



# System Release i4.2.2

## Release Notes



# Please Read

## Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

# Notices

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# About This Guide

## Introduction

System Release i4.2.2 (SR i4.2.2) is a minor release built on System Release i4.2.1 (SR i4.2.1). These release notes contain the following information:

- Descriptions of the standard features introduced with this system release
- Information you need to prepare your site for an upgrade to SR i4.2.2
- General information on contacting us
- A list of software versions installed with the base SR i4.2.2 system

## Known Issues

There are no known issues in this release.

## Audience

These release notes are written for sales and program managers, system operators, and field technicians.

## Scope

These release notes provide an executive overview of SR i4.2.2. If you have questions about this release or require more detailed information, contact Cisco Services.

## Document Version

This is the third formal release of this document. In addition to minor text and graphic changes, the following table provides the technical changes to this document.

<b>Description</b>	<b>See Topic</b>
List of new features	<i>What Are the New Features in SR i4.2.2?</i> (on page 3)
Added instructions for upgrading the online Help	<i>Upgrading the Online Help</i> (on page 15)



# 1

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## Why Choose System Release i4.2.2?

### Introduction

SR i4.2.2 includes many features and enhancements implemented at the request of our customers. Review this chapter to learn more.

### In This Chapter

- SR i4.2.2 at a Glance..... 2
- What Are the New Features in SR i4.2.2? ..... 3

## SR i4.2.2 at a Glance

### Overview

This section provides an “at-a-glance” look at the features and enhancements for SR i4.2.2. Each feature and enhancement is described in detail later in this chapter.

## What Are the New Features in SR i4.2.2?

### Feature Authorization

This feature allows the operator to enable or disable specific set-top features from the DNCS. For example, you can enable or disable the games feature for a set-top from the DNCS.

### Support for Games

SR i4.2.2 provides support for games. This feature allows the DNCS to broadcast the data to the target platform (for example, the Z60/Z70 or other Zapper set-tops). Broadcast data can be any sort of data object desired by an application on the target platform including binary files such as applications or images, text files, or other formats. The BFS will take these data objects and broadcast the data on a broadband carousel to the target platform. The carousel is simply an elementary data stream that is continually playing out these data objects over and over. The target platform can extract the desired data object from the broadband carousel and perform operations on the data object as defined by the software application.

### Multiple Bootloader Carousel

The Broadcast File System (BFS) has been enhanced to support more than one bootloader carousel. With multiple bootloader carousels, the BFS can send set-top module software version images using more than one carousel. This enhancement allows operators to reduce download times by splitting a set of images among multiple carousels and to design the data rate based on the set-top type and network bandwidth availability. This feature also enables the DNCS to download the satellite and cable set-tops in independent carousels.

### Remote Alarms

This feature triggers an alarm to get the attention of a system operator quickly whenever any process running in the DNCS goes down. The remote machine that is connected to the DNCS should be able to generate a noise that allows the operator to quickly detect this condition.

## **SARFT XML Configuration**

SR i4.2.2 supports SARFT. SARFT is a Chinese government regulatory authority and stands for State Administration of Radio, Film, and TV. SARFT has access to all Cable companies and runs periodic tests to see if the cable providers are complying with the regulatory requirements. SR i4.2.2 allows the DNCS to generate the SARFT report for the configured number of days.

## **Satellite/MMDS Configuration**

SR i4.2.2 can serve as the conditional access (CA) system for the satellite and terrestrial systems and for cable systems.

# 2

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## What Are the Site Requirements?

### Introduction

This chapter provides information that helps you prepare for the upgrade to SR i4.2.2. Read this entire chapter before you upgrade.

If you have questions or would like to order our products, please contact Cisco Services at 1-866-787-3866.

### In This Chapter

■ Upgrade Logistics .....	6
■ DNCS and Application Server Hardware Platforms.....	7
■ Scheduling Requirements.....	10
■ Software Configuration.....	11

## Upgrade Logistics

### Introduction

This section contains information that can help system operators plan the upgrade to SR i4.2.2.

### Supported Upgrade Path

Note these important upgrade requirements:

- Systems that upgrade to SR i4.2.2 must currently be operating with system software from SR i3.0.o.x, SR i4.2.0x, or later. The upgrade software is contained in a DVD due to significant changes contained in SR i4.2.2 and other time saving factors. Rollback procedures are included in the *DVD Upgrade Installation Instructions for System Release i4.2.2* in the event that the upgrade is unsuccessful.
- Our field service engineers or the system operator must have already installed the DNCS Utilities software onto the DNCS and should have already run the pre-upgrade checks to ensure system compatibility with SR i4.2.2 DVD upgrade requirements. Refer to *DBDS Utilities Version 6.1 Installation Instructions and DNCS Utilities User Guide* (part number 4020695) for instructions on installing and executing the DNCS Utilities.

**Important:** You can now use Live Upgrade with the installation DVD. Through the use of Live Upgrade, engineers can upgrade without shutting down the system processes until you activate the new system software.

### Time to Complete

The actual upgrade to SR i4.2.2 must be completed within a single maintenance window that usually starts around midnight. A few pre-upgrade procedures, consisting mainly of system checks, backups, and various operations upon the metadevices of the DNCS, can be completed *before* the maintenance window begins.

Our engineers have determined that a typical site can be upgraded within one maintenance window. See *Scheduling Requirements* (on page 10) for additional details.

### System Performance Impact

Interactive services will not be available during the maintenance window.

# DNCS and Application Server Hardware Platforms

## Introduction

This section describes the hardware configurations that are supported by SR i4.2.2.

## Running the Doctor Report

- 1 If necessary, open an xterm window on the DNCS.
- 2 Type **cd /export/home/dncs/doctor** and then press **Enter**. The /export/home/dncs/doctor directory becomes the working directory.
- 3 Type **doctor** and then press **Enter**. The system generates a list of parameters that you can use to run the Doctor Report.

**Note:** Each parameter causes the Doctor Report to generate output with specific configuration information.

```
xterm
dudley>> cd /dvs/dnscs/Utilities/doctor
dudley>> doctor

= Doctor package version 6.3.0.14 =
doctor -agestpbinqhcrx [ vd ] or
doctor [-c<number>]

a - (almost) All options (except q and x)
g - General Info: info, installed software info, and
  App Server disk utilization, and App Server swap space,
  database utilization, database extents, load average,
  and App Server debug flags, tracing levels, and App
  Server processes, and App Server corefiles, DNS, check
  force tune for valid service, dnscs license check, large log file check
  install options
e - Element Info: DHCT state summary, DHCT type summary, active
  elements, mod slot tolerance, source, source definitions,
  segments, sessions, subscription packages, EMMs expiring soon.
s - SI Info: SI_INSERT_RATE, system time message, distinguished
  SI QAM, SI out of band interval.
t - Time Info: and App Server time sync, timezone, DST.
p - PPV Info: PPV services and events, PPV and SAM service
  discrepancies, event use services, PPV files, phoneactivetime,
  EUT, GBAMs.
b - BFS Info: BFS carousels, BFS sessions, BFS source definitions.
i - IPG Info: IPG collector, IPG data files.
n - Ping Elements: QPSK Ethernet, QPSK RF, QAM, NETCRYPT, BIG, TED.
q - Check for quarantined qams and ping elements.
  This option is NOT included in all (-a).
x - Check one-one correspondence of DHCTs and serial numbers.
  This option is NOT included in all (-a).
v - Verbose mode: Detailed output, even if OK.
d - Suppress screen output. Write to output file only.
h - Generate this help text.
c - Clean up (delete) all but the last <number> doctor reports.
  Use this switch independently of all others. Report NOT GENERATED.

r - and one of the following options:
  hubqamList      - list what hub are associated to which QAMs
  smdgInfo        - list SMDG (StatMUX Dejitter Group) and respective QAM
  sdbsgInfo       - list SDB Service Group Mini Carousel Info
  genericQamInfo  - display generic QAMs and IPs
  dualGbeQamInfo - display generic QAMs and IPs
  sdbInfo         - display SDB server info and status
  pcgInfo         - display PCGs info and status

One or more of the a, g, e, s, t, p, b, i, n, c, x or q options is required.
d and v are optional but should be used with a required option.
Option order is irrelevant.

Note the q option must be explicitly chosen. It can be time consuming.
The q option automatically sets the v (verbose) option and pings and checks rpc bind for qams.
dudley>> █
```

- 4 Type **doctor -g** and then press **Enter** to view the version of DNCS software installed and the DNCS and Application Server platform, CPU, and disk information.

## What to Verify Using the Doctor Report

Using the results of the Doctor Report, verify that your system meets the following requirements. For detailed information on reading the data in the Doctor Report, see the *DBDS Utilities Version 6.1 Installation Instructions and DNCS Utilities User Guide* (part number 4020695).

**Important:** DBDS Utilities 6.1 is required for SR i4.2.2.



**DNCS System Release Required**

Your system must be running SR i3.0.o.x, SR i4.2.0x, or later. In the Doctor Report, look for the **SAIdncs** entry under the **All SAI Installed Package Information** section. If you have installed Service Packs for SR i4.2.2, your version may include additional letters and numbers.

**DNCS Hardware Configurations**

Ensure your site meets the following DNCS hardware requirements before upgrading to SR i4.2.2. The following table lists the minimum requirements for the DNCS hardware platforms that are supported by SR i4.2.2.

DNCS Server Platform	Hard Drive Configuration	Memory	Processor
Sun Fire V890	■ 6 X 146 GB	■ 8 GB min.	■ 2 X 1.5 GHz min.
	■ 12 X 146 GB	■ 16 GB min.	■ 4 X 1.5 GHz min.
Sun Fire V880	■ 12 X 73 GB	■ 8 GB min.	■ 4 X 900 MHz min.
	■ 6 X 73 GB	■ 4 GB min.	■ 2 X 900 MHz min.
Sun Enterprise 450	■ 7 X 18 GB	4 GB max.	4 X 400 MHz min.
	■ 10 X 18 GB		
Sun Enterprise 445	4 X 73 GB	4 GB	2 X 1.6 GHz min

**Application Server Hardware Configurations**

The following table lists the Application Server hardware platforms that are supported by SR i4.2.2.

Application Server Platform	Hard Drive Configuration	Memory	Processor
Sun V240	2 X 73 GB min.	2 GB min.	1 X 1.34 GHz min.
Sun V245	2 X 73 GB min.	2 GB min.	1 X 1.34 GHz min.
Sun Blade 150	1 X 20 GB min.	512 MB min.	1 X 550 MHz min.
Sun Ultra 5	1 X 20 GB min.	256 MB min.	1 X 333 MHz min.

## Scheduling Requirements

### How Long Does It Take to Complete the Upgrade?

With the live upgrade, your site only needs to be down for 2 to 3 hours during the entire upgrade process. Most of the upgrade procedures have no system impact. You can perform the pre-install and pre-upgrade steps at any time of day. However, the actual upgrade process normally takes place during a maintenance window beginning at midnight. The following table describes each upgrade process.

Process	Length of Time	Activity
Pre-install	1-3 hours	Activities are performed by Cisco Services, including checking the overall health of the system. These activities do not impact the system.
Pre-upgrade	3-4 hours	Backing up the system: <ul style="list-style-type: none"> <li>■ Back up the system components</li> <li>■ Back up the DNCS and Application Server files</li> <li>■ Complete system checks</li> </ul> These activities do not impact the system.
Upgrade	6-8 hours total; 2-3 of these hours require system outage  <b>Note:</b> Actual time may vary based on the number of devices being upgraded.	Upgrade the DBDS network: <ul style="list-style-type: none"> <li>■ Back up the DNCS database</li> <li>■ Install the DNCS and Application Server software</li> <li>■ Determine which optional features (licensed or unlicensed) need to be enabled as a result of this upgrade</li> <li>■ Install and download the component software (QAM, MQAM, GQAM, and QPSK modulator)</li> <li>■ Reboot the hardware</li> <li>■ Complete functional checks</li> </ul> QPSK modulator upgrades and some QAM and MQAM upgrades can be completed with little or no subscriber impact. However, 2-3 hours of the upgrade require system outage.
Post-Upgrade	3-4 hours	Back up the system: <ul style="list-style-type: none"> <li>■ Back up the file system</li> <li>■ Back up the DNCS database</li> </ul> These activities do not impact the system.

# Software Configuration

## Introduction

This section lists the software versions in each media kit supplied with SR i4.2.2.

## Software Versions

The following table lists the configuration of headend components *after* the upgrade to SR i4.2.2.

DBDS Component	Version Number
DNCS	
Application	i4.2.2.3
GUI/WUI	i4.2.2.3
DNCS Application Patch	i4.2.2.3p3
DNCS Support Software	
DNCS & Application Server Tools	4.2.1.12
DNCS Report Writer	4.3.0.7
DNCS Online Help	i4.2.2.1
Platform	
DNCS / Application Server Platform	4.3.0.3
Solaris	10 08/07
Solaris 10 Recommended / Security Patches	4.3.0.1
Application Server	
Application Server	i3.4.0.3
Application Server Software Support	
DNCS & Application Server Tools	4.2.1.12
RNCS	
RNCS	i1.2.1.4
QAM	
QAM App	3.2.0

## Chapter 2 What Are the Site Requirements?

DBDS Component	Version Number
PCG	
PowerKEY Conditional Access System (CAS) Gateway	1.0.17

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## Customer Information

### **If You Have Questions**

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.





# Upgrading the Online Help

## Introduction

System Release i4.2.2.1 contained an older version of online Help. To ensure that your system is using the appropriate online Help (i.4.2.2.1), we have provided a separate CD that includes the online Help package. This section provides the instructions for installing the online Help from the CD provided. Instructions for clearing the Firefox cache are also provided to make sure your system displays the appropriate online Help.

## In This Appendix

- Clear the Firefox Cache ..... 16
- Installing the Online Help Package from CD ..... 17

## Clear the Firefox Cache

Before you upgrade your system to the online Help for SR i4.2.2.1, we recommend that you clear the Firefox cache to remove any old Help files that may have been cached on your system. Complete the following steps to clear the cache.

- 1 Open an xterm window.
- 2 Type **firefox &** and press **Enter**. A Welcome screen opens.
- 3 Select **Tools** and **Clear Private Data**. The Clear Private Data screen opens.



- 4 Make sure that both **Cache** and **Browsing History** are selected.
- 5 Click **Clear Private Data Now**. This step removes any previous Help files that have been cached, and it prepares your system for a clean installation of the Help.



## Installing the Online Help Package from CD

Complete the following steps to install the online Help for SR i4.2.2.1 on your system.

- 1 Before you upgrade your online Help, you must clear the Firefox cache. See *Clear the Firefox Cache* (on page 16).
- 2 Insert the CD labeled DNCS Online Help i4.2.2.1 into the CD/DVD drive.
- 3 Wait for the DNCS to auto-mount the DVD.
  - If the CD auto-mounts, a file management window for dncshelp i4.2.2.1 opens. Proceed to step 4.
  - If the CD does not auto-mount, type the following commands as root user.
 

```
svcadm enable volfs
svcadm restart volfs
```

- 4 After the CD-ROM has been auto-mounted, type the following command:

```
# cat /cdrom/cdrom0/SAIhelp/pkginfo
```

**Result:** The system displays the following information:

```
PKG=SAIhelp
NAME=DNCS Online Help 01-28-09
DESC=DNCS Online Help 01-28-09
VERSION=i4.2.2.1
ARCH=sparc
CATEGORY=application
BASEDIR=/dvs
INTONLY=1
CLASSES=none
VENDOR=Cisco
PROJECT_WORK_AREA=
PSTAMP=aurora20090128100952
```

**Note:** This display is for example only and will change per package version you install.

- 5 Confirm this is the correct version you want to install. For this system release, the version should be **i4.2.2.1**.
- 6 To install the package, complete the following steps as root user:
  - a Type `cd /cdrom/cdrom0`
  - b Type `install_pkg SAIhelp`

**Result:** The system displays the following information:

## Appendix A

### Upgrading the Online Help

Checking the system, please wait...

\*\*\*\*\*

This script will install the following packages on "dncs":

SAIhelp      DNCS Online Help 01-28-09

i4.2.2.1

\*\*\*\*\*

Are you SURE you want to continue? [y,n,?,q]

7 At the prompt, type **y** and press **Enter**.

8 After the package is installed, you can view the log for errors in the following location:

/var/sadm/system/logs/SAIhelp\_i4.2.2.1\_install.log

**Note:** This display is for example only and will change per package version you install.

9 Type the following command to confirm that the correct package was installed.

**pkginfo -l SAIhelp**

**Result:** The system displays the following information:

PKGINST: SAIhelp

NAME: DNCS Online Help 01-28-09

CATEGORY: application

ARCH: sparc

VERSION: i4.2.2.1

BASEDIR: /dvs

VENDOR: Cisco

DESC: DNCS Online Help 01-28-09

PSTAMP: aurora20090128100952

INSTDATE: Jun 08 2010 09:45

STATUS: completely installed

FILES: 436 installed pathnames

5 directories

8831 blocks used (approx)

**Note:** This information is for example only and will change per package version you install.

10 Review the information above to confirm that the correct version of online Help has been installed.





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