

Replication Server® 15.7.1 SP100

UNIX and Linux

DOCUMENT ID: DC01232-01-1571100-01

LAST REVISED: May 31, 2013

Copyright © 2013 by Sybase, Inc. All rights reserved.

This publication pertains to Sybase software and to any subsequent release until otherwise indicated in new editions or technical notes. Information in this document is subject to change without notice. The software described herein is furnished under a license agreement, and it may be used or copied only in accordance with the terms of that agreement.

Upgrades are provided only at regularly scheduled software release dates. No part of this publication may be reproduced, transmitted, or translated in any form or by any means, electronic, mechanical, manual, optical, or otherwise, without the prior written permission of Sybase, Inc.

Sybase trademarks can be viewed at the Sybase trademarks page at http://www.sybase.com/detail?id=1011207. Sybase and the marks listed are trademarks of Sybase, Inc. (a) indicates registration in the United States of America.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world.

Java and all Java-based marks are trademarks or registered trademarks of Oracle and/or its affiliates in the U.S. and other countries.

Unicode and the Unicode Logo are registered trademarks of Unicode, Inc.

All other company and product names mentioned may be trademarks of the respective companies with which they are associated

Use, duplication, or disclosure by the government is subject to the restrictions set forth in subparagraph (c)(1)(ii) of DFARS 52.227-7013 for the DOD and as set forth in FAR 52.227-19(a)-(d) for civilian agencies. Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

Contents

Product Summary	1
Change in Release Version Number	
Supported Platforms and Operating Systems	
Replication Server 15.7.1 SP100 64-bit for HP-	
UX Itanium	5
Replication Server	5
Replication Manager	5
Replication Monitoring Services	6
Sybase Control Center	6
ExpressConnect for HANA DB	6
ExpressConnect for Oracle	7
Separately Licensed Products	7
Replication Server Options	7
Replication Server Data Assurance Option	8
Product Editions and Licenses	8
Product Compatibility	
Adaptive Server Enterprise	
Compressed LOB Column Replication	
Replication Server Interoperability	
Sybase Control Center Compatibility	
HANA DB Compatibility	
Unsupported Microsoft SQL Server Datatypes	
Installation and Upgrade	
Special Installation Instructions	12
Installing ODBC Libraries for ExpressConnect	
for HANA DB	
Enabling Asynchronous Disk I/O	
Special Upgrade and Downgrade Instructions	15
Incompatible Function String in	
rs_sqlserver_function_class	
ERSSD Upgrade Requirement	15

Release Bulletin iii

Known Issues	15
Known Issues for Replication Server	16
Oracle-to-Oracle Database Resynchronization	
Script	22
Known Issues for Replication Agent	26
Known Issues for Replicating to Sybase IQ	27
Known Issues for Replicating to HANA DB	29
Known Installation Issues	29
Known Issues for SySAM License	32
Documentation Changes	32
No Support for Oracle to Oracle Reference	
Implementation	33
Replication Manager Plug-In Route Upgrade	33
Replication Server System Tables Diagram	33
SQL Anywhere Replication Support	34
Updated ASA Path Names	
Obtaining Help and Additional Information	34
Technical Support	
Downloading Product Updates	
Product and Component Certifications	
Accessibility Features	

iv Replication Server

Product Summary

This release bulletin provides late-breaking information about Replication Server[®] version 15.7.1 SP100. A more recent version may be available on the Web.

Change in Release Version Number

Software patches currently known to Sybase[®] customers as ESDs (Electronic Software Deliveries) following major or minor releases are now referred to as SPs (support packages), with numbers of up to three digits.

See SAP® Release Strategy for all Major Software Releases at: https://service.sap.com/releasestrategy. There is no change to upgrade or downgrade procedures because of this change in version number.

Supported Platforms and Operating Systems

Check the system requirements and system patches for the server on which you will install Replication Server.

Platform	Supported Operating Systems and Version
HP-UX Itanium	• HP-UX 11.31
(64-bit)	Note: The installer requires the gzip utility. Ensure that the path to gzip is set in the \$PATH environment variable.

Platform	Supported Operating Systems and Version
Linux x86-64 (64-bit)	 Red Hat Enterprise Linux 5.5 kernel – 2.6.18-194.el5 #1 SMP glibc – 2.5-49 Red Hat Enterprise Linux 5.6 kernel – 2.6.18-238.5.1.el5 #1 SMP glibc – 2.5-58 Red Hat Enterprise Linux 5.7 kernel – 2.6.18-274.el5 glibc – 2.5-49 (64-bit) Red Hat Enterprise Linux 5.8 kernel – 2.6.18-339.el5 glibc – 2.5-105 (ExpressConnect for HANA DB) Red Hat Enterprise Linux 6 Red Hat Enterprise Linux 6.2 kernel – 2.6.32-131.0.15.el6.x86_64 #1 SMP glibc – 2.12-1.47 Red Hat Enterprise Linux 6.3 kernel – 2.6.32-220.el6.x86_64 #1 SMP glibc – 2.12-1.80 (ExpressConnect for HANA DB) SuSE Linux Enterprise Server SLES 11 SuSE Linux Enterprise Server SLES 11.1 kernel – 2.6.32.12-0.7-default #1 SMP glibc –2.11.1-0.17.4 SuSE Linux Enterprise Server SLES 11.2 kernel – default-3.0.13-0.27.1 glibc –2.11.3-17.31.1

Platform	Supported Operating Systems and Version
Linux on IBM p-Series (Linux on POWER) (64-bit)	 Red Hat Enterprise Linux 5.5 kernel – 2.6.18-53.el5 #1 SMP glibc – 2.5-49 Red Hat Enterprise Linux 5.7 kernel – 2.6.18-274.el5 glibc – 2.5-49 (64-bit) Red Hat Enterprise Linux 5.8 kernel – 2.6.18-339.el5 glibc – 2.5-105 Red Hat Enterprise Linux 6.0 kernel – 2.6.32-71.el6.ppc64 #1 SMP glibc – 2.12-1.7.el6.ppc SuSE Linux Enterprise Server SLES 11 kernel – 2.6.27.19-5-ppc64 #1 SMP glibc – 2.9-13.2 SuSE Linux Enterprise Server SLES 11.2 kernel – default-3.0.13-0.27.1 glibc –2.11.3-17.31.1
	Note: ExpressConnect for HANA DB is not supported on Linux on IBM p-Series. Before you install Replication Server, install the runtime libraries for the IBM XL C compiler. To verify that IBM XL C runtime packages are installed, issue: vacpp.rte-10.1.0-0 If the message is "package vacpp.rte-10.1.0-0 is not installed", download the IBM XL C version 10.1 runtime executables from the IBM Web site at https://www-304.ibm.com/support/docview.wss?uid=swg24021253. Make sure that you select the appropriate installation package for your operating systems from the download table.

Platform	Supported Operating Systems and Version
IBM AIX (64-bit)	AIX 6.1AIX 7.1
	Before you install Replication Server, install the IBM XL C/C++ Runtime for AIX and the SMP Runtime Libraries required 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 are available on the Web site under "IBM XL C/C++ Enterprise Edition for AIX, Runtime Environment and Utilities."
	To verify that the libraries are installed, issue:
	source \$SYBASE/SYBASE.csh cd \$SYBASE/\$SYBASE_REP/bin ldd ./repserver
Solaris	Solaris 10
(64-bit)	Solaris 11
VMware VSphere ESXi	VSphere ESXi 5.0
	Replication Server on Linux x64 and Solaris x64

On Linux: Linux distribution vendors often provide errata packages, allowing you to upgrade and fix known issues 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.

Replication Server 15.7.1 SP100 64-bit for HP-UX Itanium

The 64-bit version of Replication Server for HP-UX Itanium uses the libtcl64.cfg file to provide configuration information such as driver, directory, and security services for Open Client/Server $^{\text{TM}}$ applications.

The 64-bit version of Replication Server for HP-UX 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-UX 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-UX Itanium.

Replication Server

Replication Server coordinates data replication activities for local databases and exchanges data with Replication Servers that manage data at other sites.

For detailed information about new features in Replication Server 15.7.1 SP100, see the *Replication Server New Features Guide*.

Replication Manager

The Replication Manager (RM) is a utility for creating, managing, and monitoring replication environments, and is available as a plug-in to Sybase CentralTM.

With Replication Server 15.7.1, Replication Server installation media does not include Replication Manager. To continue using Replication Manager, download and install these tools from the Sybase Web site. Refer to the Replication Manager README for its known issues and workarounds. See *Obtaining Help and Additional Information* > *Downloading Products Updates*.

Replication Manager is not certified for use with Replication Server Multi-Path ReplicationTM or 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 the *Replication Server Reference Manual*.

Replication Monitoring Services

Replication Monitoring Services (RMS) monitors the servers and components in a replication environment, provides the ability to control the flow of data in the replication environment, and sets the configuration parameters.

With Replication Server 15.7.1, Replication Server installation media does not include Replication Monitoring Services. To continue using Replication Monitoring Services, download and install these tools from the Sybase Web site. Refer to the Replication Monitoring Services README for its known issues and workarounds. See *Obtaining Help and Additional Information* > *Downloading Products Updates*.

RMS is not certified for use with Replication Server Multi-Path Replication or Adaptive Server Enterprise Cluster Edition.

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

Sybase Control Center

Sybase Control Center (SCC) for Replication provides status information at a glance, using server monitors and a heat chart for displaying the availability or status of a specific server.

The server monitors display critical performance statistics along replication paths and visually displays replication in a topology view. The server monitors also display critical performance counters to aid you in troubleshooting replication performance.

In *Sybase Control Center 3.2.8*, see *Sybase Control Center 3.2.6* for *Replication*. Although you can use Sybase Control Center 3.2.6 with Replication Server 15.7.1 SP100, Sybase Control Center 3.2.6 for Replication does not support the new features in Replication Server 15.7.1 SP100.

ExpressConnect for HANA DB

ExpressConnect for HANA DB (ECH) is an embedded library that is loaded by Replication Server for connectivity to support replication to SAP HANA® database.

Replication Server supports the replication of data through ExpressConnect for HANA DB to the HANA database from these primary databases:

- Adaptive Server[®]
- Oracle
- Microsoft SQL Server

• DB2 UDB on Linux, UNIX, and Windows

See ExpressConnect for HANA DB and Replicate Database Connectivity for HANA DB in the Replication Server Heterogeneous Replication Guide.

ExpressConnect for Oracle

ExpressConnect for Oracle (ECO) is an embedded library that is loaded by Replication Server for connectivity to support replication to 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.

See the *ExpressConnect for Oracle Configuration Guide* in Replication Server Options 15.7.1 SP100 product documentation.

Separately Licensed Products

Obtain a separate license for each Replication Server and Replication Server Options component.

Replication Server Options

Replication Server Options may consist of a Replication Agent[™] and either Enterprise Connect[™] Data Access (ECDA), or ExpressConnect (for Oracle or HANA DB). You must have Replication Server to obtain Replication Server Options.

Replication Server Options are available in these data-source-specific versions: for Oracle, Microsoft SQL Server, IBM DB2 Universal Database (UDB), and SAP HANA database. See the *Release Bulletin for Replication Server Options for Linux, Microsoft Windows, and UNIX* for details about supported platforms and compatible Replication Server versions.

ExpressConnect for Oracle

You can use ExpressConnect for Oracle (ECO) if you have a licensed Replication Server and have purchased Replication Server Option for Oracle, which includes the additional ECO license. See *Obtaining ECO Static License* in the *ExpressConnect for Oracle Configuration Guide*.

ExpressConnect for HANA DB

ExpressConnect for HANA DB is installed with Replication Server. There is no separate installer for ExpressConnect for HANA DB. For replication to HANA DB, use the license key that you generate for your product during installation:

- SAP Sybase Replication Server, option for SAP HANA, or
- SAP Sybase Replication Server, SAP HANA edition

See Replication Server Quick Start Guide for HANA DB.

Replication Server Data Assurance Option

Replication Server Data Assurance (DA) Option is available as a separately licensed product for Replication Server and supports Replication Server versions 15.1 and later.

Replication Server DA Option compares row data and schema between any combination of Adaptive Server and Sybase[®] IQ, Oracle, or SAP HANA databases and reports discrepancies.

Replication Server Data Assurance Option is licensed through SySAM license manager and is available on multiple platforms. See Replication Server Data Assurance Option documentation for additional information.

Product Editions and Licenses

Replication Server is released as two separate product editions— Enterprise Edition (EE) and Real-Time Loading Edition (RTLE) — that comprise different base and optional features, and which require separate licences.

Although real-time loading is supported on all platforms that Replication Server supports, Replication Agent for Oracle (RAO) is not available on Linux on POWER. However, you can run RAO on any of the platforms it supports. For platforms on which RAO is available, see the *Installation Guide for Replication Agent* in the Replication Server Options documentation.

See Replication Installation Guide > Planning Your Installation > Obtaining a License.

To purchase licensed options, contact your Sybase sales representative.

Product Compatibility

Replication Server has been tested for compatibility with Adaptive Server Enterprise and other Sybase products.

Adaptive Server Enterprise

Review the Adaptive Server versions and its operating systems that are compatible with Replication Server.

Replication Server version 15.7.1 SP100 is fully compatible with both 32-bit and 64-bit versions of Adaptive Server version 15.0.3 and later on HP-UX, IBM AIX, Linux, and Solaris.

See the "Interoperability Between Adaptive Server and Replication Server" table.

Warning! Replication Server 15.7.1 is incompatible with the Adaptive Server 15.7 GA release. You can download the latest Adaptive Server 15.7 EBF from the Sybase Downloads

Web site or contact Sybase Technical Support for detail to download the latest Adaptive Server 15.7 EBF for compatibility with Replication Server 15.7.1.

See the Replication Server New Features Guide.

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

See also

• Replication Server Interoperability on page 9

Compressed LOB Column Replication

Only Adaptive Server 15.7 ESD #1 and later and Replication Server 15.7.1 and later support compressed large object (LOB) column replication. All intermediate Replication Servers in the route from Adaptive Server must also be version 15.7.1 and later.

Replication Server Interoperability

Review the interoperability of Replication Server against other Sybase products, across different platforms, and versions.

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.

Table 1. Interoperability Between Adaptive Server and Replication Server

Operating System	Replica	tion S	erver		Adaptive Server					
	15.7.1 SP100	15. 7.1	15. 7	15 .6	15 .5	15 .2	15. 7 SP1 00	15. 7*	15. 5	15. 0.3
HP-UX Itanium (64-bit)	x	X	x	х	x	x	X	х	X	х
IBM AIX (32-bit)	n/a	n/a	n/a	n/a	n/a	X	n/a	n/a	n/a	n/a
IBM AIX (64-bit)	x	X	X	X	х	n/a	X	х	X	X
Linux x86 (32-bit)	n/a	n/a	n/a	х	х	x	n/a	n/a	х	X
Linux x86-64 (64-bit)	X	X	X	X	X	n/a	X	X	X	X
Linux on POWER (64-bit)	X	X	X	X	X	X	X	X	X	X
Solaris SPARC (32-bit)	n/a	n/a	n/a	n/a	n/a	X	n/a	n/a	X	X
Solaris SPARC (64-bit)	X	X	X	X	X	n/a	X	X	X	X

Operating System	Replica	tion S	erver		Adaptive Server					
	15.7.1 SP100	15. 7.1	15. 7	15 .6	15 .5	15 .2	15. 7 SP1 00	15. 7*	15. 5	15. 0.3
Solaris x86-64 (32-bit)	n/a	n/a	n/a	n/a	n/a	X	n/a	n/a	n/a	n/a
Solaris x86-64 (64-bit)	х	х	х	х	х	n/a	X	X	X	X
Microsoft Windows x86 (32-bit)	х	X	х	X	X	Х	X	X	X	X
Microsoft Windows x64 (64-bit)	Х	х	х	х	х	n/a	x	х	х	х
VMware VSphere ESXi VSphere ESXi 5.0	х	n/a	n/a	n/a	n/a	n/a	х	n/a	n/a	n/a

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

Table 2. Interoperability Between Replication Server, Open Client/Server, and Sybase IQ

Operating System	Repli	cation	Open Client/ Server			Sybase IQ					
	15.7 .1 SP1 00	15.7. 1, 15.7	15.6, 15.5	15. 2	15.7 SP1 00	15. 7, 15. 5	15. 0	16. 0	15. 4	15.3	15. 2
HP-UX Itani- um (64-bit)	X	x	X	X	X	х	x	n/a	х	n/a	n/a
IBM AIX (32-bit)	n/a	n/a	n/a	х	Х	х	х	n/a	n/a	n/a	n/a
IBM AIX (64-bit)	х	х	x	n/a	Х	х	х	n/a	х	n/a	Х
Linux x86 (32- bit)	n/a	n/a	х	Х	Х	х	х	n/a	n/a	n/a	n/a

10 Replication Server

^{*} Adaptive Server 15.7 GA is incompatible with Replication Server 15.7.1, download the latest Adaptive Server 15.7 EBF from the Sybase Downloads Web site.

Operating System	Repli	cation	Open Serve		it/	Sybase IQ					
	15.7 .1 SP1 00	15.7. 1, 15.7	15.6, 15.5	15. 2	15.7 SP1 00	15. 7, 15. 5	15. 0	16. 0	15. 4	15.3	15. 2
Linux x86-64 (64-bit)	X	x	х	n/a	X	x	х	х	х	x	х
Linux on POW- ER (32-bit)	n/a	n/a	n/a	n/a	х	х	х	n/a	n/a	n/a	n/a
Linux on POW- ER (64-bit)	Х	х	х	х	X	х	х	n/a	х	n/a	х
Solaris SPARC (32-bit)	n/a	n/a	n/a	х	X	х	х	n/a	n/a	n/a	n/a
Solaris SPARC (64-bit)	Х	х	х	n/a	x	х	х	n/a	х	х	х
Solaris x86-64 (32-bit)	n/a	n/a	n/a	х	x	х	х	n/a	n/a	n/a	n/a
Solaris x86-64 (64-bit)	Х	х	х	n/a	X	х	х	n/a	n/a	n/a	n/a
Microsoft Windows x86 (32-bit)	Х	х	х	х	Х	Х	х	n/a	n/a	n/a	n/a
Microsoft Windows x64 (64-bit)	Х	х	х	n/a	х	X	х	n/a	х	Х	n/a
VMware VSphere ESXi VSphere ESXi 5.0	x	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

 $\label{eq:loss} Legend: x = compatible; n/a = product \ not \ available \ or \ does \ not \ work \ with \ Replication \ Server \ on \ that \ platform.$

Sybase Control Center Compatibility

Sybase Control Center 3.2.8 includes Sybase Control Center 3.2.6 for Replication. Although you can use Sybase Control Center 3.2.6 with Replication Server 15.7.1 SP100, Sybase

Control Center 3.2.6 for Replication does not support the new features in Replication Server 15.7.1 SP100.

In Sybase Control Center 3.2.8, see Sybase Control Center 3.2.6 for Replication.

HANA DB Compatibility

Replication Server 15.7.1 SP100 supports HANA database version 1.0 revision 48 and later.

See Replication Server Quick Start Guide for HANA DB and the Replication Server Support for HANA DB in the Replication Server Quick Start Guide New Features Guide.

Unsupported Microsoft SQL Server Datatypes

Replication of some Microsoft SQL Server datatypes is not supported when the replicate database is HANA database.

- varbinary(max)
- varchar(max)
- nvarchar(max)

Installation and Upgrade

Get 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, see the *Replication Server Installation Guide*.

Special Installation Instructions

Additional installation updates for Replication Server that are omitted from or incorrect in the installation guide.

Installing ODBC Libraries for ExpressConnect for HANA DB

ExpressConnect for HANA DB (ECH) does not include the required HANA DB ODBC drivers. Download these libraries from the SAP Service Marketplace and install them after you have installed Replication Server.

 Download the HANA client for your operating system from the SAP Support Marketplace:

- a) Go to SAP Support Package and Patches at http://service.sap.com/patches.
- b) Select **A-Z Index** in the Find your software tab or in the left sidebar.
- c) Click **H** in the Support Packages and Patches tab.
- d) If you see a message regarding the need for authorization at the top of the page, follow the instructions provided to request authorization to download packages before proceeding.
- e) Select SAP HANA PLATFORM EDITION.
- f) Select SAP HANA PLATFORM EDIT. 1.0 or the latest available version.
- g) Select Comprised Software Component Versions > SAP HANA CLIENT 1.00 or the latest available version.
- h) Select the appropriate operating system, and scroll to the Downloads tab.
- Select the appropriate IMDB_CLIENT or the revision level check box, and click Add to Download Basket.
- j) In the SAP Download Area pop-up window, click **Download Basket**. The Download Basket tab shows all items selected for download from the SAP Support Marketplace, including the selected SAP HANA client. Select the item to download. For example, click **Revision 52 for SAP HANA CLIENT 1.00** in the list.

This package is downloaded to the local file system.

Note: You do not need to select Get Download Manager to download this package.

- 2. Extract the package, and issue:
 - > sapcar.exe -xvf yourdownloadedpackage.sar

where the name of the *sapcar.exe* depends on the operating system and its version selected.

If you do not already have the **SAPCAR** tool, you can obtain it this way:

- a) Go to SAP Support Package and Patches at http://service.sap.com/patches
- b) Select **A-Z Index** in the Find your software tab or in the left sidebar.
- c) Click S in the Support Packages and Patches tab.
- d) Select **SAPCAR** from the list.
- e) Select **SAPCAR 7.20** or the latest available version.
- f) Repeat steps h through j in step 1.

After extracting the package, you should see the hdbinst and hdbsetup executables.

3. Follow the instructions in the *SAP HANA Database – Client Installation and Update Guide* at *https://websmp205.sap-ag.de/~sapidb/011000358700000604582011D* to install the HANA client component for your operating system.

You can also obtain this guide in this way:

- a) Go to SAP Help Portal at http://help.sap.com/.
- b) Select **SAP In-Memory Computing** > **SAP HANA**.
- c) Click Installation and Upgrade Information.
- d) Select and download the PDF for SAP HANA Client Installation Guide.

4. Copy the ODBC driver library from the HANA client installed directory to the Rep Server install dir\REP-15 5\connector\lib directory. Install:

Platform	Library Name
Windows (32-bit)	LIBODBCHDB32.dll
Windows (64-bit)	LIBODBCHDB.DLL
UNIX (64-bit)	libodbcHDB.so

Enabling Asynchronous Disk I/O

HP-UX users must enable asynchronous I/O. Enabling asynchronous I/O improves I/O performance on character or raw block devices.

Prerequisites

Shut down Replication Server.

Install HP asynchronous I/O driver from the system administration manager (SAM). For help with installing this driver, contact your operating system administrator or HP technical support.

Task

1. Launch the kernel configuration:

```
kcweb -F
```

- 2. Select Modules.
- 3. Select asyncdsk and change the Next Boot to static.
- **4.** Rebuild the kernel and restart the system.
- **5.** Using *userid*, root, execute:

```
#/etc/mknod/dev/async c 101 4
#chmod 0660/dev/async
#chown uid /dev/async
#/etc/setprivgrp ugrp MLOCK
```

where:

- *uid* is the user ID who is starting Adaptive Server.
- *ugrp* is the group to which the user ID belongs.

Special Upgrade and Downgrade Instructions

Review the additional special upgrade and downgrade instructions for Replication Server.

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.

Incompatible Function String in rs_sqlserver_function_class

When you upgrade from a pre-15.7 version of Replication Server using a customized **rs_sqlserver_function_class** in your connection, you may lose some customized function-string-class scope functions.

Sybase recommends that you back up these function strings before upgrading:

- rs_commit
- · rs_get_lastcommit
- rs_get_thread_seq
- · rs_get_thread_seq_noholdlock
- · rs initialize threads
- rs_ticket_report
- rs_update_threads

ERSSD Upgrade Requirement

Embedded Replication Server System Database (ERSSD) requires Sybase SQL Anywhere[®], which is compatible with 64-bit versions operating system.

If you are upgrading to Replication Server 15.7.1 SP100 on Solaris SPARC, Solaris 10 x64, 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 SOL Anywhere database.

Known Issues

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

Note: If you have a Sybase[®] support contract, 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.

If you have an SAP® support contract, use the Sybase xSearch to search for knowledge-based articles and solved cases. Go to the SAP Sybase Support Portal at http://service.sap.com/sybase/support, log in, and select **KBAs & Solved cases** to start the xSearch.

Key to issue types:

- RTC SAP® Release to Customer tracking number.
- CSN SAP Customer Services Network tracking number.
- **CR** Sybase[®] Change Request number.
- N/A No tracking number.

Known Issues for Replication Server

Known issues and workarounds for Replication Server.

Table 3. Replication Server Issues

CR#	Description									
739573	Cannot create direct load subscription when there is no route from the replicate Replication Server to the primary Replication Server.									
	Workaround: Either:									
	 Create a route from the replicate Replication Server to the primary Replication Server, or, From the RSSD of the replicate Replication Server, get the rs_databases row for the replicate database and insert this row to the RSSD of the primary Replication Server, then restart the primary Replication Server. 									
739186	Replication Server does not support SQM cache size greater than 2GB. Workaround: Reconfigure the block_size, sqm_page_size, sqm_cache_size parameters to reduce the cache size to less than 2GB. See configure replication server in the Replication Server Reference Manual.									
	See configure replication server in the Replication Server Reference Manual.									

CR#	Description			
739068	Replication Server fails to set unichar value when the table has 256 or more columns.			
	When there are more than 255 columns in a table, and if there are primary and replication definition column of unichar or univarchar, create subscription direct load may fail with this error message in the Replication Server log file:			
	<pre>E. 2013/05/08 14:17:29. ERROR #1027 MatApply() - /dsiu- til.c(420) Open Client Client-Library error: Error: 34, Severity 5 '[Ex- pressConnect for ODBC Data Source statement] /calm/bldr/rsconx/odbc/generic/src/odbccolumn.cpp: 1241 odbcCol::SetValue failed, value too long. Setting Parameter 15 to it's bind location failed. '.</pre>			
	Workaround: Set the length of the corresponding replicate column twice as long as the one in the primary column.			
738978	After using rs_init user database "upgrade" function and it finishes successfully, the admin version, "connection" command in Replication Server displays an incorrect Database information not found message. Workaround: None.			
738928	Replication Server does not include the hds_oracle_new_set-up_for_replicate.sql script for the Oracle-to-Oracle database resynchronization.			
	Workaround: Use the <i>Oracle-to-Oracle Database Resynchronization Script</i> on page 22.			
738917	For an Adaptive Server or a non-Adaptive Server primary database, a materialization error occurs in Replication Server if the table replication definition includes:			
	 An LOB column A column with a map to clause No replicate_if_changed LOB column_name [, column_name] clause 			
	Workaround: Add a replicate_if_changed <i>LOB column_name</i> [, <i>column_name</i>] clause into the replication definition. For an Oracle primary database, you must define replicate_if_change .			

CR#	Description		
738172	When the parallel DSI is enabled, and dsi_bulk_copy or dynamic_sql is set to on, Replication Server may fail if the transaction size is greater than dsi_large_xact_size.		
	Workaround: Either set:		
	 The parallel DSI to off, or, The dsi_bulk_copy and dynamic_sql to off. 		
737550	You cannot use dynamic_sql with an Adaptive Server replicate data server if tables have more 255 columns.		
	Workaround : Configure the replication definition and/or connection to use either Language or Bulk (dsi_bulk_copy) interface.		
736202	When you set autocorrection to on for the replication definition table, Replication Server does not always update text columns correctly.		
	Workaround: Set autocorrection to off.		
730159	Replication Server does not use the default value for a target value where none is supplied in the source value in a user-defined datatypes (UDDs) translation.		
	Workaround: None.		
728541	Replication of LOB columns fails when data compression is enabled and you see these error messages in the Replication Server log:		
	E. 2013/04/27 18:07:11. ERROR #5163 DSI EXEC(108(1) repl0_16504.tdb4) - /dsiexec.c(9510) Text data is being converted from one character set to another. The length of the converted text data is longer than the length of the original text data times the config option 'dsi_text_convert_multiplier'. The value for the database 'repl0_16504.tdb4' is '0.000000'. Please increase this value for the database and resume the DSI thread.		
	See also Adaptive Server CR #738552.		
	Workaround: None.		
724706	Replication Server does not start if the LANG environment variable is set to any value except a valid Open Client/Server language.		
	Workaround : Set the LANG environment variable to a supported Open Client/Server or Replication Server language, or to "".		

18 Replication Server

CR#	Description	
718889	If the maintenance user does not have adequate permission on the rs_dbversion table, then admin version, "connection" may return incorrect status.	
	Workaround: When issuing admin version , " connection ", grant select permission on the rs_dbversion table to maintenance user before the maintenance user executes admin version , " connection ".	
718342	Reference implementation fails because rs_init requires a non-NULL password for Replication Server.	
	Workaround : Provide a non-NULL password for the "sa" user in the configuration file.	
708716	Upgrading versions of Replication Server earlier than 15.5 to version 15.5 and later may fail if the preupgrade Replication Server is not an ID Server.	
	Workaround: Either:	
	 Use sysadmin system_version to obtain the new version from the ID Server; or, Restart the preupgrade Replication Server. 	
704615	Replication Server may incorrectly interpret LTL commands sent by RepAgent if you enable both the asynchronous parser and Executor command cache features simultaneously.	
	Workaround: Do not use both features simultaneously	
703894	When you set "Initialize standby using dump and load" to yes either in a resource file or in an interactive rs_init, rs_init does not add the maintenance user ID, and the Replication Server objects, such as tables and stored procedures, to the standby database.	
	Workaround: Use sp_addlogin to add the maintenance user to the standby database.	
702699	(Linux) You cannot create an ExpressConnect for Oracle (ECO) connection if you have selected the sample Replication Server during installation.	
	Workaround: Manually start the sample Replication Server after installation.	

CR#	Description		
696035	Replication Server does not support upgrade Oracle database connections using ECO.		
	For connections with DCO, when you upgrade Replication Server to 15.7.1 GA and later, you see the DSI shutdown error:		
	" "CONN_ID": invalid identifier"		
	Workaround : Exclude your Oracle user databases from the seamless upgrade command, issue:		
	repserver-upgrnodb oracle_user_db_id		
	and manually load the Oracle upgrade scripts.		
	See Upgrading Non-ASE User Databases and User Databases Not Supported by sysadmin upgrade in the Replication Server Configuration Guide.		
694983	rs_init does not connect to an Embedded Replication Server System Database (ERSSD) using Adaptive Server® Anywhere when upgrading or downgrading with versions earlier than 15.5.		
	Workaround: Issue this trace option in rs_init:		
	rs_init -r resource_file_name -T T_SEND_CLEARTEXT_PASSWORD		
694628	In Adaptive Server to Adaptive Server replication, Replication Server always uses batch mode to send class-level function strings—such as rs_usedb and rs_set_ciphertext—that set connection attributes, even if you set batch off for the connection.		
	Workaround: None.		
690422	Incorrect value for text and image columns.		
	In a warm standby environment, if you set text and image columns of a table to do_not_replicate on the active database, and you create a table replication definition for this table without send standby replication definition columns, the replication definition does not include the text and image columns. As a result, the standby database gets incorrect value for the text and image columns.		
	Workaround:		
	 Create the table replication definition with send standby replication definition columns clause. Drop the table replication definition if it is not necessary. 		

CR#	Description			
678521	Cannot find a matching function string for the function-string class rs_sqlserv-er_function_class.			
	If you create multiple replication definitions for a specified primary table and you subsequently alter a column without an LOB datatype to be an LOB column in one of the replication definitions, the LOB-related function strings are not created automatically for one of the replication definitions at the replicate Replication Server. The replicate Replication Server log shows:			
	Cannot find a matching function string for function 'all-types.rs_writetext' and function string class 'rs_sqlserver_function_class'.			
	Workaround:			
	Clear the failed Data Server Interface (DSI) connection queue by executing resume/skip tran until the DSI connection resumes.			
	2. Drop the subscription to the problem replication definition at the replicate Replication Server, then drop the replication definition at the primary Replication Server, then recreate both.			
678488	Cannot replicate BLOB data into non-nullable blob column in UDB and DB2 target databases.			
	Workaround: Define the blob column as nullable:			
	 In the database, and, If you have a table-level replication environment, the replication definition created for the blob table replication. 			
642091	RepAgent fails when Replication Server is configured to use Secure Sockets Layer (SSL) with an ERSSD.			
	Workaround: Either:			
	 Disable SSL using configure replication server with the use_ssl option, or, Do not use ERSSD if the Replication Server is configured to use SSL. 			
618624	Insufficient number of threads in Replication Server.			
	If you increase the number of client connections and did not increase the number of Open Server [™] threads that the Replication Server can use, Replication Server may shut down.			
	Workaround:			
	 Log in to RSSD. Increase the value of num_threads. Restart Replication Server. 			

CR#	escription	
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.	

See also

• Oracle-to-Oracle Database Resynchronization Script on page 22

Oracle-to-Oracle Database Resynchronization Script

Use a maintenance user ID in the replicate Oracle to apply this script which replaces the hds_oracle_new_setup_ for_replicate.sql script.

```
drop table rs info;
commit:
create table rs info (rskey varchar2 (20), rsval varchar2 (20));
commit;
insert into rs info values ('charset name', 'iso 1');
commit;
insert into rs info values ('sortorder name', 'bin iso 1');
drop public synonym rs lastcommit;
commit;
drop table rs lastcommit;
commit:
create table rs lastcommit(
       origin number(8), origin qid char(72 byte),
        secondary qid char (72 byte),
        origin time date,
        dest commit time date,
        conn id number default 0);
commit;
grant all on rs lastcommit to public;
commit;
create public synonym rs lastcommit for rs lastcommit;
CREATE OR REPLACE PROCEDURE RS UPDATE SEQUENCE
    SequenceName VARCHAR2,
    SequenceValue NUMBER,
   Increment NUMBER
```

```
)
AS
    CurrentID NUMBER:
    LastID NUMBER;
    SegCursor INTEGER;
    SOLStmt VARCHAR2 (1024);
    Result NUMBER:
BEGIN
    SOLStmt := 'SELECT ' || SequenceName || '.NEXTVAL FROM DUAL';
    SeqCursor := DBMS SQL.OPEN CURSOR; DBMS SQL.PARSE (SeqCursor,
                              SQLStmt,
                               DBMS SQL.NATIVE);
    DBMS SQL.DEFINE COLUMN (SeqCursor,
                    \overline{1},
                    LastID);
    Result := DBMS SQL.EXECUTE AND FETCH (SeqCursor);
    DBMS SQL.COLUMN VALUE (SeqCursor, 1, CurrentID);
    LOOP
        IF ( Increment < 0 ) THEN
            EXIT WHEN CurrentID <= SequenceValue;
            EXIT WHEN CurrentID > LastID;
        ELSE
            EXIT WHEN CurrentID >= SequenceValue;
            EXIT WHEN CurrentID < LastID;
        END IF;
        LastID := CurrentID;
        Result := DBMS SQL.EXECUTE AND FETCH(SeqCursor);
        DBMS SQL.COLUMN VALUE (SeqCursor, 1, CurrentID);
    END LOOP;
    DBMS SQL.CLOSE CURSOR(SeqCursor);
END;
grant all on RS UPDATE SEQUENCE to public;
commit;
DROP sequence rs ticket seq;
CREATE sequence rs ticket seq;
Drop table rs ticket history;
CREATE TABLE rs ticket history (
        cnt numeric (8, \overline{0}),
        h1 varchar(10),
        h2 varchar(10),
        h3 varchar(10),
        h4 varchar(50).
        pdb varchar(30),
        prs varchar(30),
        rrs varchar(30),
        rdb varchar(30),
        pdb t varchar(128),
        exec t varchar(128),
        dist t varchar (128),
        rsi t varchar(128),
```

```
dsi t varchar(128),
        rdb t varchar(128) default current date,
        exec b numeric (22,0),
        rsi \overline{b} numeric(22,0),
        dsi tnx numeric(22,0),
        dsi cmd numeric (22,0),
        ticket varchar(1024),
        conn id number NULL);
create unique index rs ticket idx on rs ticket history(cnt);
create or replace trigger rs ticket tri
before insert on rs ticket history for each row
begin
    if :new.cnt is null then
       select rs ticket seq.nextval into :new.cnt from dual;
    end if:
end rs ticket tri;
grant all on rs ticket history to public;
commit;
create or replace package RS TRIGGER CONTROL
   procedure ENABLE;
   function IS ENABLED
     return boolean;
    end;
create or replace package body RS TRIGGER CONTROL
    fire trigger boolean := TRUE;
    function IS ENABLED return boolean as
    begin
        if fire trigger then
            return FALSE;
        else
            return TRUE;
        end if;
    end IS ENABLED;
procedure ENABLE
as
    begin
        fire trigger := FALSE;
    end ENABLE;
procedure DISABLE
as
    begin
       fire trigger := TRUE;
    end DISABLE;
end RS TRIGGER CONTROL;
```

```
grant all on rs trigger control to public;
drop public SYNONYM rs trigger control;
create public SYNONYM rs trigger control for rs trigger control;
commit;
CREATE OR REPLACE PROCEDURE rs send repserver cmd(rs api IN
VARCHAR2)
AS
   cmd VARCHAR2 (4000);
   plsql block VARCHAR2(50);
   BEGIN
        if (instr(lower(rs api), 'rs rcl') > 0) then
            DBMS OUTPUT.put line ('The Replication Server command
should not contain the keyword ''rs rcl''');
            return;
        end if;
       cmd := 'rs rcl ''' || replace(rs api, '''', ''''') || '''
rs rcl';
        if ('rs rcl' != substr(cmd, length(cmd) - 5)) then
            DBMS OUTPUT.put line('The Replication Server command is
too long.');
            DBMS OUTPUT.put line('Please split it into two or more
commands');
            return:
        end if;
        plsql block := 'begin rs marker(:a); end;';
        EXECUTE IMMEDIATE plsql block USING cmd;
    END;
drop public SYNONYM rs send repserver cmd;
create public SYNONYM rs send repserver cmd for
rs send repserver cmd;
commit;
```

Known Issues for Replication Agent

Known issues and workarounds for Replication Agent.

Table 4. Replication Agent Issues

CR#	Description			
737282	Trailing whitespace characters truncated in direct load materialization.			
	Whitespace characters at the end of variable-length character type strings are truncated during direct load materialization. For example, the eight-character varchar string "1234567" is materialized as "1234567".			
	Workaround: None.			
689941	RepAgent for Adaptive Server handles some of the normalization errors from Replication Server as warnings, which may result in data loss.			
	Workaround: Upgrade to Replication Server 15.7 and later.			
	• If you are using a version of Adaptive Server earlier than 15.7, the RepAgent log may show incorrect normalization errors. For example:			
	Column unknown.unknown status 'always_replicate' in replication definition does not match database status 'replicate_if_changed'. Use 'alter replication definition' to set 'replicate_if_changed' status, at least until existing transactions have been processed. (Refer to Troubleshooting Guide for recovery procedures.)			
	See the accurate error information in the Replication Server log. For example:			
	E2011/11/16 09:17:11. ERROR #32057 REP AGENT(ost_replnxb9_32.pdb1) - /nrm/nrm.c(4175) The value given for 'blurbs.copy' cannot be translated from datatype 'text_status' to the required datatype 'varchar'.			
	If you are using a version of Adaptive Server later than 15.7, the RepAgent log shows the correct error information. For example, the RepAgent log shows:			
	00:0002:00000:00018:2011/11/16 09:17:11.71 server Rep-Agent(4): Received the following error message from the Replication Server: Msg 32057. The value given for 'blurbs.copy' cannot be translated from datatype 'text_status' to the required datatype 'varchar'.			

Replication Server

CR#	Description	
596321, 596320	Replication Server does not support specifying owner information of stored procedures in the function replication definition for Oracle.	
	Therefore, Replication Agent cannot 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 that is replicated from an active to a standby database, create a corresponding function string. Specify owner information in the target stored procedure.	
	To customize the function-string class of the standby connection, which is inherited from rs_oracle_function_class, enter:	
	alter connection to eco2stb.ordb (standby connection) set function string class to my_oracle_function_class go	

Known Issues for Replicating to Sybase IQ

Known issues concerning replication to Sybase IQ from Adaptive Server using real-time loading (RTL) in Replication Server.

Table 5. Replicating to Sybase IQ Issues

CR#	Description	
722797	The default Sybase IQ NUMERIC and DECIMAL datatypes precision and scale do not match and are incompatible with the isql and the Adaptive Server defaults.	
	When using the default precision and scale in the replicate Sybase IQ table definition for NUMERIC and DECIMAL datatypes, the Sybase Replication Server DSI thread shows:	
	<pre>ct_results(): protocol specific layer: external error: There is a tds protocol error. An invalid numeric precision was received.</pre>	
	Workaround : Define the target Sybase IQ NUMERIC and DECIMAL datatypes with precision less than or equal to 77. See <i>Numeric Data Types</i> in the <i>SAP Sybase IQ Reference: Building Blocks, Tables, and Procedures.</i>	
695949	Connection to Sybase IQ 15.4 fails when create connection using profile with UTF-8 character set.	
	Workaround: Use Sybase IQ 15.4 ESD #1.	

CR#	Description	
641373	Lock table failure when replicating in Sybase IQ multiplex environment.	
	Because Replication Server connects and issues the lock table command, you must make the connection from the Replication Server to Sybase IQ in a multiplex environment to the coordinator node. Otherwise, you see:	
	E. 2010/09/14 08:51:13. ERROR #1028 DSI EXEC(104(1) pocmpx.iqdb) - dsiqmint.c(4234) Message from server: Message: -1004015, State 0, Severity 14 'SQL Anywhere Error -1004015: Permission denied: Command not allowed on Multiplex Writer servers. (saint_iqthresholdddl.cxx 14936)'.	
	Workaround : Change the interfaces file entry for Sybase IQ that the Replication Server uses, to connect to the coordinator node.	
620097	Data corruption when replicating data to Sybase IQ 15.x in RTL.	
	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, mark the table to not be compiled. 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.x and later.	

Known Issues for Replicating to HANA DB

Known issues and workarounds for replicating to HANA DB.

Table 6. HANA ODBC Drivers Version 1.00.55 Build 0376513-1510 Issues

CR#	Bugzilla#	Description
737784	25968	You cannot create a connection to a replicate HANA database if you do not have write privileges to the \$HOME directory before you start the Replication Server.
		Without these privileges, when creating the connection to the HANA DB, the connection fails and Replication Server generates and displays the errors.
		Workaround: Make sure that you have write privileges to the \$HOME directory when starting a Replication Server.
737642	30506	Cannot replicate DECFLOAT values between -2.2207e-307 to 2.2207e-308 into a HANA database.
		Workaround: None.

Table 7. HANA Database Issues

CR#	Description	
735171	When replicating GB 18030 character set to HANA DB for text and ntext columns, the replicate value differs between the primary Replication Server and replicate Replication Server.	
	Workaround: Do not use text or ntext columns when you are using the GB 18030 character set.	

Known Installation Issues

Known issues and workarounds for Replication Server installation.

Table 8. Installer Issues

CR#	Description
739701	After completing configuring a Replication Server with rs_init, you see: This implementation only intended to be used in non-production code.
	Workaround: Ignore the message.
718029	The Replication Server component may not be uninstalled when you uninstall the Replication Server Suite.
	Workaround : Manually delete the files and folders after uninstallation. Do not delete the OCS-15_0 directory if it is being used by other products.
706443 Cannot validate passwords if you start sample Replication Server a lation.	
	Workaround: Manually edit these attributes in the SAMPLE_RS.res file:
	rs.rs_idserver_pass
	rs.rs_rssd_prim_pass rs.rs_rssd_maint_pass
	• rs.rs_ltm_rs_pass
	• rs.rs_rs_sa_pass
	rs.rs_rs_pass
	See Syntax and Parameters for a Resource File in the Replication Server Configuration Guide.
701924	The installer does not remove environment variables entries from earlier versions of \$SYBASE/SYBASE.sh and \$SYBASE/SYBASE.csh
	Workaround: Manually edit the \$SYBASE/SYBASE.sh and \$SYBASE/SYBASE.csh to remove environment variables that are pointing to versions you do not want to include.
620755	Installation fails on Solaris SPARC.
	When the file descriptor limit is set to "unlimited," the installer fails with this message:
	<pre>awk: insufficient memory for string storage Context is: >>></pre>
	Workaround: Set the hard file descriptor limit to a number.

Replication Server

CR#	Description		
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 allows you to use your keyboard. Installer – use the mouse to select the features in the Choose Product Features window. 		
619784	Cannot run installer with default tar tool.		
	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/tarin \$PATH.		
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 "".		
618722	Interactive installation using response file does not work.		
	When installing Replication Server in an interactive mode using a response file, the installer does not use the values stored in the file. In silent mode, the response file works as expected.		
	Workaround: None.		

Known Issues for SySAM License

Known issues and workarounds for SySAM License from Sybase SPDC and SAP Service Marketplace (SMP).

Table 9. SySAM License Issues

Table 9. Sysaw License issues			
CR#	Description		
717668	Insufficient licenses message in Replication Server log displays an incorrect available number of CPUs when a CPU is added.		
	The Replication Server log displays the messages twice. The first log message displays an incorrect number of CPUs, but the second log message displays the correct number of CPUs added.		
	Workaround: Ignore the incorrect error message.		
625227	SPDC- or SMP-generated served partition-level license may not work.		
	When you use a served partition-level license generated from the Sybase Product Download Center or the SAP Service Marketplace (SMP) to start a SySAM server, you see a message that you are using an invalid license key, similar to:		
	(SYBASE) Invalid license key (inconsistent authentication code) (SYBASE) License server system started on hpiabou (SYBASE) No features to serve, exiting (SYBASE) EXITING DUE TO SIGNAL 49 Exit reason 4 (lmgrd) SYBASE exited with status 49 (No features to serve) (lmgrd) SYBASE daemon found no features. Please correct (lmgrd) license file and re-start daemons. (lmgrd) (lmgrd) This may be due to the fact that you are using (lmgrd) a different license file from the one you expect. (lmgrd) Check to make sure that: (lmgrd) /remote/cat_fc/nli/iq152.hpia/SYSAM-2_0/licenses/ 18965_hpiabou_ (lmgrd) is the license file you want to use. Workaround: Use the old host IDs for the license running on the license server.		

Documentation Changes

Read about updates, corrections, and clarifications to the documentation released with Replication Server 15.7.1 SP100.

No Support for Oracle to Oracle Reference Implementation

You cannot use the Reference Implementation for Oracle to Oracle Replication.

Disregard Reference Implementation for Oracle to Oracle Replication in the Replication Server Heterogeneous Replication Guide.

Replication Manager Plug-In Route Upgrade

Route upgrade in the Replication Manager plug-in to Sybase Central is deprecated.

Use the **sysadmin upgrade "route"** Replication Server command instead.

See Upgrading Routes in the Replication Server Configuration Guide.

Replication Server System Tables Diagram

There are changes in the definitions and subscriptions and queues columns tables in the Replication Server system tables diagram.

• Definitions and subscriptions tables – Add these new columns to the rs_maintusers table:

Column	Datatype
new_password	varchar(66)
attributes	int
password_date	datetime
expiration_interval	smallint

• Queues tables – Add new rs autopartpath table.

Column	Datatype
name	varchar (30)
path	varchar(255)
size	int
max_size	int
status	int

See Replication Server System Tables in the Replication Server Reference Manual.

SQL Anywhere Replication Support

Read about updates, corrections, and clarifications for SQL Anywhere documentation.

For information on SQL Anywhere support as a primary or a replicate database, see the SQL Anywhere documentation.

Updated ASA Path Names

Replace ASA11 with ASA12 in the path names to set the ERSSD environment variables.

In *Prerequisites for Replication Server Recovery* in the *Replication Server Administration Guide Volume 1*, replace ASA11 with ASA12.

On UNIX platforms:

 Set your environment variable PATH to include \$SYBASE/\$SYBASE_REP/ASA12/ bin:

```
setenv PATH $SYBASE/$SYBASE REP/ASA12/bin:$PATH
```

Set your environment variable LD_LIBRARY_PATH (SHLIB_PATH on HP, LIB_PATH on AIX) to include \$SYBASE/\$SYBASE REP/ASA12/lib:

```
setenv LD_LIBRARY_PATH $SYBASE/$SYBASE_REP/ASA12/lib:
$LD LIBRARY PATH
```

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, maintenance releases, 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 SAP® 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 Technical Support as specified in your contract:

- Sybase Technical Support or the Sybase subsidiary in your area
- SAP Technical Support

Customers with an SAP support contract can obtain support for this product at the SAP support site, *http://service.sap.com/sybase/support*. You can also find information about Sybase support migration at this location (login may be required).

Customers with a Sybase support contract can obtain support for this product at *http://www.sybase.com/support* (login required).

Downloading Product Updates

Get maintenance releases, support packages and patches, and related information.

- If you purchased the product directly from Sybase or from an authorized Sybase reseller:
 - a) Go 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 product under an SAP contract:
 - a) Go to http://service.sap.com/swdc and log in if prompted.
 - Select Search for Software Downloads and enter the name of your product. Click Search.

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

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.