System Release 4.3.1 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.

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Contents

About This Guide

Introduction

System Release 4.3.1 (SR 4.3.1) is a maintenance release of Cisco's Digital Broadband Delivery System (DBDS) software. These release notes contain the following information:

- A list of highlights with descriptions

- The list of media and software versions for this release

- Site requirements

- A description of closed, open, and enhanced issues for SR 4.3.1 and Report Writer 1.0

- General information on contacting Cisco® Systems

Purpose

The purpose of these release notes is to inform system administrators contemplating an upgrade of the new features, known issues, and upgrade notes for SR 4.3.1.

Audience

This document was written for system operators. Field service engineers and Cisco Services engineers may also find the information in this document helpful.

Document Version

This is the second formal release of this document.

1

Highlights

Introduction

New features and product improvements for SR 4.3.1 are described in this chapter.

In This Chapter

New Features

Central Inventory Management Support

Central inventory management support on the DNCS requires a new Web Services interface that allows an inventory management client application to programmatically upload set-top staging information in mini-PIMS (PowerKEY Information Management System) format. The Web Services interface also allows a client application to reset the staging state of a set-top whose entitlements have expired.

Dual EAS Support

Dual EAS support in this release allows conversion of In-Band (IB) SCTE-18 messages to force-tune messages, while preserving an overlay Out-Of-Band (OOB) EAS message. The DNCS now sends force-tune messages to DTA set-tops even if the system is configured for text scroll EAS.

No additional configuration is required for Dual EAS support.

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Site Requirements

Introduction

This chapter provides information that helps you prepare for the upgrade to System Release 4.3.1. Read this entire chapter before you upgrade.

In This Chapter

Upgrade Logistics

Introduction

This section contains information that can help system operators plan the upgrade to SR 4.3.1.

Supported Upgrade Path

Note these important upgrade requirements:

- Systems that upgrade to SR 4.3.1 must currently be operating with system software from SR 4.3, as well as DHCT client operating system (OS) 3.1 or later.

- The upgrade software is on CD. For upgrade instructions, refer to *System Release 2.8.1/3.8.1/4.3.1 CD Upgrade Installation Instructions* (part number 4036043). Rollback procedures and software are also provided in the event that the upgrade is unsuccessful.

- You must already have the DBDS Utilities software installed on the DNCS and should have already run the pre-upgrade checks to ensure system compatibility with SR 4.3.1 CD upgrade requirements. Refer to *DBDS Utilities Version 6.3 Installation Instructions and User Guide* (part number 4031374) for instructions on installing and executing the DBDS Utilities.

Time to Complete

The entire upgrade to SR 4.3.1 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.

Cisco engineers have determined that a typical site can be upgraded within one maintenance window. See **Scheduling Requirements** (on page 7) for additional details.

System Performance Impact

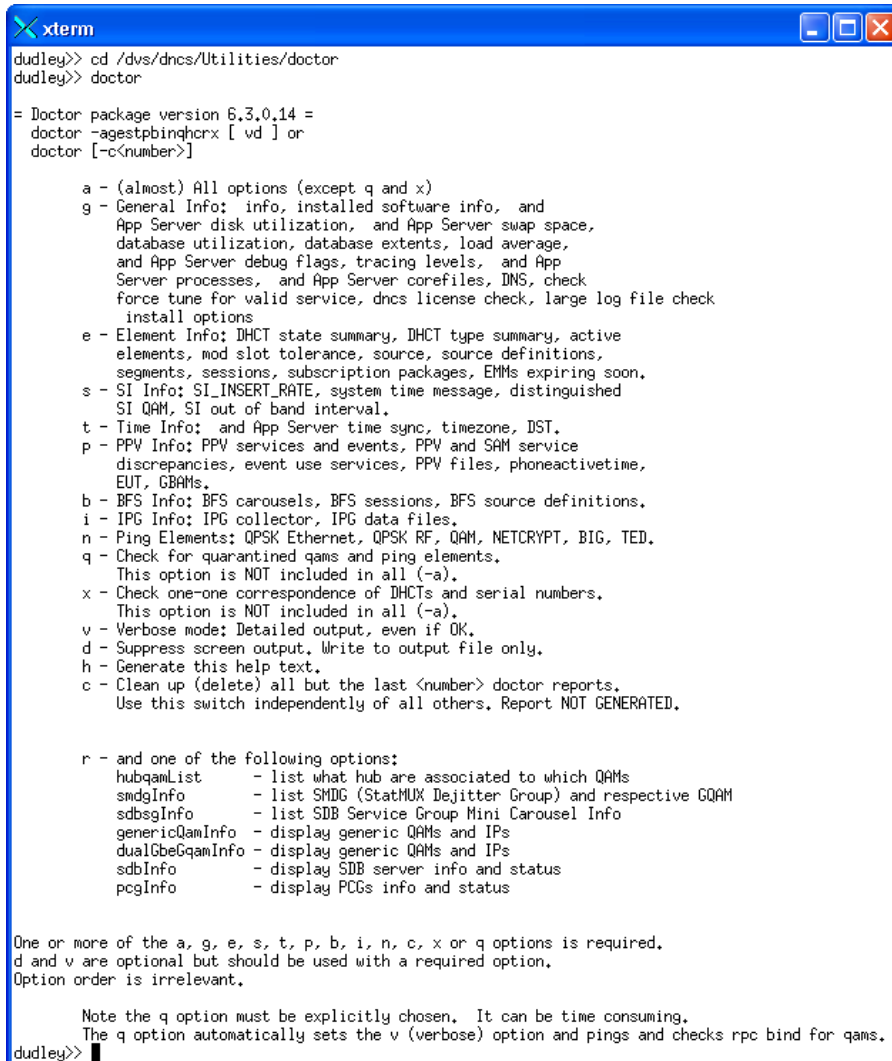Interactive services will not be available during the maintenance window.

DNCS and Application Server Hardware Platforms

Introduction

This section describes the hardware configurations that are supported by SR 4.3.1.

Running the Doctor Report

1 If necessary, open an xterm window on the DNCS.

2 Type **cd /dvs/dncs/Utilities/doctor** and then press **Enter**. The /dvs/dncs/Utilities/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. Each parameter causes the Doctor Report to generate output with specific configuration information.

```
dudley>> cd /dvs/dncs/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, dncs 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 GQAM
            sdbsgInfo      - list SDB Service Group Mini Carousel Info
            genericQamInfo - display generic QAMs and IPs
            dualGbeGqamInfo - 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 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 6.3 Installation Instructions and User Guide* (part number 4031374).

Important: DBDS Utilities 6.3 is required for SR 4.3.1.

DNCS System Release Required

Your system must be running SR 4.3. In the Doctor Report, look for the **SAIdncs** entry under the **All SAI Installed Package Information** section. Ensure the **SAIdncs** version is 4.3.0.14 or later. If you have installed Service Packs for your system release, your version may include additional characters.

DNCS Hardware Configurations

Ensure your site meets the following DNCS hardware requirements before upgrading to SR 4.3.1. The following table lists the minimum requirements for the DNCS hardware platforms that are supported by SR 4.3.1.

DNCS Server Platform	Hard Drive Configuration	Memory	Processor
Sun Fire V445	■ 4 X 73 GB	■ 4 GB min	■ 2 X 1.5 GHz min.
Sun Fire V890	■ 6 X 146 GB ■ 12 X 146 GB	■ 8 GB min. ■ 16 GB min.	■ 4 X 1.5 GHz min. ■ 2 X 1.5 GHz min.
Sun Fire V880	■ 12 X 73 GB ■ 6 X 73 GB	■ 8 GB min. ■ 4 GB min.	■ 4 X 900 MHz min. ■ 2 X 900 MHz min.

Application Server Hardware Configurations

The following table lists the Application Server hardware platforms that are supported by SR 4.3.1.

Application Server Platform	Hard Drive Configuration	Memory	Processor
Sun V240	2 X 36 GB min.	512 MB min.	1 X 1.34 GHz min.
Sun V245	2 X 73 GB min.	2 GB min.	2 X 1.5 GHz min.
Sun Blade 150	1 X 20 GB min.	512 MB min.	1 X 550 MHz min.
Sun Ultra 5	1 X 18 GB min.	256 MB min.	1 X 333 MHz min.

Scheduling Requirements

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. The pre-install and pre-upgrade steps can be performed at any time of day. However, the actual upgrade process normally takes place during a maintenance window beginning at midnight. The following table provides a breakdown of 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: ■ Back up the system components ■ Back up the DNCS and Application Server files ■ Complete system checks These activities do not impact the system.
Upgrade	6-8 hours total; 2-3 of these hours require system outage **Note:** Actual time may vary based on the number of devices being upgraded.	Upgrade the DBDS network: ■ Back up the DNCS database ■ Install the DNCS and Application Server software ■ Determine which optional features (licensed or unlicensed) need to be enabled as a result of this upgrade ■ Install and download the component software (QAM, MQAM, GQAM, and QPSK modulator) ■ Reboot the hardware ■ Complete functional checks 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: ■ Back up the file system ■ Back up the DNCS database These activities do not impact the system.

Software Configuration

Introduction

This section lists the software versions in each media kit supplied with SR 4.3.1.

Antecedents

This release succeeds and carries forward all of the enhancements, features, and improvements of previous system releases and related service packs.

Software Versions

The following table lists the configuration of System Release and headend components before and after an upgrade to SR 4.3.1.

DBDS Component	Previous Version Number	New Version Number
DNCS		
DNCS Application	4.3.0.14	4.3.1.6
DNCS Patch	N/A	4.3.1.6p2
DNCS GUI	4.3.0.14	4.3.1.6
DNCS WUI	4.3.0.14	4.3.1.6
DNCS Support Software		
DNCS/App Server Tools	4.2.1.16	No Change
DNCS Spectrum Kit	4.2.1.0	No Change
DNCS Report Writer	4.3.0.6	r1.0.0.3
DNCS Online Help	4.3.0.3	4.3.1.0
DNCS Platform		
DNCS Platform (SAIcomplat/SAIdnapp)	SAIdnapp 4.3.0.5	No Change
Solaris	10 08/07 Update 4	No Change
Solaris Patches	4.3.0.1	No Change
Fore ATM Drivers	4.2.0.0	No Change
Video Propulsion DVB Direct ASI Drivers	1.0.0.6	No Change
Informix IDS	9.21.UC3	No Change
Tools (SAItools)	4.2.1.16	No Change

DBDS Component	Previous Version Number	New Version Number
Spectrum Installation		
Spectrum Installation	4.2.1.0	No Change
Spectrum Enterprise Manager App Version	5.0R1	No Change
Spectrum CS1/MMS1 Supplement	CS3/MMS3 P122	No Change
Application Server		
App Server Application	3.5.0.1	No Change
Application Server Platform		
Application Server Platform	4.3.0.5	No Change
Solaris	10 08/07 Update 4	No Change
Solaris Patches	4.3.0.1	No Change
ATM/BFS BIG		
MSYNC Control Card D9711 App	2.25	No Change
MSYNC Control Card D9710 Boot	0.75	No Change
ATM OC3 Card D9722 Application	3.01.0	No Change
SWIF Receiver Card D9730 Application	2.02	No Change
SWIT Transmitter Card D9714 Application	2.03	No Change
Grooming BIG		
MSYNC Control Card D9711-2 App	3.01	No Change
MSYNC Control Card D9711-2 Boot	0.75	No Change
GPI Card D9476 App	0.8.2	No Change
GPI Card D9476 Boot	0.6.7	No Change
Automux Script	2.3	No Change

DBDS Component	Previous Version Number	New Version Number
Sonet/ASI (STA)		
Sonet/ASI (STA)	1.3.4	No Change
_Sonet/ASI (STA)	1.3.4	No Change
DBDS Maintenance CD		
DBDS Maintenance CD	3.3.8	No Change
Backup and Restore	6.0.18	No Change
Unipack Install Scripts	2.1.1.8	No Change
Spectrum Support		
Spectrum_Support	4.3.1.3	4.3.1.6
Netcrypt		
Netcrypt Bulk Encryptor	1.2.12	No Change
QAM		
QAM App	2.5.7	No Change
MultiQAM		
MQAM App	2.6.18	2.7.2*
GQAM		
GQAM	4.0.17	4.3.x**
GoQAM RF / GoQAM IF		
GoQAM RF / GoQAM IF	1.1.4	No Change
QPSK Mod/Demod		
QPSK Modulator	G08	G13*
QPSK Demodulator	G08	G13*
	App/A62 legacy	App/A62 legacy

* These versions have been approved for use with SR 4.3.1, but are not being delivered with the SR 4.3.1 CD Upgrade Kit.

** The GQAM software version is pending.

3

Implemented Issues

Introduction

This chapter provides a list of issues and enhancements that have been resolved in software for SR 4.3.1 and for Report Writer 1.0.

In This Chapter

Report - Implemented Issues for SR 4.3.1

ID #	Title
86578-06	siManager memory leaks
88145-08	QamManager audit traffic against XDQA at startup results in incomplete port resp
89452-03	OOB Bridge GUI needs to include all CCCM values in drop down list
89895-04	emmDistributor memory leak
90238-04	camAm leaks memory
91822-06	Primary SDV server doesn't recover (transition) from backup after a failover
92077-05	siManager intermittent in sending information
93004-05	Stranded sessions in qamManager after high qamManager activity
93110-06	qamManager should perform audit-based deletions first, then creations
93374-05	Online and primary fields are sometimes changed after a SDV download
93716-06	sdvManager opening multiple connections to database
93862-06	At startup qamManager audits generic qams twice, gqam and caqam only once
94077-05	Loss of DSG Filter for OCAP Object Carousel
94089-04	Sdv server wui is allowing duplicate name and ipaddress just by refreshing wui
94890-10	qamManager provisioning not complete, RF parameters and GigE IP not updating

ID #	Title
95528-07	bsm connection logic to siMgr causes re-connect churn when siMgr is down
96454-03	qpskManager cored while bouncing the DNCS
96610-07	Add scripts svcgrouprsr.sh for postupgrade of svc_group_rsr, and updatemaxbw.sh
99590-03	qamManager can core auditing generic qams
100440-05	camEx core dumps when invalid STB mac address is sent over the OCAI interface
101977-02	QpskManager alternates sending current and old time packets
102567-02	siManager takes too long to rebuild VCT table
103064-01	OCAI requests slow to 0.5 sec each
103080-01	CamEx memory growing during VOD OCAI testing
103323-05	qamManager cache not correctly deleting QAMs
103823-03	When DCM table is split into multiple packets, first virtual ch set incorrectly
104538-02	failed session set up on GbE port of qam
105377-02	EAS Priority 0 causes DTA to force tune
106047-02	GQAM RPC API v2 does not act on TSR responses from GQAM
106229-01	EAS - 1 part channel number is not populated correctly by MMMServer in SCTE-18
108151-01	The WUI incorrectly rejects the TSR setup with GigE as input

Report - Implemented Enhancement Issues for SR 4.3.1

ID#	Title & Description
89850-04	CCCM column db updates during SR upgrade from earlier releases CCCM default values are not currently set to the correct value during a database upgrade.
98495-06	UNCC needs to be sent from port 13818 Panasonic set-tops are expecting the UNCC to come from port 13818.

Report - Implemented Issues for Report Writer 1.0

ID#	Title
72014-02	Channel, source and session report is not working
82951	Non Responding DHCTs-Lost connection report is showing incorrect information
86243	PCG Report is showing database error messages
87788	DNCS Reports -Channels, Sources, Sessions Report has incorrect and missing data
88986	Netcrypt Report is showing incorrect Encryption Type for an existing netcrypt
89074	qpsk Modems report is not showing exact channel frequency
90797	SNMP Poll Report is not showing the QPSK DeMod Freq correctly
91652	Combo Box support for Non-Responding DHCTs SNMP Report
97754-01	Seach function does not work properly in Report Writer
98375-01	Report Manager - DHCT Report lists N/A for all values for VCTID & ModID

Report - Implemented Enhancement Issues for Report Writer 1.0

ID#	Title & Description
91655	**Enabling and disabling reports for Report Writer** Users have reported seeing reports even if the corresponding features were not enabled.
93026	**Create new report for CableCARD combo device admin/opererator status** This new report will provide information for the CableCARD and host devices similar to the information that is currently provided in the DHCT report for the pre-CableCARD (embedded security) devices (i.e. Admin/Operational status, S/N, MAC Addr, IP Address, and so on). This CableCARD/host status information is not currently provided in the CableCARD Report.
94506-02	**Request change to include additional data** The following data categories have been added to Report Writer: Headend HubID MPEG Multicast IP UDP Source IP QAM Name QAM IP QAM MAC POD SEM IP

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Open Issues

Introduction

This chapter provides a list of open issues that were identified during testing of SR 4.3.1. Resolutions to these issues are currently under investigation or in development.

If you have questions about a particular issue, contact your account representative.

Note: There are no open issues for Report Writer 1.0.

In This Chapter

Report - Open Issues for SR 4.3.1

ID #	Title & Description
106212-01	LoadPIMSFile return codes need to meet ICD and SRS requirements Most failure cases return 'unspecified-error' instead of a more specific response. Recommendation: When error messages are vague, users should search through the logs to determine why failures occured.
107076-04	DNCS Database Differences Are Present After a 4.3.1.x CD Upgrade When upgrading to 4.3.1.x via CD, the SAIdncs_4.3.1.5_install.log indicates that there are differences (warnings) found in the dncsdb. There is no system impact.
107499-01	siManager won't come out of recovery database locked Set-top boxes will not boot. This problem occurs when bouncing siManager after creating a source. Workaround: Close the Source>Source Definition List window before bouncing siManager.
107500-01	DNCS taking 30+ minutes to recover Slow recovery causes delays for set-top boots and interactive sessions. This problem only occurs when the +zip option is turned on for logging and only with a system setup where /dvs/dncs/tmp and /dvs/dncs/tmp/savelogs are not on the same file system. For example, this scenario would occur if the user hooks up an external drive or mounts a network drive in order to archive the logs.
107505	Cannot update TSR - DNCS database holding on to completed TSR This problem occurs when users attempt to change TSR parameters. TSRs cannot be updated. Workaround: To update a TSR, delete the TSR and set up a new one. This procedure works as long as the user has not attempted to update the TSR. If the user has made changes to the TSR, he must delete the TSR and run clearDbSessions before setting up a new one.

ID #	Title & Description
107517-01	XML Parsing err observed in CableCARD UI if " or < is used in Phone Number field XML parsing errors should not occur for " or <. When characters are entered that cannot be parsed, the field turns yellow to indicate an error. Do not hit Enter when the field is yellow because the system will accept the input. Once entered, the only way to correct the error is to delete the record. Recommendation: Use care when entering phone numbers on the CableCARD user interface.
108310	SAIwebui install stops and immediately restarts Tomcat and http-apache2 During SAIwebui package installation, Tomcat and apache2 are stopped and immediately restarted. They should not restart until the post-install. This does not appear to have any impact as the installation, since the CD upgrade doc (4036043A) instructs the installer to reboot the DNCS and AppServer after the packages have been installed.
108325-01	The smdgrsr table is listing the output_port value as the device_type This could lead to SMDGs not being recovered correctly.
108903-03	DNCS sends incorrect input port on Unicast SMDG delete stranding the SMDG. The SMDG will be stranded on the GQAM preventing the creation of additional SMDGs on the output port until the GQAM is rebooted. Recommendation: Reboot the GQAM.
108910-03	RF Output Carrier incorrectly displayed on Multicast Session wui The RF output carrier is correctly entered but is incorrecty displayed on the Multicast Session wui. The database is correct. Recommendation: Operators should write down the output carrier value when it is entered.

ID #	Title & Description
109566-01	De-Selecting "VOD Redundancy Mode" and saving GQAM is not removing DB record Workaround: Delete the GQAM and re-add it without enabling dual mode or VOD redundancy.
109569-01	DRM using IP from "redun_gbe_params" table when "Dual Gbe Port" selected The DRM should be using the primary GbE IP address when the VOD Redundancy Mode is not selected. This issue will affect the changing of a dual GQAM operating in VOD redundancy mode back to normal GQAM mode.
109580-01	TSRs do not appear in WUI if GQAM management IP is changed Operators will not be able to tell if TSRs are present on a GQAM. Recommendation: Do not change the GQAM management IP if TSRs are present.
109603	mgrUIServer process settles in yellow state after the DNCS upgrade. Workaround: Manually restart the tomcat and apache servers.
109624-01	qpskManager cores while deleting a QPSK qpskManager should restart automatically unless the problem has occured several times in a row. Check the DNCS moritor status. If qpskManager is down, restart the process manually.

ID #	Title & Description
109952-02	The manage_pims_files should run by dncs crontab only

The /dvs/dncs/tmp/manage_pims_files.log denies overwrites. This behavior confuses users.
When upgrading the DNCS package from SR 4.3.1.3 to higher versions there there may still be a "manage_pims_files" entry in root crontab. If there is, please remove it by following the instructions below:
1) Login to the DNCS as root user.
2) Enter crontab -l which will display the root crontab entries. The output will look something like this:
```
#ident  "@(#)root     1.21   04/03/23 SMI"
#
# The root crontab should be used to perform accounting data collection.
#
#
10 3 * * * /usr/sbin/logadm
15 3 * * 0 /usr/lib/fs/nfs/nfsfind
30 3 * * * [ -x /usr/lib/gss/gsscred_clean ] && /usr/lib/gss/gsscred_clean
0  0 * * * /usr/sbin/audit -n
0 * * * * /etc/security/audit_clean
45 * * * * [ -x /dvs/dncs/etc/manage_dncsLog ] &&
/dvs/dncs/etc/manage_dncsLog > /dvs/dncs/tmp/manage_dncsLog.log 2>&1
   0 0 * * * [ -x /dvs/dncs/etc/newdncslog ] && /dvs/dncs/etc/newdncslog
     30 1 * * * [ -f /dvs/dncs/bin/dncsSetup ] && (. /dvs/dncs/bin/dncsSetup ;
$DNCS_TOP/bin/updateStatistics.sh ) > /dev/null
```
3) Verify the information above. If there is an entry for "manage_pims_files," then remove it by editing the root crontab, using this command:
    crontab -e
4) Verify the /dvs/dncs/tmp/manage_pims_files.log. If this file exists, remove it by running the following commands:
    a. Login as DNCS user.
    b. Enter rm /dvs/dncs/tmp/manage_pims_files.log
    c. If permission is denied, login as root user and enter
      rm /dvs/dncs/tmp/manage_pims_files.log once more.

| 110173-01 | RFGW entries added to ServiceGroup Map file are not created |

TSIDs and Frequencies for the RFGW QAM will not get published for SARA, Native iGuide, and COMCAST SDV if they are using the files on the DNCS.

| 110173-02 | RFGW entries added to ServiceGroup Map file are not created |

TSIDs and Frequencies for the RFGW QAM will not get published for SARA, Native iGuide, and COMCAST SDV if they are using the files on the DNCS.

ID #	Title & Description
110173-03	RFGW entries added to ServiceGroup Map file are not created
	TSIDs and Frequencies for the RFGW QAM will not get published for SARA, Native iGuide, and COMCAST SDV if they are using the files on the DNCS.

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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.