Agent support for UDB 9.5 is limited to only the same features that Replication Agent supports for UDB 9.1. Replication Agent does not support the following features added in UDB 9.5: large identifiers, DECFLOAT datatype, and XML datatype.

2.4 Supported platforms

Table 2 describes the compatible platform and operating system configurations for RSHE.

Table 2: RSHE requirements

Platform	Operating system version
HP-UX Itanium	HP-UX 11.31 (11i v3) (64-bit)
IBM RISC System/6000	IBM AIX 5.3 (64-bit)
Linux/Intel	<ul style="list-style-type: none"> • RedHat Advanced Server 5.0, kernel-2.6.18-8.el5 • SuSE Linux Enterprise Server 10.0, Kernel version 2.6.16.21-0.8-smp
Microsoft Windows	<ul style="list-style-type: none"> • Microsoft Windows XP Professional Service Pack 2 or later • Microsoft Windows Server 2003, Standard Edition or Enterprise Edition • Microsoft Vista • Microsoft Windows Server 2008, Standard Edition or Enterprise Edition
Sun Solaris (SPARC)	Solaris version 9.0 or 10.0 (32-bit and 64-bit) <hr/> Note Replication Agent is supported only on 64-bit Sun Solaris.

Note Replication Agent for Microsoft SQL Server is supported only on Windows platforms.

Refer to the individual product's release bulletin for any patch level information for your operating system. For a complete list of supported operating systems, see the Sybase Platform Certification Web site at <http://certification.sybase.com/ucr/search.do>.

3. Special installation instructions

This section documents installation instructions that are not covered in *Replication Server Heterogeneous Edition 15.2 Quick Start Guide*.

3.1 Installing static license for Replication Agent 15.2

This section describes installing the *SYBASE_RSHE_RAX.lic* file that contains a valid SySAM license for Replication Agent component in RSHE 15.2.

- 1 Install Replication Agent 15.2 component from RSHE 15.2 release, if not already installed.
- 2 Stop the Replication Agent instance if it is running.
- 3 Copy the Replication Agent license file to these location:

- UNIX – *\$SYBASE/SYSAM-2_0/licenses*
- Windows – *%SYBASE%\SYSAM-2_0/licenses*

where *\$SYBASE* or *%SYBASE%* is the location where you have installed the Replication Agent.

- 4 Restart the Replication Agent instance.
- 5 Check the Replication Agent log file to make sure that the Replication Agent has started successfully. The Replication Agent log files can be found at these locations:

- UNIX – *\$SYBASE/RAX-15_2/<instance_name>/log/<instance_name>.log*
- Windows – *%SYBASE%\RAX-15_2\<instance_name>\log\<instance_name>.log*

where *\$SYBASE* or *%SYBASE%* is the location where you have installed the Replication Agent.

3.2 Installing static license for ECDA 15.0

This section describes installing the *SYBASE_RSHE_ECDA.lic* file that contains a valid SySAM license for ECDA component in RSHE 15.2.

- 1 Install ECDA component from RSHE 15.2 release, if not already installed.
- 2 Stop ECDA if it is running.
- 3 Copy the ECDA license file to these location:

- UNIX – *\$SYBASE/SYSAM-2_0/licenses*
- Windows – *%SYBASE%\SYSAM-2_0/licenses*

where *\$SYBASE* or *%SYBASE%* is the location where you have installed ECDA.

- 4 Restart the ECDA server instance.
- 5 Check the ECDA instance log file to make sure that the ECDA instance has started successfully. The ECDA log files can be found at these locations:
 - For ECDA Option for Oracle:
 - UNIX – `/$SYBASE/DCO-15_0/<servername>.log`
 - Windows – `%SYBASE%\DCO-15_0\<servername>.log`where `$SYBASE` or `%SYBASE%` is the location where you have installed the ECDA Option for Oracle.
 - For ECDA Option for ODBC:
 - UNIX – `/$SYBASE/DC-15_0/<servername>.log`
 - Windows – `%SYBASE%\DC-15_0\<servername>.log`where `$SYBASE` or `%SYBASE%` is the location where you have installed the ECDA Option for ODBC.

3.3 Updating ECDA 15.0 to ECDA 15.0 ESD #3

You must download ECDA ESD #3 from the Sybase EBFs/Maintenance site at <http://downloads.sybase.com/> under the ECDA product listing.

4. Known issues

For known issues concerning Replication Server, Replication Agent, and ECDA, see these documents:

- *Replication Server 15.2 Release Bulletin* for your platform
- *Replication Agent 15.2 Release Bulletin*
- *Enterprise Connect Data Access 15.0 Release Bulletin* for your platform

The known issues for the Replication Server Heterogeneous Edition that are listed in these sections are in addition to those described in the individual product release bulletins.

4.1 IBM AIX licensing on Replication Server 15.2 and Replication Agent 15.2

[CR# 570705] In Replication Server 15.2 and Replication Agent 15.2 on IBM AIX, there is a change to the process of how Replication Server and Replication Agent determines the number of CPUs available to it. Customers running Replication Server, or Replication Agent on IBM AIX with logical partitions may find that the number of CPUs reported has changed with 15.2. This happens because Replication Server and Replication Agent now counts the total number of CPUs available to the partition. This may prevent these products from starting.

Replication Server and Replication Agent does not currently support subcapacity licensing for IBM LPAR. If you believe you may encounter this issue, contact Sybase Customer Support to raise a support incident.

4.2 Red Hat Enterprise Linux 5.0: Error while loading shared libraries

If you are running RSHE components on Red Hat Enterprise Linux 5.0, you may be unable to start either Replication Agent or ECDA due to an “error while loading shared libraries” message.

Workaround: Change the firewall configuration from *enforcing* to *permissive*. You must have root or sudo permission to make this change.

4.3 Known issues for the Sybase installer

This section describes known issues with the Sybase installer that are not specific to a particular data server type.

4.3.1 Cannot view text fields properly when using Hummingbird Exceed from Windows

If you use Hummingbird Exceed from a Windows workstation to install Replication Agent on a UNIX host, you might not be able to view all of the text fields on the Sybase installer screens.

Workaround: Either use a native X-Windows session to run the Sybase installer, or run it in console or silent mode. See the *Replication Agent Installation Guide*.

4.3.2 Sybase Central fails to open after uninstalling Replication Agent

[CR# 399954] Uninstalling Replication Agent removes the SYBASE system environment variable. Consequently, Sybase Central™ cannot open.

Workaround: Redefine the SYBASE system environment variable.

4.4 Known issues for Oracle

This section describes replication issues for Oracle.

4.4.1 No support for automatic failover when replicating into a Real Application Cluster (RAC) system

ECDA 15.0 supports replication into an Oracle instance, even if that instance is a node in a RAC system. However, if the configured node fails, ECDA 15.0 does not support automatically going to another node in the RAC system.

Workaround: Download and install ECDA 15.0 ESD #3 to obtain this functionality.

4.4.2 LOB value not being applied to existing row

[CR# 564330] When Sybase Replication replicates a LOB column, the ECDA for Oracle first determines the ROWID value for the Oracle row that should contain the LOB. The row for that ROWID is updated with the LOB value. If the table in the replicate Oracle database is a reference table and the parent table is partitioned across multiple tablespaces, then the ROWID returned for the reference table may be incorrect, resulting in the LOB value not being applied to the expected row. The Oracle bug ID for this incorrect ROWID problem is 8417690.

Workaround: None.

5. 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.

6. Other sources of information

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

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

To access the Sybase Product Manuals Web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

6.1 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 Certification Report.
- 3 In the Certification Report filter, select a product, platform, and time frame, and then click Go.
- 4 Click a Certification Report title to display the report.

❖ Finding the latest information on component certifications

- 1 Point your Web browser to Availability and Certification Reports at <http://certification.sybase.com/>.
- 2 Either select the product family and product under Search by Base Product, or select the platform and product under Search by Platform.
- 3 Select Search to display the availability and certification report for the selection.

❖ 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.

6.2 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.

7. 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.

The HTML documentation has been tested for compliance with the 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.

For Section 508 compliance statement for Sybase products, go to the Voluntary Product Assessment Template at http://www.sybase.com/detail_list?id=52484

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.

