CISCO SYSTEMS

Cisco IP Telephony Backup and Restore System (BARS) Administration Guide

Version 4.0 (2)

CONTENTS

Preface

This preface describes the overview, audience, organization, and conventions of this guide and provides information on how to obtain related documentation.

The preface covers these topics:

- Overview, page vii
- Audience, page vii
- Organization, page viii
- Conventions, page viii
- Related Documentation, page ix
- Obtaining Documentation, page ix
- Documentation Feedback, page x
- Obtaining Technical Assistance, page x
- Obtaining Additional Publications and Information, page xi

Overview

The *Cisco IP Telephony Backup and Restore System (BARS) Administration Guide, Version 4.0 (2)* describes how to use the BARS utility and provides procedures for completing various backup-related tasks and restore-related tasks.

Audience

This guide provides a reference and procedural guide for users of Cisco CallManager and other Cisco IP telephony applications.

Organization

Table 1 provides an overview of this guide:

Table 1   Organization of this Manual

Chapter	Description
Chapter 1, "Backup and Restore System (BARS) Overview"	This section provides overview information about some of the main components that make up the BARS utility.
Chapter 2, "BARS Installation"	This section contains installation procedures and installation-related information.
Chapter 3, "Backing Up the Data"	This section contains procedures for backing up your data. Procedures include configuring the backup server and the data source servers.
Chapter 4, "Restoring the Data"	This section contains procedures for restoring data that was backed up from the configured data source servers.
Appendix A, "BARS Error Messages"	This section contains a list of error messages and their workarounds for messages that you may receive during BARS installation or usage.

Conventions

Notes use the following conventions:

Note   Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Tips use the following convention:

Tip   Means *the following are useful tips.*

Cautions use the following convention:

Caution   Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Related Documentation

Click on the URLs in Table 2 to navigate to the appropriate documentation about related Cisco IP Telephony applications and products:

Table 2   Quick Reference for URLs

Related Information and Software	URL
Backup and restore release note documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm
Operating system documentation and Virtual Network Computing (VNC) documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm
Cisco CallManager Compatibility Matrix	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm
Cisco CallManager documentation, including Cisco CAR documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm
Cisco CallManager service releases	http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml
Related Cisco CRS and Cisco CER documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm
Cisco Integrated Communication System (ICS) 7750 documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/ics/index.htm

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

http://www.cisco.com/univercd/home/home.htm

You can access the Cisco website at this URL:

http://www.cisco.com

International Cisco websites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

  http://www.cisco.com/en/US/partner/ordering/index.shtml

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can submit e-mail comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

http://www.cisco.com/tac

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

http://tools.cisco.com/RPF/register/register.do

Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

http://www.cisco.com/tac/caseopen

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is "down" or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:

  http://www.cisco.com/go/marketplace/

- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

  http://cisco.com/univercd/cc/td/doc/pcat/

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/ipj

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

  http://www.cisco.com/en/US/learning/index.html

Backup and Restore System (BARS) Overview

The BARS utility provides a reliable and convenient way to perform regularly scheduled automatic or user-invoked backups of data for a variety of Cisco IP telephony products. BARS performs the following tasks:

- Saves all settings that are configured with the Cisco IP Telephony Applications Backup and Restore System (BARS) configuration. Figure 1-1 shows the main window of the Backup and Restore System configuration.

- Verifies authentication information that you provide during the configuration of the backup.

- Backs up the data that you choose.

- Creates separate logs for the backup and the restore utilities.

- Creates a trace for each task.

- Restores the data that was backed up.

Note Cisco strongly recommends that you use the supported Cisco Backup and Restore System (BARS) utility if you are running Cisco CallManager 3.3 or later.

If you are using an earlier version of Cisco CallManager, use the Cisco IP Telephony Applications Backup Utility (3.5).

BARS only restores files that were backed up with BARS.

Figure 1-1   Backup and Restore System Main Window

This section contains the following topics:

- System Requirements, page 1-3
- Obtaining BARS, page 1-3
- IP Telephony Applications That Use BARS, page 1-3
- Versions of Applications That BARS Supports, page 1-3
- Obtaining Release Notes for BARS, page 1-4
- How the Backup Portion of the BARS Utility Works, page 1-4
- What Data Does the BARS Utility Back Up?, page 1-7
- Understanding How the Restore Utility Works, page 1-10
- Location of Trace Files, page 1-10

System Requirements

Be sure the following BARS requirements are met:

- For a standalone installation, you must use Microsoft Windows 2000 (server) and Internet Information Server (IIS) 5.0.

- Ensure that Cisco CallManager 3.3x or above (or one of its associated Cisco IP telephony applications) is installed.

- You must use SQL 2000 or above and MSDE 2000 for either a standalone Customer Response Solutions (CRS) server or a standalone Cisco Emergency Responder (CER) server to act as a backup server for a Cisco CallManager 3.3 or 4.0 cluster.

Obtaining BARS

You can obtain BARS from the web or from the CD-ROM that may ship with the supported application. To obtain the latest version of BARS, always download it from the web. The version that is available on the CD-ROM may not provide the latest utility. For the location of the latest web version of BARS, see the "Installation Procedure" section on page 2-2.

IP Telephony Applications That Use BARS

BARS supports the following applications:

- Cisco CallManager

- Cisco Customer Response Applications/Solutions (CRA/CRS)

- Cisco CDR Analysis and Reporting (CAR)

- Cisco Emergency Responder (CER)

Versions of Applications That BARS Supports

Cisco IP Telephony BARS, version 4.0 (2), supports the following Cisco IP Telephony applications, which serve as minimum requirements:

- Cisco CallManager 3.3 or later

- All CRA/CRS and Cisco CAR releases that are compatible with Cisco CallManager

  To obtain compatibility information on CRA/CRS and Cisco CAR, see the *Cisco CallManager Compatibility Matrix (*refer to Table 2 on page -ix*).*

- Cisco Emergency Responder (CER) 1.2(1) or later

Obtaining Release Notes for BARS

The release notes document contains resolved/open caveats and workarounds that apply to this version of the utility. To obtain the document, click the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/voice/bars/index.htm

If you have an account with Cisco.com, you can use the Bug Toolkit to find caveats for this utility.

To use the Bug Toolkit, click http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl

How the Backup Portion of the BARS Utility Works

This section describes important information about different components of the backup portion of BARS. This section includes the following topics:

- About the Backup Server, page 1-4
- About Data Source Server(s), page 1-5
- About Backup Data and the Backup File, page 1-5
- About the Scheduler, page 1-5
- About the Backup Storage Destination, page 1-6
- About the Created Backup Log File, page 1-6

About the Backup Server

Although any server in the Cisco CallManager cluster can act as the backup server, Cisco recommends that you designate the publisher database server as the backup server. One backup server is required within a Cisco CallManager cluster. You designate a server as a backup server during BARS installation.

Note The Cisco CallManager publisher database contains all the information that you configure with Cisco CallManager Administration, and the database updates each time that you make a change. Cisco strongly recommends that you make a backup of the Cisco CallManager database, configuration, and directory information by using BARS every time that you make changes in Cisco CallManager Administration. Each Cisco CallManager cluster contains only one publisher database.

For subscriber databases that are configured for backup, BARS backs up only TFTP files and CDR/CMR files.

However, you can configure BARS to back up more than one Cisco IP Telephony Applications Server, such as publishing database servers of other Cisco CallManager clusters, Cisco CER servers, or Cisco Customer Response Solutions (CRS/CRA) servers.

To successfully back up the Cisco CallManager database, the backup server and data source servers (called *backup targets* during BARS installation) must exist in the same cluster and have the same version of BARS installed.

For backups to succeed for supported applications, the same version of the database must exist on the backup server and all data source servers.

For more information about the backup server, see Chapter 3, "Backing Up the Data."

About Data Source Server(s)

A data source server (or *backup target*) contains the data to be backed up for Cisco CallManager, CAR, CRS, or CER.

A Cisco CallManager cluster can contain zero, one or more data source servers. You designate a server as a data source server (*backup target*) during BARS installation.

When you add a data source server by using the BARS configuration window, you can enter the computer name, the IP address or the fully qualified DNS name.

If a data source server is a remote server, you must provide a user name and password that has administrative privileges to the remote server.

⚠
Caution   Verify that the backup data source server(s) and backup server have the same version of BARS installed. Verify that the backup data source server(s) and backup server exist in the same cluster.

⚠
Caution   If the backup server and data source server(s) are not running and functional, the backup fails. Verify that all corresponding services, such as DC Directory, are running before you perform the backup. If the services are not running, the backup fails.

For more information about data source servers, see Chapter 3, "Backing Up the Data."

About Backup Data and the Backup File

During the backup, BARS sends the data to a staging directory, and, by default, one file that is called Backup*mm-dd-yy*.tar (where *mm* specifies the month, *dd* specifies the day and *yy* specifies the year) archives all data that is backed up from the data source servers listed in the BARS configuration windows.

⚠
Caution   BARS creates a unique backup file for each date. Each time that a backup is performed on the same date, the new backup file overwrites the existing backup file. If you want to retain previous backup data, you must archive or rename the existing backup tar file before the next backup is performed.

For more information about the backup file, see Chapter 3, "Backing Up the Data."

About the Scheduler

Using the Scheduler tab (click **Backup -> Scheduler** on the BARS main window), you configure the day and time that you want the backup to run.

Cisco sets a default schedule for when the backup is to run. You can change the schedule at any time, restore the default schedule, and enable/disable the configured schedule.

The utility backs up all data at the same time. You cannot configure a separate schedule for each application.

You must enable the schedule, even if you choose to use the default schedule that Cisco automatically configures. See the "Enabling the Scheduler" section on page 3-5.

After you configure the backup settings, you can initiate a backup at any time. See the "Performing a Backup Now" section on page 3-8.

About the Backup Storage Destination

BARS stores all data from all applications in the same backup location.

For the backup destination, Cisco strongly recommends that you specify a tape drive or a network directory, not a local directory.

For more information about backup storage location, see the "Configuring the Backup Storage Location" section on page 3-7.

About the Created Backup Log File

The backup process creates a backup log file with the following format:

Backup*mm-dd-yy*.txt

where *mm* specifies the month, specifies the day and *yy* specifies the year

BARS puts this file in the following location on the backup server:

C:\Program Files\Common Files\Cisco\Logs\BARS\Backup

On the Configure Scheduler window, you can specify the number of days for which you want to retain log files. Log files exist for each day that you perform a backup.

For more information, see the "Accessing the Backup Log File After the Backup Completes" section on page 3-9.

What Data Does the BARS Utility Back Up?

If you configure the backup settings as instructed in this document, Cisco BARS automatically backs up the information that the following sections list for each supported application:

- Cisco CallManager Version 3.3(x) and 4.0(x), page 1-7
- Call Detail Records Administrative Reporting, page 1-8
- Cisco Customer Response Applications/Solutions, page 1-8
- Cisco Emergency Responder, page 1-10

⚠
Caution   The Cisco IP Telephony BARS utility does not back up any operating system files except Host/LMhost, if these files exist on the server.

Cisco CallManager Version 3.3(x) and 4.0(x)

Cisco CallManager Publisher Database

The following list shows the data that is backed up and restored for the Cisco CallManager publisher database:

- LmHosts/Hosts files
- Latest Cisco CallManager publisher database
- DC Directory LDAP directory
- For Cisco CallManager 3.3.x—DirectoryConfiguration.ini from C:\dcdsrvr.

    For Cisco CallManager 4.0(x) or later—UMDirectoryConfiguration.ini.

- Directory schema files—avvid_schemaV*.txt
- Publisher and subscriber configuration information to replication.ini file.
- Cisco CallManager version to version.ini file.
- If the option to backup CDR is chosen, CDR database and CDR/CMR flat files from Local CDR Path
- TFTP files from C:\Program Files\Cisco\TFTPPath (the default path)
- TFTP files on subscriber servers that are configured as backup data source servers (targets)
- TFTP files from alternate file locations
- Cisco Bulk Administration Tool (BAT) files–templates from C:\CiscoWebs\BAT, CSV files from C:\BAT and the BATversion.asp file.
- HKLM\Software\Cisco Systems, Inc. (registry keys)
- Cisco CallManager DSN

Cisco CallManager Subscriber Database

The following list shows the data that is backed up and restored for the Cisco CallManager subscriber database:

- LmHosts/Hosts files
- Publisher and subscriber configuration information to replication.ini file.
- Cisco CallManager version to version.ini file.

- If the option to backup CDR is chosen, CDR database and CDR/CMR flat files from Local CDR Path
- TFTP files
- Cisco CallManager DSN

Note The BARS utility does not back up the Microsoft Active Directory or Netscape Directory Server database. This utility does not back up Cisco Multilevel Administration (MLA). Refer to the Cisco MLA documentation for information on how to back up that data.

Call Detail Records Administrative Reporting

The following list shows the data that is backed up and restored for Call Detail Records (CDR) Administrative Reporting (CAR):

- CAR (ART) database
- C:\Ciscowebs\ART\reports\Pregenerated
- HKLM\Software\Cisco Systems Inc.\ART (registry key)

Cisco Customer Response Applications/Solutions

The following list shows the data that is backed up and restored for Cisco Customer Response Applications/Solutions (CRA/CRS):

All Versions of Cisco CRA (with CRS server)

- LMHosts file and Hosts file
- $winsysdir$\Ccn\Ccndir.ini
- If present, C:\Program Files\Cisco\bin\SaEnvProperties.ini
- Files from C:\Program Files\Wfavvid, including Workflows (.aef), Java files(.java), Jar (.jar), Properties (.properties), and Audio (.wav)

Cisco CRA Release 3.0 and Later (with CRS server)

- LMHosts file and Hosts file
- $winsysdir$\Ccn\Ccndir.ini
- If present, C:\Program Files\Cisco\bin\SaEnvProperties.ini
- Files from C:\Program Files\Wfavvid, including Workflows (.aef), Java files(.java), Jar (.jar), Properties (.properties), and Audio (.wav)
- Files from C:\Program Files\Wfavvid, including XML (.xml), Class (.class), GSL (.gsl), and Digit (.digit), JobRunner.ini, Sch.ini
- War (.war) files from C:\Program Files\Wfavvid\tomcat_appadmin and below.
- Cfg files (.CFG) from C:\Program Files\Cisco\Common
- Cfg files (.CFG) from C:\Program Files\Cisco\Desktop
- AlarmService.ini from C:\program Files\Cisco\AlarmService
- GSL and .Digit from user and system grammar paths
- Databases DB_CRA, DB_CRA_CCDR, SCHEDULERDB.

- If Spanlink and ICD are installed:
  - Database FCRASSVR (if ICD is installed)
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Config
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Icons
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Audio Files.
- Audio files(.wav) from user and system prompt paths

Cisco CRA Release 3.1 and Later (with CRS server)

- LMHosts file and Hosts file
- $winsysdir$\Ccn\Ccndir.ini
- If present, C:\Program Files\Cisco\bin\SaEnvProperties.ini
- Files from C:\Program Files\Wfavvid, including Workflows (.aef), Java files(.java), Jar (.jar), Properties (.properties), and Audio (.wav)
- Files from C:\Program Files\Wfavvid, including XML (.xml), Class (.class), GSL (.gsl), and Digit (.digit), JobRunner.ini, Sch.ini
- War (.war) files from C:\Program Files\Wfavvid\tomcat_appadmin and below.
- Cfg files (.CFG) from C:\Program Files\Cisco\Common
- Cfg files (.CFG) from C:\Program Files\Cisco\Desktop
- AlarmService.ini from C:\program Files\Cisco\AlarmService
- GSL and .Digit from user and system grammar paths
- Databases DB_CRA, DB_CRA_CCDR, SCHEDULERDB.
- If Spanlink and ICD are installed:
  - Database FCRASSVR (if ICD is installed)
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Config
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Icons
  - All files/folders under C:\Program Files\Cisco\Desktop_config\Audio Files.
- Audio files(.wav) from user and system prompt paths
- System DSN dsn_cra_hrdb
- If ICD is installed, back up the following directory (including all files/folders), if it exists: C:\Program Files\Cisco\Desktop_AudioFiles

Cisco CRA Release 3.1 and Later (RDB server)

- LMHosts file and Hosts file
- Databases – db_cra, db_cra_ccdr
- SQL jobs belonging to category 'CRS-RemoteDB Synchronization'
- If ICD is installed, backup the following directory (including all files/folders), if it exists: C:\Program Files\Cisco\Desktop_AudioFiles

Cisco CRA Release 3.1 and Later (VOIP and Record server)

- C:\Program Files\Cisco\Desktop_Audio Files
- CFG files (*.CFG) from C:\program Files\Cisco\Desktop

Cisco Emergency Responder

Cisco Emergency Responder Versions 1.21 and Above

The following list shows the data that is backed up and restored for Cisco Emergency Responder (CER):

- LmHosts and Hosts files from C:\Winnt\System32\Drivers\Etc

- Latest database CER12XX

- Registry key HKEY_LOCAL_MACHINE, "Software\Cisco Systems, Inc.\AVVID E911

- Replication information to Replication.ini

- Build Number and Minor Version to version.ini

- Folders—CallHistory, CERSysFiles, etc, export, import, nena_msag_records

- Files—JTapi.jar from %CERRoot%\lib and SAenvProperties.ini from %Program Files%\Cisco\bin

- CER NT Users

Understanding How the Restore Utility Works

The BARS restore process allows you to recover all data that was compressed into the Backup*mm-dd-yy*.tar file.

BARS puts log files that were created during the restore process into the following folder:

C:\Program Files\Common Files\Cisco\Logs\BARS\Restore

For information on how the restore process works, what log files are created during the restore process, when to run a restore, and the procedures for running a restore, see Chapter 4, "Restoring the Data."

Location of Trace Files

BARS puts trace files that were created during the backup and restore processes into the following folder:

C:\Program Files\Cisco\Trace\BARS

These files will contain detailed information for each BARS operation. Refer to these files in case of a failed backup or restore process.

2

BARS Installation

This section contains the following topics, which include the step-by-step procedure for installing BARS:

- Restrictions When Installing or Upgrading BARS, page 2-1
- About Third-Party Applications and Services, page 2-2
- Installation Procedure, page 2-2
- Procedure to Uninstall BARS, page 2-4
- Determining Which Version of BARS Runs on Your System, page 2-4

Note   BARS installation automatically removes any previously installed version of
Cisco IP Telephony Applications (CIPTA) Backup Utility 3.5. BARS also migrates backup-server configurations from CIPTA Backup Utility 3.5 installation to BARS backup-server configuration. However, Cisco recommends that you check all configurations after a migration is performed.

Restrictions When Installing or Upgrading BARS

This section contains the following topics that describe restrictions about the usage of various services and applications when you install or upgrade BARS:

- About Terminal Services, page 2-1
- About Third-Party Applications and Services, page 2-2

About Terminal Services

Do not use Terminal Services to install/upgrade the utility.

To eliminate remote access to the server during the installation/upgrade, Cisco recommends that you disable Terminal Services before the utility installation/upgrade and reboot the server. You must enable Terminal Services after the installation/upgrade.

If you want to use Virtual Network Computing (VNC) to remotely install supported applications, see Table 2 on page -ix to obtain the latest version of the VNC document.

⚠

Caution   If you have installed VNC but do not plan to use it to perform the installation, disable it to prevent remote access to the server. If you do not disable VNC and a user/administrator accesses the server during the installation, the utility installation will fail.

Do not use Integrated Lights Out (ILO) to install or upgrade the utility. Cisco supports ILO for remote management and remote configuration tasks only.

About Third-Party Applications and Services

Cisco strongly recommends that you stop and disable all non-Cisco CallManager applications and services before performing a BARS installation or upgrade. Failure to do so could interrupt the installation.

The following platform agents may interfere with the installation/upgrade: antivirus services, intrusion detection services, OEM server agents, server management agents, and VOIP monitoring/performance monitoring, or remote access/remote management agents. Disabling platform agents and services ensures that you do not encounter issues that are associated with these services.

If you installed Cisco IDS Sensor Host Agents on the server, locate the corresponding product documentation for procedures on disabling and stopping the services.

⚠

Caution   Remember to manually enable all services after the installation/upgrade completes.

Installation Procedure

To install BARS, perform the following steps:

Procedure

Step 1   There are two methods for obtaining BARS 4.0 (2):

   a.   Download BARS from the following URL:

   http://cco.cisco.com/cgi-bin/tablebuild.pl/cmva-3des

   b.   Insert your BARS-installation CD.

Step 2   Run the BARSSetup.exe file to launch the BARS installation process.

Step 3   Click **Next**.

Step 4   Accept the license agreement and click **Next**.

Step 5   You are now asked to specify the purpose of this server:

   a. Backup server—This is the default. Use this choice if the server where you are performing the BARS installation will perform the actual backup operation when you back up data.

   b. Backup target—Choose this option if you want the server where you are performing the BARS installation to have its data backed up when the BARS backup process runs.

   You must choose this option if a backup server already exists.

   If you choose this option, a field appears where you enter the name of the server.

   Note   You must configure all backup targets as *data source servers* on the BARS administration configuration window. For more information, see the "Configuring a Data Source Server" section on page 3-2.

Step 6   Click **Next**. The BackAdmin Password window appears.

Step 7   Enter the Backadmin Private Password Phrase for the BackAdmin account.

   The installation uses the string that you enter to create a unique, encrypted password. You must enter the same phrase on the backup server and all backup targets.

   If the passwords do not match or if BARS cannot verify the passwords, you receive a warning message that asks whether you want to proceed. If you proceed and the passwords do not match, an error message appears in the log file.

   Note   Administrator and BackAdmin passwords must match on the backup server and the backup target. BackAdmin passwords synchronize during BARS installation because servers have the same private phrase. Synchronizing the administrator passwords ensures a successful configuration, backup, or restoration, especially with the CER database.

   Click **Next**.

Step 8   Follow the instructions on the screen and complete the installation process.

Step 9   When the process completes, reboot the server.

   Note   The installation log file, *BARSInstall mm-dd-yyyy hh.mm.ss.log*, is located in the folder: C:\Program Files\Common Files\Cisco\Logs.

Procedure to Uninstall BARS

If you need to uninstall BARS, perform the following procedure:

Procedure

Step 1   Choose **Start > Settings > Control Panel**.

Step 2   Double-click **Add/Remove Programs**.

Step 3   Click **Cisco Backup And Restore System**.

Step 4   Click **Remove**.

Step 5   Reboot the server and log in to the server by using the Administrator password.

Changing the Purpose of a Server

You can change a backup server to a backup target (data source server), or vice versa, but you must uninstall and then reinstall BARS on the server; you can then specify the purpose by clicking the **Backup Server** or **Backup Target** radio button during the reinstallation of BARS. If you change a data source server to a backup server, you must configure the backup settings on the backup server. If you change the backup server to a data source server, be aware that you must choose and configure another backup server for BARS to run.

Determining Which Version of BARS Runs on Your System

To identify the version of BARS on your system, perform the following procedure:

Procedure

Step 1   Invoke the main Backup and Restore System configuration window. To invoke this window, go to **Start -> Programs -> Cisco BARS -> BARS Admin**.

Step 2   Click the **About** button on the main configuration screen, and the version of BARS is displayed.

Note   Cisco strongly recommends that you install BARS *before* you install the supported Cisco IP telephony application.

You should upgrade BARS when later versions become available on the web; always verify that you have the latest utility installed on the backup server before you perform an application upgrade. Before the application upgrade, always back up the data to a network directory or tape device. If you store the data on the local directory, the application upgrade may overwrite the data.

CHAPTER 3

Backing Up the Data

This section contains information on topics that relate to using the backup portion of the BARS utility:

- Accessing BARS, page 3-2
- Configuring BARS for the First Time, page 3-2
- Configuring a Data Source Server, page 3-2
- Configuring the Schedule, page 3-4
- Configuring the Backup Storage Location, page 3-7
- Performing a Backup Now, page 3-8
- Canceling the BARS Backup Process, page 3-9
- Stopping the BARS Scheduler, page 3-9
- Accessing the Backup Log File After the Backup Completes, page 3-9

Figure 3-1 shows the BARS main window, with the choices of the Backup menu highlighted. The Backup menu items allow you to perform all necessary backup tasks.

Figure 3-1   Backup and Restore System Main Window

Accessing BARS

If you have an administrative account on the BARS backup server, you can access the BARS administration web interface using the following URL from anywhere in the network:

`http://BackupServerName/BARS/BARSmain.asp`

where *BackupServerName* is the name of the BARS backup server.

To access the BARS administration web interface when you are physically located at the backup server, choose **Start -> Programs -> Cisco BARS -> BARS Admin**. The Backup and Restore System main window appears.

Configuring BARS for the First Time

To configure BARS for the first time, you must perform the following tasks that are described in Table 3-1.

Table 3-1   Configuring the Backup Utility

Step	Task	Related Information
Step 1	Configure the datas source server(s) where the data exists.	Configuring a Data Source Server, page 3-2
Step 2	Choose the applications on the data source server that you want to back up.	Configuring a Data Source Server, page 3-2
Step 3	Configure the backup storage location where the utility will store the data.	Configuring the Backup Storage Location, page 3-7
Step 4	Accept the default schedule in which the backup will run or modify the schedule. You must enable the schedule before the backup utility will run.	Configuring the Schedule, page 3-4

Configuring a Data Source Server

Using the Backup and Restore System, you can add or delete a data source server, which houses the data that you want to back up. For more information on performing these tasks, see the following sections:

- Adding or Modifying a Data Source Server Configuration, page 3-3
- Deleting a Data Source Server, page 3-4

Adding or Modifying a Data Source Server Configuration

Adding or modifying a data source server configuration includes the following two-step process:

- Choosing the server where the data currently exists.
- Choosing the applications on the data source server that you want to back up.

  For lists of all data that the BARS utility backs up, see Chapter 1, "Backup and Restore System (BARS) Overview."

Tip   You can configure more than one data source server.

Procedure

Step 1   From the Backup and Restore System main window, choose **Backup > Data Source Server**.

Step 2   In the DNS/IP address field, enter the server name or server IP address where the data that you want to back up currently exists.

Note   If you are modifying the data that you want to back up for a data source server that is already configured, click on the name of that data source server under the Configured Servers list.

Step 3   If you entered a remote server, enter a username and password with administrator access rights for the remote server and then click **Next**.

Note   BARS attempts to connect to the remote server. If the remote server is not found, the authentication fails, and an error message appears.

Step 4   If no error message appears, choose the applications that you want to back up on the data source server configuration window.

Caution   These applications must exist on the data source server you are configuring.

Step 5   Click **Finish**.

Step 6   The Data Source Server Summary window appears. Perform the following optional tasks:

   a.   If you want to add another Data Source Server, click **Configure More Data Source Servers**.

   b.   If you want to modify the default schedule, click **Modify Schedule**.

       See the "Configuring the Schedule" section on page 3-4 for more information on how to update the schedule.

   c.   To configure the location where the utility will store the data, click **Modify Backup Storage Location**.

       See the "Configuring the Backup Storage Location" section on page 3-7 for more information on how to add or modify the Backup Storage Location.

Related Topics

- Understanding How the Restore Utility Works, page 1-10
- Deleting a Data Source Server, page 3-4

Deleting a Data Source Server

This section describes how to delete a data source server from BARS. If you delete the server, BARS does not back up the data that resides on the server.

Procedure

Step 1   From the Backup and Restore System main window, choose **Backup > Data Source Server**.

Step 2   The configured Data Source Servers list displays in the pane on the left side of the window. Click the server that you want to delete.

Step 3   Click the **Delete** button.

Related Topic

- Adding or Modifying a Data Source Server Configuration, page 3-3

Configuring the Schedule

All data that you choose during the configuration is backed up on the day and time that you designate by using the Configure Scheduler screen.

Cisco sets a default schedule for the backup to run. You can change the schedule at any time, restore the default schedule, and enable/disable the configured schedule.

Tip   You must enable the schedule, even if you choose to use the default schedule that Cisco automatically configures.

The utility backs up all data at the same time. You cannot configure a separate schedule for each application.

This section contains the following topics:

- Enabling the Scheduler, page 3-5
- Disabling the Scheduler, page 3-5
- Updating the Schedule, page 3-6
- Restoring the Default Schedule, page 3-6

Enabling the Scheduler

You must enable the Scheduler to ensure that the scheduled backup occurs at the designated time.

Procedure

Step 1   Choose **Backup > Scheduler**.

Step 2   Click the **Enable Scheduler** button.

The message "Scheduler Status: Enabled" displays.

Related Topics

- Disabling the Scheduler, page 3-5
- Updating the Schedule, page 3-6
- Restoring the Default Schedule, page 3-6

Disabling the Scheduler

When you disable the Scheduler, scheduled backups do not occur. If you disable the Scheduler, Cisco recommends that you perform regular backups by using the information in "Performing a Backup Now" section on page 3-8.

Procedure

Step 1   Choose **Backup > Scheduler**.

Step 2   Click the **Disable Scheduler** button.

The message "Scheduler Status: Disabled" displays.

Related Topics

- Stopping the BARS Scheduler, page 3-9—This section describes how to stop and restart the BARS Scheduler from the Windows **Start** menu.
- Enabling the Scheduler, page 3-5
- Updating the Schedule, page 3-6
- Restoring the Default Schedule, page 3-6

Updating the Schedule

This section describes how to change the defaults that Cisco automatically configures. When you click the Update Schedule button, BARS saves the frequency and log settings that you configured.

Procedure

Step 1 Cisco sets a default schedule for when the backup is to run. If you want to change the default, choose **Backup > Scheduler** from the main window.

The utility backs up all data at the same time. You cannot configure a separate schedule for each application.

Step 2 For the frequency, choose the time from the drop-down list boxes.

Step 3 Choose one of the following buttons, depending on your schedule preference:

    a. Click the radio button **On every** and check the check boxes for the days when you want the backup to run.

    b. Click the radio button **After every** and choose the number of days from the drop-down list box.

Step 4 If you want BARS to erase the log after a certain number of days, choose the number of days from the Erase logs after drop-down list box.

Step 5 If you want BARS to erase the backup file after a certain number of days, choose the number of days from the Erase logs after drop-down list box.

Step 6 Click **Update Schedule**.

Related Topics

- Understanding How the Restore Utility Works, page 1-10
- Enabling the Scheduler, page 3-5
- Disabling the Scheduler, page 3-5
- Updating the Schedule, page 3-6

Restoring the Default Schedule

If you want to restore the default schedule that Cisco automatically provides, perform the following procedure:

Procedure

Step 1 From the main window, choose **Backup > Scheduler**.

Step 2 Click the **Restore Defaults** button.

The default schedule appears in the window.

Step 3 To ensure that backup runs as scheduled, click the **Enable Scheduler** button.

Step 4 To save the default settings, click the **Update Schedule** button.

When you restore the default schedule, all default settings including the frequency and the log settings appear in the Configure Scheduler window. Schedule status—*enabled* or *disabled*—does not change.

Related Topics

- Enabling the Scheduler, page 3-5
- Disabling the Scheduler, page 3-5
- Updating the Schedule, page 3-6

Configuring the Backup Storage Location

This section describes the procedure for configuring the backup storage location, which is the location in which BARS stores the data.

Perform the following steps to configure the backup storage location.

Procedure

Step 1   Choose **Backup > Storage Location**.

Cisco allows you to choose only one Backup Storage Location for all data that is backed up. The utility compresses the data to a single file, the Backup*mm-dd-yy*.tar file, and stores the file in the location that you choose.

For the backup destination, Cisco strongly recommends that you specify a tape drive or a network directory, not a local directory.

Step 2   Click the **Network Directory**, **Local Directory**, or **Tape Device** radio button.

- You may click the Tape device radio button only if you have the Cisco CallManager server with tape drive (for example, the MCS 7835, MCS 7845-1400, IBM xSeries 340, or xSeries 342 server).

  If you plan to restore data from one server to another server by using a tape drive, make sure that both servers use the same tape format.

- If you choose to use the Local Directory, make a copy of the Backup*mm-dd-yy*.tar file before you perform a restoration on the same server.

  > **Note**   If the data is stored on the local directory and an unrecoverable error occurs on the server, the data is lost. There also exists the potential of consuming all available disk space if the destination location is the local directory on the system, thus causing the system to crash and become unrecoverable.

- If you choose a network directory as the destination for the backup server, the directory must be shared in Windows 2000. To share a directory, log in on that server, right-click the directory folder icon that you want to share, click **Sharing...**, click **Share this folder**, and then click **OK**.

  If you choose to back up the data to a network directory, that server must have NETBIOS name resolution in place. (Use the computer name, the IP address or the fully qualified DNS name.)

Step 3 Perform the following step, depending on the radio button that you chose in Step 2:

    a. Network Directory—In the Path Name field, enter the name of the server where you want BARS to store the data.

      You must enter a user name and password with administrative access rights to the server; then, click **Verify**.

    b. Local Directory—In the Path Name field, enter the directory path where you want BARS to store the data.

    c. Tape Device—From the Device Name drop-down list box, choose the device where you want to store the data.

Step 4 Click the **Update** button near the top of the Backup Storage Location window.

⚠️

Caution Choosing the local drive could consume all available disk space and cause the system to crash and become unrecoverable.

Related Topics

- Configuring a Data Source Server, page 3-2
- Performing a Backup Now, page 3-8

Performing a Backup Now

If you want to perform a backup now, you can either back up all configured data source servers, or you can choose the data source servers that you want to back up immediately.

Procedure

Step 1 Choose **Backup > Backup Now**. The Backup Data Source Server window appears.

Step 2 Perform one of the following tasks, depending on the outcome that you want:

    a. If you want to back up all configured data source servers, click the **All configured servers** radio button.

    b. If you want to choose the data source servers that the utility will back up, click the **Selected servers** radio button; then, check the server check boxes.

Step 3 Click **Start Backup Now**. A window gives status of the backup process as it runs.

Related Topics

- Configuring the Backup Storage Location, page 3-7
- Accessing the Backup Log File After the Backup Completes, page 3-9

Canceling the BARS Backup Process

To cancel the backup process after it has begun, perform the following procedure:

Procedure

Step 1   Choose **Start > Programs > Cisco BARS>**

Step 2   You now have two options. Choose **Cancel Backup**.

Stopping the BARS Scheduler

To stop the BARS Scheduler, perform the following procedure:

Procedure

Step 1   Choose **Start > Programs > Administrative Tools > Services**.

Step 2   Locate the service named **Cisco BARS Scheduler**.

Step 3   Right-click **Stop** to immediately stop the Scheduler.

Step 4   To restart the Scheduler, you can navigate to the **Cisco BARS Scheduler** service again and right-click **Restart**.

Accessing the Backup Log File After the Backup Completes

The backup process creates a backup log file with the following format:

Backup*mm-dd-yy*.txt

where *mm* specifies the month, *dd* specifies the day and specifies the year.

BARS puts this file in the following location on the backup server:

C:\Program Files\Common Files\Cisco\Logs\BARS\Backup

BARS writes all errors that occur during configuration or while the utility is running to the Backup*mm-dd-yy*.txt file. If you receive the following error messages or other error messages in the log file, the process did not successfully backup up the data:

- Cisco CallManager database could not be found on <Server Name>.
- Could not determine APPS version
- Could not find a CCM/ART/CDR SQL database on <Server Name>

- Error finding SQL database
- Error enumerating registry keys on <Server Name>
- Open file request returned Not Enough Space

⚠

Caution   During the backup, heed warnings about the amount of temporary space that is available on the staging directory. The staging directory serves as a temporary directory where the backup utility places all files until it builds the single Backup*mm-dd-yy*.tar file. If you do not have enough temporary space (about 200 MB), the backup will fail. Do not run a backup if you receive these warnings.

Always verify that the backup completed successfully.

Related Topics

- Appendix A, "BARS Error Messages"
- Location of Trace Files, page 1-10

Restoring the Data

This section provides information on the following topics that relate to the restore process:

Understanding How the Restore Process Works

The BARS restore process allows you to recover all data that was compressed into the Backup*mm-dd-yy*.tar file. The BARS Restore Wizard prompts you for the following information:

- The backup storage location of the archived Backup*mm-dd-yy*.tar file.
- The data destination server where you want the restore utility to send the restored data.
- The application that you want restored.

The BARS restore process stops system services, copies the data that you want restored to a staging directory, notifies the data destination server that the data is ready for restoration, and then sends the data to the data destination server.

⚠️
Caution During the restoration, services stop, which causes call-processing interruptions. Cisco recommends that you use the restore utility during off-peak hours to minimize call-processing interruptions.

⚠️
Caution All-third party applications, including Cisco-provided and approved applications that are co-resident on the Cisco CallManager server, must be stopped and disabled before you use the Restore process.

The restore process creates log files, which are text files that are saved by date, in the following folder:

C:\Program Files\Common Files\Cisco\Logs\BARS\Restore.

If the following error messages or other error messages appear in the log file, the process did not successfully restore the data:

- Failed to drop CCM/ART/CDR database from <Server Name>
- Failed to restore DC Directory
- Failed to stop DC Directory service
- Failed to restart DC Directory service

Related Topics

- Accessing the Backup Log File After the Backup Completes, page 3-9
- Restoring the Data, page 4-1
- Appendix A, "BARS Error Messages"
- Location of Trace Files, page 1-10

Important Information About the Restore Process

Be aware of the following items relating to the restore process:

- While restoring a server, you should not change passwords for SQL and LDAP directory. These passwords will be the same as they were when the backup was performed.
- The restore process cannot selectively restore user-level components, such as mailboxes or device settings.
- The restore process does not reinstall locale settings that were installed with Locale Installer.
- The restore process does not reinstall bootstrap files.
- The restore process does not reinstall custom configurations.

Restoring the Data

This section describes how to restore data that the backup process stored in the Backup Storage Location.

Procedure

Step 1 Choose **Restore > Restore Wizard**.

The Restore Wizard guides you through the restoration.

Step 2 Choose the backup storage location where the data is stored. Click **Next**.

Step 3 From the drop-down list boxes, first choose the data destination server, then choose the application to restore. Click **Next**.

You can only choose a single application to restore. If you want to restore additional applications, you must repeat the process.

Step 4 In the Authentication Information portion of Step 3 of 4 of the Restore Wizard, enter a user name and a password that has administrative access privileges on the data destination server. Click **Next**.

Step 5   The restoration process overwrites all data on the data destination server that you chose in Step 3. To complete the restoration process, click the **Restore** button.

Step 6   When the restore process finishes, reboot the restored server for the process to take effect.

Step 7   Verify that the restored data is on the server.

Step 8   Repeat this procedure to restore any other servers in the system.

Related Topics

- Restoring the Cisco CallManager Cluster, page 4-3
- Restoring Subscriber Servers, page 4-4
- Restoring Subscriber Servers, page 4-4

Restoring the Cisco CallManager Cluster

⚠️

Caution   All pre-installation and post-installation tasks that are noted in the Cisco CallManager installation and upgrade documents apply to restoring the cluster. Review the guidelines before you begin any restoration procedures.

You need to reinstall Cisco CallManager on every server in the cluster *only* if all of the following conditions exist:

- Every machine in the Cisco CallManager cluster crashes
- You do not have a current backup of Cisco CallManager
- The Publisher database server crashes and the backup-up version of Cisco CallManager does not match the version currently running within the cluster. For example, a backup was taken of Cisco CallManager 3.3(2) but the cluster is currently running Cisco CallManager 3.3(3).

If the above conditions exist, install the operating system and Cisco CallManager on the publisher and on all subscribers in the cluster. Always restore one server at a time. Make sure that the Cisco CallManager version that is installed on each subscriber server matches the version of Cisco CallManager that is installed on the publisher database server.

⚠️

Caution   Cisco strongly recommends that you do not change any passwords when you are restoring/replacing the server or cluster. The restoration process restores the previously backed up passwords, does not acknowledge the new passwords, and causes the system to malfunction.

If you change the Directory Manager password when you are restoring/replacing the server or cluster, the server cannot access the directory.

If you do have a current backup, use the following procedure to restore the cluster:

Procedure

Step 1 Reinstall the operating system on the publisher database server.

Choose the **Same Server Recovery** option during the operating system installation to ensure that the original information you entered during the initial operating system installation displays in the appropriate fields.

> **Note** If you will be reinstalling Cisco CallManager 3.3(2), manually remove the *D:\stiRecover.flg* file before proceeding with Cisco CallManager reinstallation.

Step 2 Reinstall Cisco CallManager on the publisher database server.

Make sure that the Cisco CallManager version that is installed on the server matches the version of the latest successful publisher database server backup.

Step 3 Restore the data to the publisher database server.

> **Note** To restore subscribers, see the "Restoring Subscriber Servers" section on page 4-4.

The restore process resycnchronizes the replications between the publisher and subscribers.

Step 4 After you restore the Cisco CallManager servers, you can restore other application servers.

Restoring Subscriber Servers

Cisco no longer requires that you remove the subscriber server from the Cisco CallManager database before recovering the server. When the subscriber server authenticates to the publisher database server and pulls a duplicate of the database from the server, the subscriber server automatically adds itself to the database.

Use the following guidelines to restore the subscriber server(s):

- Perform a new installation of both Cisco CallManager and the Cisco-provided operating system:
    - For Cisco CallManager 3.3(3), the minimum required operating system is version 2000.2.3 with and upgrade to 2000.2.4, or a fresh install to operating system version 2000.2.4.
    - For Cisco CallManager 4.0(1), the minimum required operating system is version 2000.2.3 with an upgrade to version 2000.2.5. The operating system must also be SR2 or later.

> **Note** The version of Cisco CallManager must match the version that is running on the publisher database server.

- Restore the subscriber if its CDR and TFTP data was backed up.

Restoring a CRA Server or CER Server

Use the following guidelines to restore these application servers:

- Make sure that you have restored the Cisco CallManager servers/data before you restore these application servers.
- Install the operating system on the server, if it is not already installed.
- Co-resident servers (Cisco CallManager and CRA/CRS installed on the same server) may already have the operating system installed.
- Install the application as if it were a new installation.
- Upgrade the application to the version of the backup that you want to restore, if necessary.
- Restore the backup data to the new server.
- To restore the data, Cisco recommends that you have backup data stored on tape device or on a network directory, not on the local directory of the failed server.
- Verify that the data was restored to the new server.

Replacing an Existing or a Failed Server

When one server is configured to replace an existing or failed server, the new server uses the IP information and computer name of the original server. To replace an existing or failed server, perform the following tasks:

- Install the operating system and the software as if it were a new installation.
- Upgrade the application to the version of the backup that you want to restore.
- Restore the backup data to the new server.

You must have backup data stored on tape or on a network directory, not on the local directory of the existing or failed server, to replace the server.

Tip   When you replace a server that has Cisco CallManager installed, choose the **Server Replacement/Same Server Recovery** option during the operating system installation to ensure that the original information that you entered during the initial operating system installation displays in the appropriate fields.

When you perform a server replacement, you must always manually enter the IP information, computer name, and other configuration data exactly as it was entered on the original server.

Make sure that you locate the configuration information for this server before you begin.

Related Documents

- *Installing Operating System Version 2000.2.2* (or later)
- *Installing Cisco CallManager Release 3.3* (or later)

Tasks to Perform After Restoration

Whenever you run a restoration process, perform the following post-restoration tasks:

- For the restoration to take effect, make sure that you reboot the server after you restore the data.

- Verify that no errors occurred during the restoration.

- If necessary, reinstall the Cisco IP telephony applications/products/plugins/service releases to versions that are compatible with the restored version of Cisco CallManager. Refer to the *Cisco CallManager Compatibility Matrix* for more information. To obtain the most recent version of the matrix document, see Table 2 on page -ix.

- To obtain the locales that were used prior to the restoration, reinstall the Cisco IP Telephony Locale Installer. To obtain locale installer documentation, see Table 2 on page -ix.

BARS Error Messages

This section provides tables that list error messages and corrective actions for errors that may appear in the BARS log file or in dialog boxes. These messages can occur during either the backup or restore process for applications that BARS supports:

- BARS Backup Error Messages for Cisco CallManager
- BARS Backup Error Messages for Cisco Emergency Responder
- BARS Backup Error Messages for Cisco CDR Administrative Reporting (CAR)
- BARS Backup Error Messages for Cisco Customer Response Solutions
- BARS Restore Error Messages for Cisco CallManager
- BARS Restore Error Messages for Cisco Emergency Responder
- BARS Restore Error Messages for Cisco CDR Administrative Reporting (CAR)
- BARS Restore Error Messages for Cisco Customer Response Solutions

Table A-1   BARS Backup Error Messages for Cisco CallManager

Error Message	Reason	Corrective Action
You must enter a phrase from one to 15 characters in length. This phrase may contain English lower-case letters, English upper-case letters, Westernized Arabic Numerals, and the following non-alphanumeric special characters { } . <>:?/|\`~!@$^&*()_-+	You entered invalid characters for the private password phrase.	Enter valid characters.
Could not determine Cisco CallManager version.	The server could not be connected or the registry entry for Cisco CallManager does not exist.	Verify that the backup target is installed with same backadmin password phrase as that of the backup server, and that the registry entry for Cisco CallManager is not empty.

Table A-1   BARS Backup Error Messages for Cisco CallManager (continued)

Error Message	Reason	Corrective Action
Cisco CallManager versions prior to 3.3 are not supported.	Earlier versions of Cisco CallManager are not supported. Only 3.3(3) or later is supported.	Only Cisco CallManager 3.3(3) or later will be backed up. Use the latest version of the Cisco IP Telephony Applications Backup Utility to back up earlier versions of Cisco CallManager.
Could not extract publication information. Replication will not be restored.	The server replication is broken. The server is not in cluster.	Recreate the replication for the cluster and do the backup again.
Could not find CCM03XX database on server_name.	Database CCM03XX does not exist, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on backup server and backup target where server_name is the remote server.	Verify if the database exits on the system. Only if the data source server to be backed up is remote server, install the backup target with the same backadmin private phrase as that of backup server.
Cannot continue with backup. Not enough space on server_name.	The staging directory lacks sufficient disk space.	Make sure the staging directory has enough disk space when you are planning to backup large files.
Could not find SQL service on this server. Database could not be backed up.	SQL service is stopped in the data source server.	Start the SQL service and then start the backup again.
Could not backup CDR & CMR files successfully.	The files or folder either do not have administrator permissions or may be in use.	Verify that the files and folder have full administrator permissions. Verify that the files are not in use.
Failed to backup Cisco CallManager Registry.	Cisco CallManager registry does not exist, or the Backadmin user is unable to connect to the registry. Backadmin passwords are different on the backup server and backup target.	Verify that the Cisco CallManager registry exists and that the remote targets have the same backadmin private phrase as that of the backup server.
Could not backup DC Directory completely.	The DC Directory backup failed.	Verify that DC Directory is installed and that the service *DC Directory server* currently runs on the backup target. Restart the service and repeat the backup.
Could not back up TFTP files.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.

Table A-1   BARS Backup Error Messages for Cisco CallManager (continued)

Error Message	Reason	Corrective Action
Could not back up files from alternate file location path.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Could not back up BAT CSV files successfully.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Could not back up BAT Template files successfully.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Could not backup BAT Version file successfully.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Could not backup Cisco CallManager successfully on server_name.	Some of the Cisco CallManager components were not backed up successfully.	Verify that each Cisco CallManager component is backed up successfully.

Table A-2   BARS Backup Error Messages for Cisco Emergency Responder

Error Message	Reason	Corrective Action
The publication status of the CER database in SQL does not match the file E911Bootstrap.properties. Please verify configuration. Skipping database backup.	The replication of the cluster is broken. The server is not in the cluster.	Recreate the replication for the cluster and do the backup again.
Could not find the CER SQL database on server_name.	Database CER12XX does not exist, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify if the database exits on the system. Only if the data source server to be backed up is remote server, install the backup target with the same backadmin private phrase as that of the backup server.
SQL Server does not appear to be installed on server_name. Skipping backup of SQL Server.	SQL Service is not running on the server.	Start the SQL service and then perform the backup.

Table A-2   BARS Backup Error Messages for Cisco Emergency Responder (continued)

Error Message	Reason	Corrective Action
Could not found Reg.dmp in the staging directory.	CER registry does not exist, or Backadmin user is unable to connect to the server. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that CER registry exists. For remote target machines, the target should be installed with the same backadmin private phrase as that of the backup server.
Could not found Version.ini in the staging directory.	Version information does not exist in registry.	Verify the registry contains the version information.
Could not determine CER version.	Version information does not exist in registry.	Verify the registry contains the version information.
Failed to backup CallHistory folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup CERSysFiles folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Etc folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Export folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Import folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Nena_msag_records folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
File JTapi.jar not found in source folder.	The file does not have administrator permissions or the file may be in use.	Verify that the file has full administrator permissions and that it is not in use.
File SAenvProperties.ini not found in source folder.	The file does not have administrator permissions or the file may be in use.	Verify that the file has full administrator permissions and that it is not in use.

Table A-2   BARS Backup Error Messages for Cisco Emergency Responder (continued)

Error Message	Reason	Corrective Action
CER versions prior to 1.2(1) are not supported.	Prior versions of CER are not supported for backup	CER 1.2(1) or later will not be backed up.
Could not backup Cisco Emergency Responder successfully on server_name	Some of the CER components were not backed up successfully.	Verify that all the CER components are backed up successfully.

Table A-3   BARS Backup Error Messages for Cisco CDR Administrative Reporting (CAR)

Error Message	Reason	Corrective Action
Could not find CAR database on server_name. Skipping database backup.	Database *Art* does not exist, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and the backup target where server_name is the remote server.	Verify that the database exits on the system. Only if the data source server to be backed up is remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Failed to backup CAR Registry.	CAR registry does not exist, or the Backadmin user is unable to connect to the server. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that CAR registry exists. For remote target machines, the target should be installed with same backadmin private phrase as that of the backup server.
Failed to backup CAR Reports.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Could not backup CAR successfully on server_name.	Some of the CAR components are not backed up successfully	Verify that all CAR components are backed up successfully.

Table A-4   BARS Backup Error Messages for Cisco Customer Response Solutions

Error Message	Reason	Corrective Action
Could not backup database DB_Name successfully. DB_Name can be db_cra, db_cra_ccdr, schedulerdb, fcRasSvr	Database DB_name does not exist, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that the database exits on the system. Only if the data source server to be backed up is remote server, install the backup target with the same backadmin private phrase as that of the backup server.
SQL Server does not appear to be installed on server_name. Skipping backup of SQL Server.	SQL Service is not running.	Start the SQL service and do the backup.
The folder CRS_Root folder does not exist. Files *.aef, *.wav, *.java, *.jar, *.properties cannot be backed up.	Check that the CRS_Root folder exists.	Verify that CRS is properly configured on the system.
The folder CRS_Root does not exist. Files *.xml, *.class, *.gsl, *.digit, *.ini cannot be backed up.	Check that the CRS_Root folder exists.	Verify that CRS is properly configured on the system.
Failed to backup Desktop_Config\Config folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Desktop_Config\Icons folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Desktop_Config\AudioFiles folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Failed to backup Desktop_AudioFiles folder.	The files or folder do not have administrator permissions or they may be in use.	Verify that the files and folders have full administrator permissions. Verify that the files are not in use.
Unable to determine the setup of the server.	The setup (CRS or RDB) of the server cannot be determined from the registry.	Verify the registry entries for CRS or RDB.
Could not back up CRS successfully on server_name.	Some of the CRS components were not backed up successfully.	Verify that all CRS components are backed up successfully.

Table A-5   BARS Restore Error Messages for Cisco CallManager

Error Message	Reason	Corrective Action
Could not find Cisco CallManager data in the archive.	The archive was not properly extracted.	Verify that BARS is properly installed.
Not enough space on the specified path to restore database CCM03XX. Skipping database restore.	The database dump is very large and there is not enough space in the system.	Verify you have enough space when you are restoring large files or databases.
Failed to drop database CCM03XX from "Server_Name".	Database CCM03XX is in use and cannot be dropped, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that the database is not in use. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Database CCM03XX on server "Server_Name" was not restored.	Restore of the database failed, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that you have a good backup of the Cisco CallManager and check the logs for a successful backup of the system. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not find Cisco CallManager database dump in archive.	At the time of creating the archive the database dump was not present in the staging directory.	Verify that the backup of the database was successful by checking the backup logs.
Failed to restore registry keys. Check if Reg.dmp exists in the archive.	At the time of creating the archive, the registry dump was not present in the staging directory, or the Backadmin user is unable to connect to the server. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that registry backup was successful by checking the backup logs. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not restore DC Directory successfully.	DC directory restore failed.	Verify that the backup of DC directory was successful by checking the backup logs.

Table A-5   BARS Restore Error Messages for Cisco CallManager (continued)

Error Message	Reason	Corrective Action
Could not restore files to alternate path locations.	Files were not restored to alternate path locations. The files or folders may not have administrator permissionsor they may be in use.	Verify that the backup of the alternate path locations was successful by checkng the backup logs.Verify that these folders have full administrator permissions. Make sure that the files are not in use.
Could not restore DSN Cisco CallManager.	DSN information was not restored by BARS.	Verify that backup of DSN was successful by checking the backup logs.

Table A-6   BARS Restore Error Messages for Cisco Emergency Responder

Error Message	Reason	Corrective Action
The Cisco Emergency Responder archive is not extracted properly.	The archive was not properly extracted.	Verify that BARS is installed properly.
CER versions prior to 1.2(1) are not supported.	Restore of CER 1.2(1) or earlier is not allowed.	Restore of CER 1.2(1) or later is allowed.
Could not find Reg.dmp in the staging directory.	At the time of creating the archive, the registry dump was not present in the staging directory.	Verify that the registry backup was successful bychecking the backup logs.
Could not find Replication.ini in the staging directory.	Replication information could not be found from the archive	Verify that backup was successful from by checking the logs.
Failed to drop database CER12XX from "Server_Name" before restoring CER12XX.	Restore of the database failed, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that you have a good backup of the CER. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not recreate publication on "Server_Name".	CER publication is not created by BARS, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Recreate the replication manually or by running CERAdmin utility. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.

Table A-6   BARS Restore Error Messages for Cisco Emergency Responder (continued)

Error Message	Reason	Corrective Action
Could not recreate subscriptions.	CER subscriptions were not created by BARS, or the Backadmin user is unable to connect to the database. Administrator passwords are different on the backup server and backup target where server_name is the remote server.	Recreate the replications manually or by running the CERAdmin utility.
DatabaseCER12XX on server "Server_Name" was not restored.	BARS restore is unable to restore the database, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that the SQL services are running. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not find CER.dmp in the staging directory.	At the time of creating the archive, the database dump was not present in staging directory.	Verify that the backup of the database was successful by checking the backup logs.
Could not find callHistory directory in the staging directory.	The archive does not contain these folders or files.	Verify that callHistory locations backup was successful by checking the backup logs.
Could not find CERSysFiles directory in the staging directory.	The archive does not contain these folders or files.	Verify that CERSysFiles locations backup was successful by checking the backup logs.
Could not find etc directory in the staging directory.	The archive does not contain these folders or files.	Verify that etc locations backup was successful by checking the backup logs.
Could not find export directory in the staging directory.	The archive does not contain these folders or files.	Verify that export locations backup was successful by checking the backup logs.
Could not find import directory in the staging directory.	The archive does not contain these folders or files.	Verify that import locations backup was successful by checking the backup logs.
Could not find nena_msag_records directory in the staging directory.	The archive does not contain these folders or files.	Verify that nena_msag_records locations backup was successful by checking the backup logs.

Table A-6   BARS Restore Error Messages for Cisco Emergency Responder (continued)

Error Message	Reason	Corrective Action
Could not find jtapi.jar file in the staging directory.	The archive does not contain these folders or files.	Verify that jtapi.jar locations backup was successful by checking the backup logs.
Could not find SAenvProperties.ini file in the staging directory.	The archive does not contain these folders or files.	Verify that SAenvProperties.ini locations backup was successful by checking the backup logs.

Table A-7   BARS Restore Error Messages for Cisco CDR Administrative Reporting (CAR)

Error Message	Reason	Corrective Action
Could not find CAR data in the archive.	The archive was not properly extracted.	Verify that BARS was installed properly.
Failed to find ART.dmp in the archive. ART database will not be restored.	At the time of creating the archive, the database dump was not present in staging directory.	Verify that backup of the database was successful by checking the backup logs.
Database art on server "Server_Name" was not restored.	BARS restore is unable to restore the database, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify the SQL service are running. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not find Registry dump in the staging directory.	At the time of creating the archive, the registry dump was not present in staging directory.	Verify that backup of the registry was successful by checking the backup logs.
Failed to restore CAR reports.	The archive does not contain these folders or files. The files or folders where the archive will be restored must have full administrator permissions.	Verify that export locations backup was successful by checking the backup logs.

Table A-8   BARS Restore Error Messages for Cisco Customer Response Solutions

Error Message	Reason	Corrective Action
The Cisco Response Solutions archive is not extracted properly.	The archive was not properly extracted.	Verify that BARS was properly installed.
Failed to restore the db_name users. Db_name can be db_cra, db_cra_ccdr, schedulerdb, fcRasSvr	The database users were not restored properly, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that the database is properly restored . Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Failed to restore db_name on "Server_Name". Db_name can be db_cra, db_cra_ccdr, schedulerdb, fcRasSvr.	The database was not properly restored, or the Backadmin user is unable to connect to the database. Backadmin passwords are different on the backup server and backup target where server_name is the remote server.	Verify that the database is backed up properly by checking the backup logs. Only if the data source server to be restored is the remote server, install the backup target with the same backadmin private phrase as that of the backup server.
Could not find db_name dump in staging directory. Db_name can be db_cra, db_cra_ccdr, schedulerdb, fcRasSvr.	The database dump was not archived at the time of backup.	Verify that database dump backup was successfully created by checking the logs.
Failed to restore linked server information.	The linked server information was not backed up properly.	Verify that the databases were restored properly before restoring the linked server information.
Failed to restore the SQL Jobs properly.	SQL jobs were not restored successfully.	Verify that the SQL jobs were successfully created at the time backup by checking the backup log.
Could not find the SQL jobs dump file in the staging directory. Failed to restore SQL jobs.	SQL Jobs information did not exist in the archive.	Verify that SQL jobs backup was successful.
Could not find Wfavvid folder in staging directory.	The archive was unable to extract the folder.	Verify that the backup of this folder was successful.
Could not find Ccndir.ini file in the staging directory.	The archive was unable to extract the file.	Verify that the backup of this file was successful.
Could not find Common folder in staging directory.	The archive was unable to extract the folder.	Verify that the backup of this folder was successful.
Could not find Desktop folder in staging directory.	The archive was unable to extract the folder.	Verify that the backup of this folder was successful.

Table A-8   BARS Restore Error Messages for Cisco Customer Response Solutions (continued)

Error Message	Reason	Corrective Action
Could not restore user and system grammar/prompts files.	The archive was unable to extract the file.	Verify that the backup of this file was successful.
Could not restore DSN dsn_cra_hrbd.	The DSN information could not be restored.	Verify that DSN was successfully backed up from the logs.

A

accessing BARS **3-2**

accessing the backup file **3-9**

adding a data source server **1-5**

applications supported **1-3**

application versions that BARS supports **1-3**

B

BackAdmin account **2-3**

Backadmin Private Password Phrase **2-3**

backing up now **3-8**

backup

data **1-5**

destination **3-7**

file **1-5, 3-7**

file location **3-9**

location **1-6**

now **3-8**

server **1-4, 2-3**

storage location **3-3, 3-7, 4-1**

tar file **3-7**

target **2-3**

backup target **1-5**

BARS

backup process components **1-4**

installation **2-2**

restore process **4-1**

version **2-4**

C

Call Detail Records Administrative Reporting **1-8**

CDR/CMR files **1-4**

changing the purpose of a server **2-4**

Cisco CallManager cluster **1-5**

Cisco CallManager Publisher Database **1-7**

Cisco CallManager Subscriber Database **1-7**

Cisco Customer Response Applications/Solutions **1-8**

Cisco Emergency Responder **1-10**

components of BARS backup process **1-4**

Configured Servers list **3-3**

Configure Scheduler screen **1-6**

configuring BARS for the first time **3-2**

D

data backed up by BARS **1-7**

data source server **1-5**

data source server configuration **3-3**

data source server deletion **3-4**

data source servers **1-4**

default schedule **1-5, 3-6**

disabling the Scheduler **3-5**

DNS/IP address field **3-3**

E

enabling the Scheduler **3-5**

erasing the log **3-6**

error messages from restore process **4-2**