Avaya Call Management System

Release 12

Base Load Upgrades

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Preventing toll fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya fraud intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Web site:

http://www.avaya.com

Select **Support**, then select **Escalation Lists**. This Web site includes telephone numbers for escalation within the United States. For escalation telephone numbers outside the United States, select **Global Escalation List**.

Providing telecommunications security

Telecommunications security (of voice, data, and video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Use (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including, but not limited to, human and data privacy, intellectual property, material assets, financial resources, labor costs, and legal costs).

Your responsibility for your company's telecommunications security

The final responsibility for securing both this system and its networked equipment rests with you, an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources, including, but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products.

Warranty

Avaya Inc. provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language, as well as information regarding support for this product, while under warranty, is available through the following Web site:

http://www.avaya.com/support

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Avaya support

Avaya provides a telephone number for you to use to report problems or to ask questions about your contact center. The support telephone number is 1-800-242-2121 in the United States. For additional support telephone numbers, see the Avaya Web site:

http://www.avaya.com

Select **Support**, then select **Escalation Lists**. This Web site includes telephone numbers for escalation within the United States. For escalation telephone numbers outside the United States, select **Global Escalation List**.

Comments

To comment on this document, send e-mail to crminfodev@avaya.com.

Acknowledgment

This document was written by the CRM Information Development group.

Avaya Call Management System
Release 12
Base Load Upgrades

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Important notice to CMS customers

This Avaya Call Management System (CMS) base load upgrade is designed to be installed by Avaya customers who have had problems with earlier versions of the Avaya CMS Release 12 (R12) software application. This upgrade provides all known software fixes from previous Avaya CMS R12 issues.

Avaya recommends that you load this upgrade as soon as possible. If you ask our Technical Support Organization to troubleshoot your Avaya product, they will require you to use the latest software release.

This section includes the following topics:

- Contacting Avaya for assistance with your upgrade on page 5
- Impacts to CMS service on page 6
- Possible customization impacts on page 6
- Upgrade kit contents on page 6
- Upgrading a non-mirrored system to a mirrored system on page 7
- When and how to use this document on page 7
- Contacting Avaya technical support during the upgrade on page 7

Contacting Avaya for assistance with your upgrade

You can make arrangements to have Avaya provide remote assistance for this upgrade. This remote assistance must be scheduled at least two weeks before your upgrade. Charges, which will be quoted, vary for this service. Contact the Technical Support Organization at 1-800-242-2121.

Impacts to CMS service

This software upgrade is service effecting. During the upgrade process you will have to reboot your CMS system and turn off the CMS software. This upgrade can take several hours to complete. During the Solaris patch installation, your system will display an estimate of the amount of time needed to install the Solaris patches. The Solaris patch installation is the part of the base load upgrade that usually requires the longest amount of time to complete.

Possible customization impacts

The software upgrade that you are installing could potentially impact system customization that was performed before this upgrade. For example:

- Custom reports
- LAN printer customization
- Work-force management interfaces

You can schedule an evaluation of your system to determine whether any of your system customizations might be impacted by this upgrade. Schedule this evaluation at least two weeks before your upgrade. Charges, which will be quoted, vary for this service. Contact Avaya CRM at 1-877-927-6662.

Upgrade kit contents

Everything you need for the upgrade should be included with your upgrade kit, which includes, but is not limited to:

- The most recent version of the Avaya CMS R12 software
- The book, *Avaya CMS Release 12 Base Load Upgrades*

Upgrading a non-mirrored system to a mirrored system

If you are upgrading a non-mirrored system to a mirrored system, call the Avaya Technical Services Organization at 1-800-242-2121, or consult with your product distributor or account team to schedule the upgrade before performing your base load upgrade.

When and how to use this document

Use this document to upgrade Avaya Call Management System (CMS) from an older CMS Release 12 (R12) base load to a newer CMS R12 load. Unless indicated otherwise, all procedures in *Avaya CMS Release 12 Base Load Upgrades* are required.

Avaya recommends that:

- Before performing the upgrade, you read through this entire document so that you are familiar with what tasks you will need to perform. If you decide you would like to have Avaya assist you performing the upgrade, see Contacting Avaya for assistance with your upgrade on page 5.
- Have a pen or pencil during the upgrade so that you can record any required information.
- During the upgrade, mark each step as it is completed.

Contacting Avaya technical support during the upgrade

If you encounter problems or have questions during the upgrade and are unable to resolve them by following the upgrade instructions, call technical support at 1-800-242-2121. Be ready to provide the number of the Quality Protection Plan you are using.

Important notice to CMS customers

8 Base Load Upgrades

Preparing for a base load upgrade

This section describes the tasks you must perform before you upgrade your CMS base load. These procedures will help you verify that your CMS system has no existing hardware or software problems before the upgrade. If you do not perform these procedures, your base load upgrade could fail, and your CMS system could be put in a non-functioning state for some time.

This section includes the following topics:

- Prerequisites on page 9
- Verifying the current CMS version and load on page 10
- Verifying that your previous backups completed successfully on page 11
- Verifying that the nightly archiver is functioning on page 15
- Checking the status of the disk drives on page 16
- Checking for memory errors and system panics on page 17
- Verifying free space in the root file system on page 18
- Rebooting your CMS system on page 19
- Backing up the CMS system on page 20

Prerequisites

Before you perform the procedures in this section, you must:

- Read the information in Important notice to CMS customers on page 5
- Log in to the system as **root**.

Important:
You will not be able to log into the system remotely as root. If you are logging into the system remotely, log in as a user and then enter:
`su - root`

Verifying the current CMS version and load

To verify the version and load of CMS currently on the machine:

1. Log in to the system as **root**.
2. Enter:

   pkginfo -x cms

   The system displays the currently installed CMS package, including the load number, for example:

   ```
   cms  Avaya Call Management System (sparc) xxxxx.x
   ```

3. Record the displayed CMS version information for reference later, during the upgrade process.

   CMS version: _____

Verifying that your previous backups completed successfully

Approximately two days before the CMS base load upgrade, verify that your backups have been completing successfully.

This section includes the following topics:

- Verifying the backup of your CMS system data on page 11
- Verifying the backup of your CMS data on page 13

Verifying the backup of your CMS system data

To verify that your previous system backup completed successfully, choose one of the following procedures:

- If you backup your data directly to a tape device, go to Verifying that your last CMSADM backup completed successfully on page 11.
- If you use the CMS LAN backup feature, go to Verifying that your last LAN backup of the system data completed successfully on page 12

  For more information about the CMS LAN backup feature, see *Avaya CMS R12 LAN Backup User Guide*, 585-215-721. This document provides: information about using the CMS LAN backup feature, hardware requirements, software requirements, and support guidelines.

Verifying that your last CMSADM backup completed successfully

To verify that your last CMSADM backup completed successfully:

1. Enter:

   ```
   tail /cms/install/logdir/backup.log
   ```

2. Verify that the previous CMSADM backup completed successfully.

   An example of a successful CMSADM backup message is:

```
===== Begin backup Wed Apr  9 05:37:05 EDT 2003

Converter started Wed Apr  9 05:37:07 EDT 2003
Converter completed successfully Wed Apr  9 05:37:10 EDT 2003

Testing tape on /dev/rmt/0...

Tape test on /dev/rmt/0 is okay...

2873600 blocks

===== Finished backup Wed Apr  9 06:30:35 EDT 2003
```

3. Choose one of the following actions:
   - If your previous backup was successful, go to Verifying the backup of your CMS data on page 13.
   - If your previous backup was *not* successful, contact your Avaya CMS support representative.

Verifying that your last LAN backup of the system data completed successfully

If you use the CMS LAN backup feature, perform the following procedure:

1. Enter:

   `cat /cms/install/logdir/backup.log | pg`

2. Press **Enter** to continue the display. It might be necessary to repeat this step several times.
3. Verify that the previous system backup completed successfully.

   An example of a successful system backup message is:

```
===== LAN SYSTEM BACKUP SUCCESSFULLY FINISHED Date and time
```

4. Choose one of the following actions:
   - If your previous backup was successful, go to Verifying the backup of your CMS data on page 13.
   - If your previous backup was *not* successful, contact your Avaya CMS support representative.

Verifying the backup of your CMS data

To verify that your previous system backup completed successfully, choose one of the following procedures:

- If you backup your data directly to a tape device, go to Verifying that your previous full or incremental backup completed successfully on page 13.
- If you use the CMS LAN backup feature, go to Verifying that your last LAN backup of CMS data completed successfully on page 14

  For more information about the CMS LAN backup feature, see *Avaya CMS R12 LAN Backup User Guide*, 585-215-721. This document provides: information about using the CMS LAN backup feature, hardware requirements, software requirements, and support guidelines.

Verifying that your previous full or incremental backup completed successfully

To verify that your previous full or incremental backup completed successfully:

1. Log in to the system as **root**.
2. Enter:

   `su cms cms`

   The system displays the CMS main menu.
3. Press **Enter** to accept the default terminal type.
4. Select **Maintenance** > **Error Log Report**.
5. Enter **1711** in the **Error codes** field.
6. Leave all of the other fields blank.
7. Press **Enter** to select the **Run** option.
8. Press **Enter**.

   The system displays a backup history report.
9. Verify that the previous full or incremental backup completed successfully.

   An example of a successful full or incremental backup message is:

   ```
   1711  4/15/03  2:14 AM   2  1  INFO
         BACKUP INFO: The backup has completed successfully.
         Please label the volume CMS-030415-01-LSAC-00-F-01-r3milcms
   ```
10. Select the **Exit** option to return to the previous menu.
11. Choose one of the following actions:

- If your previous backup was successful go to Verifying that the nightly archiver is functioning on page 15.
- If your previous backup was *not* successful, contact your Avaya CMS support representative.

Verifying that your last LAN backup of CMS data completed successfully

To verify that your last LAN backup of CMS data completed successfully:

1. Enter:

   `cat /cms/install/logdir/backup.log | pg`

2. Press **Enter** to continue the display. It might be necessary to repeat this step several times.
3. Verify that the previous data backup completed successfully.

   An example of a successful data backup message is:

   ```
   +++++ ON-Bar BACKUP SUCCESSFULLY FINISHED Date and time
   ```

4. Choose one of the following actions:
   - If your previous backup was successful, go to Verifying that the nightly archiver is functioning on page 15.
   - If your previous backup was *not* successful, contact your Avaya CMS support representative.

Verifying that the nightly archiver is functioning

To verify that nightly archiver is functioning correctly:

1. Verify that you are logged in to the system as **root**.
2. Enter:

   su cms cms

   The system displays the CMS main menu.
3. Press **Enter** to accept the default terminal type.
4. Select **Maintenance** > **Error Log Report**.
5. Enter **2600** in the **Error codes** field.
6. Leave all of the other fields blank.
7. Press **Enter** to select the **Run** option.
8. Press **Enter**.

   The system displays an archive history report.
9. Verify that the nightly archiver is functioning correctly for all ACDs administered on the system.

   An example of a successful nightly archiver message is:

```
2600  4/15/03   2:15 AM   2   1   INFO
      ARCHIVER status: Daily Archive for (Mon)
      Apr. 14, 2003 Successful
```

10. Select **Exit** to return to the previous menu.
11. Choose one of the following actions:
    - If the nightly archiver is functioning correctly, go to Checking the status of the disk drives on page 16.
    - If the nightly archiver is *not* functioning correctly, contact your Avaya CMS support representative.

Checking the status of the disk drives

To check the status of the disk drives:

1. Verify that you are logged in to the system as **root**.
2. Enter:

   . /opt/informix/bin/setenv
3. Enter:

   onstat -d | egrep "X|PD|MD|R" | pg
4. Press **Enter** to continue the display. It might be necessary to repeat this step several times.
5. Choose one of the following actions, depending on the message that is displayed:
   - If the system displays no messages other than the pound (#) prompt, go to Step 6.
   - If the system displays any messages with a flag of R, wait a few minutes. Repeat steps 3 through 5 until no messages other than the pound (#) prompt are displayed by your system. Depending on the size of your disk drives, it could take a couple of hours for the resync to complete.
   - If the system displays any messages with a flag of X, PD, or MD, your system requires maintenance. Contact your Avaya CMS support representative.

     An example of a maintenance message is:

```
Chunks
address  chk/dbs offset   size     free     bpages   flags pathname
   .
   .
cc3b830  8   8   528000   1000     1                 PD-   /dev/rdsk/c0t0d0s4
d7b65d8  8   8   528000   1000     0                 MD-   /dev/rdsk/c0t11d0s4
#
```

6. Enter the following command on a single line at the command prompt:

   metastat | grep State: | grep -v Okay | pg
7. Choose one of the following actions, depending on the message that is displayed:
   - If the system displays no messages other than the pound (#) prompt, go to Checking for memory errors and system panics on page 17.
   - If the system displays any messages in addition to the pound (#) prompt, your system requires maintenance. Contact your Avaya CMS support representative.

Checking for memory errors and system panics

To check for memory errors and system panics:

1. Enter:

   egrep -i "panic | memory error | afsr" /var/adm/messages* | pg

   Note:

   It might be necessary to press **Enter** to continue the display.

   An example of some memory error messages are:

```
/var/adm/messages:Apr 15 21:27:51 r3upctn SUNW,UltraSPARC-II: [ID 860344 kern.notice]
[AFT0] errID 0x00011903.9c12748f Corrected Memory Error on Board 3 J3600 is Persistent
/var/adm/messages:Apr 16 09:27:52 r3upctn SUNW,UltraSPARC-II: [ID 417990 kern.notice]
[AFT0] Corrected Memory Error on CPU7, errID 0x00014050.8646ccd6
/var/adm/messages:Apr 16 09:27:52 r3upctn     AFSR 0x00000000.00100000<CE> AFAR
0x00000000.09498550
/var/adm/messages:Apr 16 09:27:52 r3upctn    AFSR.PSYND 0x0000(Score 05) AFSR.ETS 0x00
Fault_PC 0x10023bd0
/var/adm/messages:Apr 16 09:27:52 r3upctn SUNW,UltraSPARC-II: [ID 136280 kern.notice]
[AFT0] errID 0x00014050.8646ccd6 Corrected Memory Error on Board 3 J3600 is Persistent
/var/adm/messages:Apr 16 21:27:51 r3upctn SUNW,UltraSPARC-II: [ID 488351 kern.notice]
[AFT0] Corrected Memory Error on CPU6, errID 0x0001679c.f8a4aa5f
/var/adm/messages:Apr 16 21:27:51 r3upctn     AFSR 0x00000000.00100000<CE> AFAR
0x00000000.09498550
/var/adm/messages:Apr 16 21:27:51 r3upctn    AFSR.PSYND 0x0000(Score 05) AFSR.ETS 0x00
Fault_PC 0x10023bd0
/var/adm/messages:Apr 16 21:27:51 r3upctn SUNW,UltraSPARC-II: [ID 599456 kern.notice]
[AFT0] errID 0x0001679c.f8a4aa5f Corrected Memory Error on Board 3 J3600 is Persistent
/var/adm/messages:Apr 17 09:27:51 r3upctn SUNW,UltraSPARC-II: [ID 473191 kern.notice]
[AFT0] Corrected Memory Error on CPU6, errID 0x00018ee9.a6074fb3
```

2. Choose one of the following actions, depending on the message that is displayed:

   - If the system displays no memory error or panic messages, go to Verifying free space in the root file system on page 18.
   - If the system displays any memory error or panic messages, your system requires maintenance. Contact your Avaya CMS support representative.

Verifying free space in the root file system

To verify that sufficient free space is available in your root file system to accomplish the base load upgrade:

1. Enter:

   df -k /

   The system displays a message similar to the following:

```
Filesystem            kbytes    used   avail capacity  Mounted on
/dev/dsk/c0t0d0s0    4130982 1016519 3073154    25%       /
```

2. Check the disk capacity.
3. Choose one of the following actions:
   - If the disk capacity is less than 85%, go to Rebooting your CMS system on page 19.
   - If the disk capacity is 85% or greater, contact your Avaya CMS support representative.

Rebooting your CMS system

You must reboot your CMS system and verify that the system is functioning properly. Reboot the CMS system before you backup your data.

To reboot your CMS system:

1. Enter the following command from the pound (#) prompt:

   `/usr/sbin/shutdown -i6 -g0 -y`

   The system reboots.

2. Log in to the system as **root**.

3. Choose one of the following actions:

   - If the system does not boot correctly or if any error messages are displayed, contact your Avaya CMS support representative.
   - If the system boots correctly, go to Backing up the CMS system on page 20.

Backing up the CMS system

Before beginning a CMS base load upgrade, you must backup your CMS system data and CMS data.

This section includes the following topics:

- Backing up your CMS system data on page 20
- Backing up your CMS data on page 22
- Backing up any new CMS data on page 24

Backing up your CMS system data

A backup of the system data must be performed approximately one day before the CMS base load upgrade.

To back up of your current system files, choose one of the following procedures:

- If you backup your data directly to a tape device, go to Performing a CMSADM backup on page 20.
- If you use the CMS LAN backup feature, go to Performing a system backup with LAN backup on page 21

  For more information about the CMS LAN backup feature, see *Avaya CMS R12 LAN Backup User Guide*, 585-215-721. This document provides: information about using the CMS LAN backup feature, hardware requirements, software requirements, and support guidelines.

Performing a CMSADM backup

To back up of your current system files, perform the following procedure:

1. Verify that you are using the correct tape for the tape drive for your system. Many of the tape cartridges look alike, and using the wrong tape can damage the tape drive mechanism and tape heads.
2. Log in as **root**.
3. Enter:

   `cmsadm`

   The **Avaya Call Management System Administration Menu** (**CMSADM Menu**) is displayed.

4. Enter the number associated with the `backup` option.

   Depending on the number of tape drives connected to your system, one of the following messages will be displayed by your system.

   - If only one tape drive is available, the system displays the following message:

```
Please insert the first cartridge tape into device name.
Press ENTER when ready or Del to quit:
```

   - If more than one tape drive is available for use, the system displays a list of tape devices. Enter a tape drive selection from the displayed list.

     An example of a tape device list is:

```
Select the tape drive:
  1) Exabyte EXB-8900 8mm Helical Scan tape drive: /dev/rmt/0
  2) Exabyte EXB-8500 8mm Helical Scan tape drive: /dev/rmt/1
Enter choice (1-2):
```

   Note:

   If the system fails to identify the tapes by manufacturer name, tape devices are displayed according to their system device names, such as "`/dev/rmt/0`".

5. Press **Enter**.

   The backup process is initiated.

   When the backup is complete, the system displays the following message:

```
xxxxxxx blocks
Tape Verification
xxxxxxx blocks
WARNING: A CMS Full Maintenance Backup in addition to this cmsadm
backup must be done to have a complete backup of the system.  . .
. .

Please label the backup tape(s) with the date and the current CMS
version (xxxxx.x)
```

6. Write protect the tape and store the tape in a secure location until the next backup is performed.
7. Go to Backing up your CMS data on page 22.

Performing a system backup with LAN backup

If you use the CMS LAN backup feature, perform the following procedure:

1. Log in as **root**.

2. Enter:

   `/cms/LANbkup/bin/backup.tivoli 0`

3. Verify that the backup has completed successfully by entering:

   `cat /cms/install/logdir/backup.log`

4. Go to Backing up your CMS data on page 22.

Backing up your CMS data

Your CMS data must be backed up approximately one day before the CMS base load upgrade is performed.

To backup your CMS data, choose one of the following procedures:

- If you backup your data directly to a tape device, go to Performing a full backup with a tape device on page 22.
- If you use the CMS LAN backup feature, go to Performing a data backup with LAN backup on page 23.

  For more information about the CMS LAN backup feature, see *Avaya CMS R12 LAN Backup User Guide*, 585-215-721. This document provides: information about using the CMS LAN backup feature, hardware requirements, software requirements, and support guidelines.

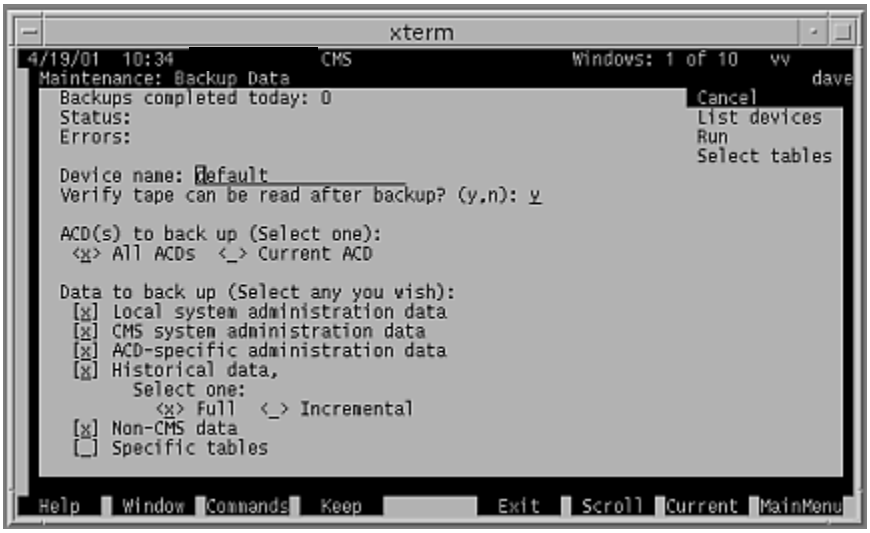
Performing a full backup with a tape device

To perform a full backup of CMS data:

1. Verify that you are using the correct tape for the tape drive for your system. Many of the tape cartridges look alike, and using the wrong tape can damage the tape drive mechanism and tape heads.
2. Verify that you are logged in as **root**.

3. From the main menu, select **Maintenance** > **Back Up Data**.

   The system displays the **Back Up Data** window, as shown below. Do not change any of the default selections.



4. Press **Enter** to access the action list in the upper right corner of the window.
5. Select **Run** and press **Enter**.
6. Wait for the backup to complete. If the backup does not complete successfully, contact your Avaya CMS support representative.
7. Write protect the tape and store the tape in a secure location until the next backup is performed.
8. Go to Backing up any new CMS data on page 24.

Performing a data backup with LAN backup

If you use the CMS LAN backup feature, perform the following procedure:

1. Verify that you are logged in as **root**.
2. Enter:

   `/cms/LANbkup/bin/onbar_backup.tivoli 0`

3. Verify that the backup has completed successfully by entering the following commands:

   `cat /cms/install/logdir/backup.log`

   `cat /cms/install/logdir/bar_act.log`

4. Go to Backing up any new CMS data on page 24.

Backing up any new CMS data

You must back up any CMS data that has been generated since your last CMS data backup. Choose one of the following options:

- If *no* new CMS data has been generated since your last CMS data backup, go to Updating the Solaris operating system on page 27.
- If new CMS data has been generated since your last CMS data backup, perform one of the following procedures immediately before the upgrade:
  - Performing an incremental tape backup on page 24
  - Performing a data backup with LAN backup on page 25

    For more information about the CMS LAN backup feature, see *Avaya CMS R12 LAN Backup User Guide*, 585-215-721. This document provides: information about using the CMS LAN backup feature, hardware requirements, software requirements, and support guidelines.

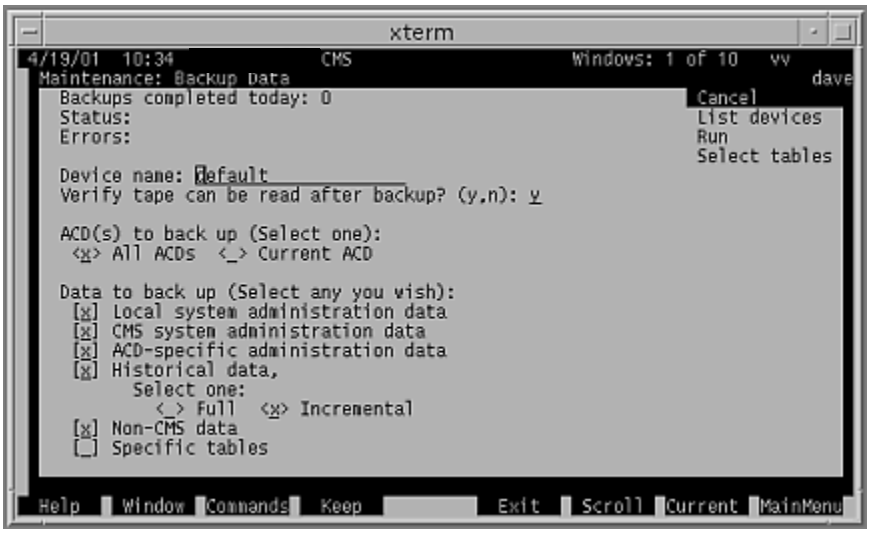
Performing an incremental tape backup

If you backup your data directly to a tape device, perform the following procedure:

1. Verify that you are using the correct tape for the tape drive for your system. Many of the tape cartridges look alike, and using the wrong tape can damage the tape drive mechanism and tape heads.
2. Log in to the system as **root**.

3. From the CMS main menu, select **Maintenance** > **Back Up Data**.

   The system displays the **Back Up Data** window, as shown below.



4. Under Historical data, select **Incremental**. Do not change any other default selections.
5. Press **Enter** to access the action list in the upper right corner of the window.
6. Select **Run** and press **Enter**.
7. Wait for the backup to complete. If the backup does not complete successfully, contact your Avaya CMS support representative.
8. Write protect the tape and store the tape in a secure location until the next backup is performed.
9. Go to Updating the Solaris operating system on page 27.

Performing a data backup with LAN backup

To back up your data with the CMS LAN backup feature:

1. Log in to the system as **root**.
2. Enter:

   `/cms/LANbkup/bin/onbar_backup.tivoli 1`
3. Verify that the backup has completed successfully by entering the following commands:

   `cat /cms/install/logdir/backup.log`

   `cat /cms/install/logdir/bar_act.log`
4. Go to Updating the Solaris operating system on page 27.

Updating the Solaris operating system

This section contains procedures for updating your Solaris operating system. You must complete the procedures in this section before upgrading your CMS base load.

This section includes the following topics:

- Prerequisites on page 27
- Stopping the Avaya Visual Vectors server software on page 28
- Stopping AOM on page 28
- Installing Solaris patches on page 29

Prerequisites

Before you perform the procedures in this section, you must:

- Read the information in Important notice to CMS customers on page 5
- Perform all of the required procedures in Preparing for a base load upgrade on page 9
- Verify that you are logged in to the system as **root**.

Stopping the Avaya Visual Vectors server software

Perform this procedure only if Visual Vectors is installed on your system. If Visual Vectors is *not* installed on your system, go to Stopping AOM on page 28.

To stop the Avaya Visual Vectors server software:

1. Enter:

   setupaas

   The system displays the **Avaya Visual Vectors Server System Services Menu**, as shown in the following figure.

```
Avaya Visual Vectors Server System Services Menu

Select a command from the list below.

     1) init_vvs     Setup the initial configuration
     2) run_vvs      Turn VVS on or off
     3) auth_display Display simultaneous VVS logins
     4) auth_set     Change simultaneous VVS logins
     5) backup       Backup vector steps and layout files
     6) restore      Restore vector steps and layout files

Enter choice (1-6) or q to quit:
```

2. Enter the number associated with the `run_vvs` option.

   The system displays the following message:

```
1) Turn VVS On
2) Turn VVS Off

Enter choice (1-2) or q to quit:
```

3. Enter the number associated with the `Turn VVS Off` option.

Stopping AOM

To stop AOM, enter:

aom stop

Installing Solaris patches

To install the Solaris patches:

1. If the system is an Enterprise 3500 or Sun Fire V880, perform the following steps:
   a. Record the original position of the key switch. You must return the key switch to this original position at the end of this procedure.
   b. If the key switch is in the “Locked” or “Diagnostics” position, move the key switch to the vertical “On” position.
2. Load the Avaya Call Management System CD-ROM into the CD-ROM drive.
3. Enter:

   `mount`

   The system displays a list of devices and file systems currently mounted. The last line displayed must show the CD-ROM drive and the CD-ROM disk name. If you do not see a `/cdrom/`*`CD_ROMname`* message, contact your Avaya CMS support representative.

   An example of a `/cdrom/`*`CD_ROMname`* message is:

   ```
   /cdrom/CD_ROMname on /vol/dev/dsk/c0t2d0/CD_ROMname read
   only/nosuid/maplcase/noglobal/rr/traildot/dev=16c0001 on current date and
   time
   ```

4. Choose one of the following procedures:
   - Installing Solaris patches from the local console on page 29
   - Installing Solaris patches from the remote console on page 32

Installing Solaris patches from the local console

To install Solaris patches from the local console:

1. Enter:

   `cmssvc`

   The system displays the **Avaya Call Management System Services Menu** (**CMSSVC Menu**).

   CAUTION:
   CMS must be off in order to install the Solaris patches.

2. Enter the number associated with the `run_cms` option.

3. Enter the number associated with the `Turn off CMS but leave IDS running` option.

   The system returns to the command prompt.

4. Set the IDS environment by entering:

   `. /opt/informix/bin/setenv`

5. Enter:

   `onmode -yuk`

6. Ignore any error messages.

7. Enter:

   `/cdrom/cdrom0/spatches_conf`

   The system displays one of the following messages:

   - If there are Solaris patches to install, the system displays the following message:

```
Warning: you must close all applications before running this script
.................
.................
.................
Solaris patches have been spooled to your machine.  The patches will
be installed after rebooting.  During the installation of patches
your
server will not be available.

The estimated time to install all patches is: 15 minutes

Ready to install Patches. Please leave the CD in the drive.
You will need to reboot the server for patches to install.

Do you want to reboot now?  [y,n,?]
```

   Important:
   The message will contain an estimate of the amount of time needed to install the Solaris patches.

   - If there are *no* Solaris patches to install, the system displays the following message:

```
There are no Solaris patches to install
```

8. Choose one of the following steps:

   - If there are Solaris patches to install, go to Step 9.
   - If there are no Solaris patches to install, go to Step 12.

9. Install the Solaris patches by entering: **y**

   The system boots into single user mode and begins to install the Solaris patches. The Solaris patch installation takes at least the amount of time that was estimated earlier in the procedure. After the Solaris patches are installed, the system reboots into multiuser mode and displays a login prompt.

   CAUTION:

   If you cancel the installation of Solaris patches, must install them before upgrading CMS. To cancel installation of the Solaris patches, enter: **n**

10. Log in to the system as **root**.
11. Verify that all of the Solaris patches have been installed by entering:

    tail -10 /var/cms/spatches/spatches.log

    The system displays the following message:

```
All patches installed successfully.
```

    Note:

    If the installation procedure fails for any of the patches, the following message is displayed:

```
Installation failed for one or more Solaris patches.

- Customers in the US should call the CMS Technical Services
Organization at 1-800-242-2121

- Customers outside the US should contact your Avaya
representative or distributor.
Patch installation completed: Fri Jan 18 13:28:19 MST 2002
```

    If the message shown above is displayed, continue with this procedure and the remaining CMS base load upgrade procedures. When the upgrade is complete, notify your Avaya CMS support organization as prompted by the system.

12. Enter:

    eject cdrom

13. If the system is an Enterprise 3500 or Sun Fire V880, return the key switch to the position it was in at the start of this procedure.
14. Go to Upgrading the CMS base load on page 35.

Installing Solaris patches from the remote console

Important:
Avaya recommends that only authorized Avaya CMS support personnel install Solaris patches from the remote console.

To install Solaris patches from the remote console:

1. Enter:

   cmssvc

   The system displays the **Avaya Call Management System Services Menu** (**CMSSVC Menu**).

2. Enter the number associated with the `run_cms` option.

3. Enter the number associated with the `Turn off CMS but leave IDS running` option.

   The system returns to the command prompt.

4. Set the IDS environment by entering:

   . /opt/informix/bin/setenv

5. Enter:

   onmode -yuk

6. Ignore any error messages.

   WARNING:
   Once the system accepts the eeprom settings, the system does not accept input from the local screen or keyboard.

7. Enter:

   eeprom input-device=tty*X*

   where ***X*** is port **a** or **b**.

8. Enter:

   eeprom output-device=tty*X*

   where ***X*** is port **a** or **b**.

9. Enter:

   /cdrom/cdrom0/spatches_conf

   The system displays one of the following messages:

- If there are Solaris patches to install, the system displays the following message:

```
Warning: you must close all applications before running this script
.................
.................
.................
Solaris patches have been spooled to your machine.  The patches will
be installed after rebooting.  During the installation of patches
your server will not be available.

The estimated time to install all patches is: 15 minutes

Ready to install Patches. Please leave the CD in the drive.
You will need to reboot the server for patches to install.

Do you want to reboot now?  [y,n,?]
```

Important:

The message will contain the approximate amount of time needed to install the Solaris patches.

- If there are no Solaris patches to install, the system displays the following message:

```
There are no Solaris patches to install
```

10. Choose one of the following steps:
    - If there are Solaris patches to install, go to Step 11.
    - If there are no Solaris patches to install, go to Step 14.
11. Enter: **y**

    The system boots into single user mode and begins to install the Solaris patches. The Solaris patch installation takes at least the amount of time that was estimated earlier in the procedure. After the Solaris patches are installed, the system reboots into multiuser mode and displays a login prompt.

    Remote connections are lost anytime the system is rebooted. The reboot could take up to 15 minutes for some systems, and it might take some additional time to re-establish a remote connection.

    CAUTION:

    If you cancel the installation of Solaris patches, you must install the patches before upgrading CMS. To cancel installation of the Solaris patches, enter: **n**
12. Log in to the system as **root**.

13. Verify that all of the Solaris patches have been installed by entering:

    tail -10 /var/cms/spatches/spatches.log

    The system displays the following message:

    ```
    All patches installed successfully.
    ```

    Note:

    If the installation procedure fails for any of the patches, the following message is displayed:

    ```
    Installation failed for one or more Solaris patches.

    - Customers in the US should call the CMS Technical Services
    Organization at 1-800-242-2121

    - Customers outside the US should contact your Avaya
    representative or distributor.
    Patch installation completed: Fri Jan 18 13:28:19 MST 2002
    ```

    If the message shown above is displayed, continue with this procedure and the remaining CMS base load upgrade procedures. When the upgrade is complete, notify your Avaya CMS support organization, as prompted by the system.

14. Enter the following commands to redirect the system to the local console:

    eeprom input-device=keyboard

    eeprom output-device=screen

15. Enter:

    eject cdrom

16. If the system is an Enterprise 3500 or Sun Fire V880 system, return the key switch to the position it was in at the start of this procedure.

17. Go to Upgrading the CMS base load on page 35.

Upgrading the CMS base load

You must complete the procedures in the previous sections before upgrading your CMS base load. Use the procedures in this section to upgrade an older CMS base load to a newer CMS base load.

This section includes the following topics:

- Prerequisites on page 35
- Switching to the command line interface on page 36
- Upgrading CMS Supplemental Services on page 37
- Removing CMS patches on page 39
- Removing the current CMS load on page 40
- Starting AOM on page 42
- Installing the new CMS base load on page 42
- Installing CMS patches on page 44
- Upgrading a non-mirrored system to a mirrored system on page 45
- Turning on CMS on page 45
- Preparing the Avaya Visual Vectors Server software on page 46

Prerequisites

Before you perform the procedures in this section, you must:

- Read the information in Important notice to CMS customers on page 5
- Perform all of the required procedures in Preparing for a base load upgrade on page 9
- Perform all of the required procedures in Updating the Solaris operating system on page 27
- Verify that you are logged in to the system as **root**.

Switching to the command line interface

You must switch to a command line interface for the upgrade procedures that follow. Usage of the command line interface ensures the completeness and integrity of the upgrade process.

To switch to the command line interface:

1. Perform one of the following actions to exit the Common Desktop Environment (CDE):
   - Right-click on an open space on the desktop and select the `Log out` option from the displayed menu.
   - Click on the **Exit** icon, which is found on the CDE front panel

   The system displays the login console window.

   Important:
   Do not enter your user name in the field provided in the console login window. If you do, repeat Step 1.
2. Select the **Options** button.

   The **Options** menu is displayed.
3. Select **Command Line Login** from the **Options** menu.

   The system displays the following message:

   ```
   Suspending Desktop Log in......
   If currently logged out, press [Enter] for a console login prompt.
   ```
4. Press **Enter**.

   The system displays the **console login** and **password** prompts.
5. Log in to the system as **root**.

   The system displays the following message:

   ```
   OpenWindows? y/n
   ```
6. Enter: **`n`**

   The system displays the command line interface.

Upgrading CMS Supplemental Services

Do not perform this procedure if a Supplemental Services CD-ROM was *not* shipped with your CMS upgrade. If a Supplemental Services CD-ROM was not shipped with your CMS upgrade, continue with Removing CMS patches on page 39.

To upgrade the CMS Supplemental Services software:

1. Obtain the *CMS Supplemental Services* CD-ROM that was shipped with your CMS upgrade software.
2. Record the version number printed on the CD-ROM, for use later in this procedure.
3. Load the CD-ROM, *CMS Supplemental Services* into the CD-ROM drive.
4. Enter:

   pkgrm LUim

   The system displays the following message:

   ```
   Do you want to remove this package?[y,n,?]
   ```

5. Enter: **y**

   The system removes the **LUim** package.

6. Enter:

   /usr/sbin/pkgadd -d /cdrom/cdrom0 LUim

   The system loads the new **LUim** package.

7. Enter:

   /opt/LUim/bin/install 2>&1|tee -a /opt/LUim.log

8. Enter:

   /opt/cc/install/ahl.cssr12*XX.X*/bin/setup

   where ***XX.X*** is the version number on the *CMS Supplemental Services* CD-ROM.

   The system displays one of the following messages:

   - If no previous version is in place, the system displays a message similar to the following:

   ```
   No previous version is in place.
   enable crontab entry...
   set up output log configuration...
   AHL setup completed successfully.
   ```

- If a previous version is in place, the system displays a message similar to the following:

```
Migrating previous version ahl.cssXXXX.X
.............
.............
.............
AHL setup completed successfully.
```

9. Enter:

   /opt/cc/install/aot.cssr12*XX.X*/bin/setup

   where ***XX.X*** is the version number on the *CMS Supplemental Services* CD-ROM.

   The system displays one of the following messages:

   - If no previous version is in place, the system displays a message similar to the following:

```
No previous version is in place.
copy previous log files...
no log files exist for tag "LAN_Admin_Log"
linking new version...
registering server with Orbix daemon
.............
.............
.............
[786: New Connection (cms3,IT_daemon,*,root,pid=645,optimised) ]

AOM setup completed successfully.
```

   - If a previous version is in place, the system displays a message similar to the following:

```
Migrating previous version aot.cssrXXX.X
.............
.............
.............
linking new version...
```

10. Enter:

    eject cdrom

Removing CMS patches

To remove CMS patches from the system:

1. Enter:

   cmssvc

   The system displays the **CMSSVC Menu**.

2. Enter the number associated with the `back_all` option.

   The system displays one of the following messages, depending on whether CMS patches are present:

   - If no patches are present, the system displays a "`No CMS patches`" message.
   - If patches are present, the system displays the following message:

```
The following patches are installed on this machine:
   .
   .
   .
Are you sure you wish to remove all these patches? (y|n)
```

3. Perform one of the following actions:

   - If no patches are present, go to Removing the current CMS load on page 40.
   - If patches are present, enter: **y**

   The system removes the patches. For each patch removed, the system displays messages similar to the following:

```
Removing patch package for cmspx-s:

Patch x has been backed out.
```

   When all patches have been removed, the system returns to the prompt.

Removing the current CMS load

To remove the current CMS base package:

1. Load the Avaya Call Management System CD-ROM into the CD-ROM drive.
2. Enter:

   mount

   The system displays a list of devices and file systems currently mounted. The last line displayed must show the CD-ROM drive and the CD-ROM disk name. If you do not see a `/cdrom/`*`CD_ROMname`* message, contact your Avaya CMS support representative.

   An example of a `/cdrom/`*`CD_ROMname`* message is:

   ```
   /cdrom/CD_ROMname on /vol/dev/dsk/c0t2d0/CD_ROMname read
   only/nosuid/maplcase/noglobal/rr/traildot/dev=16c0001 on current date and
   time
   ```

3. Enter:

   metastat | grep State: | grep -v Okay | pg

4. Choose one of the following actions:
   - If the system displays no messages other than the pound (#) prompt, continue with Step 5.
   - If the system displays resyncing messages, wait a few minutes. Repeat steps 3 and 4 until the resyncing messages are no longer displayed. Depending on the size of your disk drives, it could take a couple of hours for the resync to complete.
   - If the system displays any messages that are not resyncing messages, do not continue with this procedure. Escalate the problem to your Avaya CMS support organization.
5. Enter:

   pkgrm cms

   The system checks the package and displays the following message:

   ```
   The following package is currently installed: cms Avaya
   Call Management System
   (sparc) rxxxxx.x
   Do you want to remove this package?
   ```

6. Enter: **y**

   The system displays the following message:

```
Removing installed package instance <cms>
.  .  .
WARNING:
The <LUfaas> package depends on the   package currently being
removed.

Dependency checking failed.

Do you want to continue with the removal of this package [y,n,?,q]
```

   Note:

   The <LUfaas> package message might not appear if Visual Vectors is not installed on the system.

7. Enter: **y**

   The system displays the following message:

```
Verifying package dependencies.
Processing package information.
Executing preremove script

Do you want to preserve CMS data [y,n,?]
```

8. Enter: **y**

   The system displays the following message:

```
CMS will be removed from this machine; the data will be preserved.
Are you sure this is correct [y,n,?]
```

9. Enter: **y**

   The system displays the following message:

```
Have you backed up the file systems [y,n,?]
```

10. Enter: **y**

    If CMS has not been turned off, the system displays the following message:

```
CMS must be turned off in order to remove software.

Do you want to turn off CMS now?
```

11. Enter: **y**

    The system removes the current CMS load and displays the following message:

```
Turning off CMS, please wait.
.................
Removal of <cms> was successful.
```

Starting AOM

To start AOM, enter:

aom start

Installing the new CMS base load

To install the new CMS base load:

1. Verify that the Avaya Call Management System CD-ROM is in the CD-ROM drive.
2. Enter:

   pkgadd -d /cdrom/cdrom0 cms

   Note:

   It may be necessary to enter **y** several times to continue the CMS software installation.

   The system installs the CMS software and displays a message similar to the following:

```
Installing Avaya Call Management System as <cms>
.....................
.....................
Background installation of performance packages complete.

If CMS was installed by choosing CMS from pkgadd menu, type q and
press return to exit.

If CMS was installed using pkgadd -d /cdrom/cdrom0 cms, press
return.
```

3. Press **Enter**.

   The system proceeds to install several CMS performance tool packages. When the installation is complete, the program once again displays the following message:

```
If CMS was installed by choosing CMS from pkgadd menu, type q and
press return to exit.
If CMS was installed using pkgadd -d /cdrom/cdrom0 cms, press
return.
```

   Note:

   If the installation procedure fails for any of the performance tools, the system displays the following message:

```
- Customers in the US should call the CMS Technical Services
Organization at 1-800-242-2121

- Customers outside the US should contact your Avaya
representative or distributor.
```

   If the message shown above is displayed, continue with this procedure and the remaining CMS base load upgrade procedures. When the upgrade is complete, notify your Avaya CMS support organization as prompted by the system.

4. Press the **Enter** key.

   The system returns to the command prompt.

5. Perform one of the following tasks:

   - If the system prompts you to reboot the system, perform the following steps:

     i. Enter:

     /usr/sbin/shutdown -y -i6 -g0

     The system reboots.

     ii. Log in as **root**.

     iii. Go to Step 6.

   - If the system does not prompt you to reboot the system, go to Step 6.

6. Enter:

   pkgchk -n cms

   If the software installation was successful, the system prompt returns to the screen after a few seconds. If you receive any error messages, call the Avaya Technical Services Organization, 1-800-242-2121, or your product distributor.

7. Enter:

   cat /cms/install/logdir/admin.log |pg

   The system displays part of the CMS administration log.

8. Verify that there were no errors during the installation.
9. Press **Enter** to continue the display. It might be necessary to repeat this step several times.
10. Log in to the system from the command line. For more information, see Switching to the command line interface on page 36.

Installing CMS patches

To install the CMS patches:

1. Enter:

   cmssvc

   The system displays the **CMSSVC Menu**.

2. Enter the number associated with the `load_all` option.

   Depending on the availability of CMS patches one of the following events occurs:

   - If there are no patches to be installed, the system displays a message to that effect and returns to the system prompt.
   - If there are no patches to be installed, the system displays the following message:

   ```
   Are you sure you want to install all these patches? (y|n)
   ```

3. Choose one of the following actions:

   - If there are no patches to be installed, go to Step 4.
   - If there are patches to be installed, enter: **y**

     The system installs the CMS patches. As the installation proceeds, the system keeps you informed of its progress, as shown in the following message:

   ```
   Generating list of files to be patched...
        .  .  .
   Patch installation completed.
   ```

4. Enter:

   eject cdrom

Upgrading a non-mirrored system to a mirrored system

If you are upgrading a non-mirrored system to a mirrored system, call the Avaya Technical Services Organization, 1-800-242-2121, or consult with your product distributor or representative to have the mirroring package authorized and set up.

For more information, see “Setting up a mirrored system” in *Avaya CMS Release 12 Software Installation, Maintenance and Troubleshooting Guide*, 585-215-117.

Turning on CMS

To turn on CMS:

1. Enter:

   cmsadm

   The system displays the **CMSADM Menu**.

2. Enter the number associated with the `run_cms` option.

   The system displays the following message:

```
Select one of the following
  1) Turn on CMS
  2) Turn off CMS but leave IDS Running
  3) Turn off CMS
Enter choice (1-3):
```

3. Enter: **1**

   The system starts CMS and returns to the command prompt. If CMS data collection was turned off at the beginning of the upgrade, you must restart it.

Preparing the Avaya Visual Vectors Server software

Do not perform this procedure if you have *not* purchased Visual Vectors *and* if Visual Vectors is *not* installed on the CMS system. If you have not purchased Visual Vectors and Visual Vectors is not installed on the CMS system, go to Completing the base load upgrade process on page 51.

Choose one of the following procedures:

- If you are upgrading Visual Vectors from an earlier version, go to Removing the Avaya Visual Vectors Server software on page 46.
- If you are installing Visual Vectors for the first time, go to Installing the Avaya Visual Vectors Server software on page 46.
- If you are not upgrading Visual Vectors and if Visual Vectors is installed on the system, go to Turning on Avaya Visual Vectors on page 48.

Removing the Avaya Visual Vectors Server software

To remove the Avaya Visual Vectors Server software:

1. Enter:

   `pkgrm LUfaas`

   For each package, the system will display at least two messages asking for confirmation to continue the removal.

2. Enter **`y`** each time you receive messages asking for confirmation to continue the removal.

   When the last package is removed, the system returns to the command prompt.

3. Go to Installing the Avaya Visual Vectors Server software on page 46.

Installing the Avaya Visual Vectors Server software

To install or upgrade the Avaya Visual Vectors Server software:

1. Enter:

   `aom stop`

2. Load the new CD-ROM, *Avaya Visual Vectors Server Software* into the CD-ROM drive.

3. Enter:

   pkgadd -d /cdrom/cdrom0 LUfaas

   The system displays the following message:

```
Processing package instance <LUfaas> from </cdrom/untitled>

Visual Vectors Server Software
(sparc) vvsXX.X

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The selected base directory </cms/aas> must exist before
installation is attempted.

Do you want this directory created now [y,n,?,q]
```

4. Enter: **y**

   The system displays the following message:

```
Using </cms/aas> as the package base directory.

## Processing package information.
## Processing system information.
## Verifying package dependencies.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.

The following files are already installed on the system and are
being used by another package:

* /cms/aas <attribute change only>
* - conflict with a file which does not belong to any package.

Do you want to install these conflicting files [y,n,?,q]
```

5. Enter: **y**

   The system displays the following message:

```
## Checking for setuid/setgid programs.

This package contains scripts which will be executed with
super-user permission during the process of installing this
package.

Do you want to continue with the installation of <LUfaas> [y,n,?]
```

6. Enter: **y**

   The system displays the following message:

```
Installing Visual Vectors Server Software as <LUfaas>

## Installing part 1 of 1.
/cms/aas/.odbc.ini
/cms/aas/AAS_README
/cms/aas/Translation/AcdRelease/de_DE
..........
..........
..........
Installation of <LUfaas> was successful.
```

7. Enter:

   aom start

8. Enter:

   setupaas

   The system displays the **Avaya Visual Vectors Server System Services Menu**.

9. Enter the number associated with the `init_vvs` option.

   The system displays the following message:

```
This version of VVS functions only with CMS.

CMS name used : cms3
Maximum concurrent VVS logins[1-100](q to quit):
```

10. Enter the number of allowable concurrent logins. The maximum login number must not exceed the number of licenses that were purchased.
11. Go to Turning on Avaya Visual Vectors on page 48.

Turning on Avaya Visual Vectors

To turn on the Avaya Visual Vectors software:

1. Enter:

   setupaas

   The system displays the **Avaya Visual Vectors Server System Services Menu**.

2. Enter the number associated with the `run_vvs` option.
3. Enter the number associated with the `Turn VVS On` option.

4. Enter:

   eject cdrom

5. Go to Completing the base load upgrade process on page 51.

Completing the base load upgrade process

You must perform the procedures in this section to complete the CMS base load upgrade process.

This section includes the following procedures:

- Prerequisites on page 51
- Returning to the Common Desktop Environment on page 52
- Checking free space allocation on page 53
- Performing a backup of the system files on page 54
- Performing a backup of the CMS data on page 54

Prerequisites

Before you perform the procedures in this section, you must:

- Read the information in Important notice to CMS customers on page 5
- Perform all of the required procedures in Preparing for a base load upgrade on page 9
- Perform all of the required procedures in Updating the Solaris operating system on page 27
- Perform all of the required procedures in Upgrading the CMS base load on page 35

Returning to the Common Desktop Environment

To return the Common Desktop Environment (CDE) interface:

1. At the command prompt, enter:

   exit

   The system displays the following message:

   ```
   console login:
   ```

   Important:
   Do not enter anything at the login prompt. After about 10 to 30 seconds, the system will return you to the CDE Login console.

2. Log in as **root**.

   The system displays the Common Desktop Environment, along with one or more open XTERM windows.

Checking free space allocation

To check free space allocation:

1. Enter:

   su cms cms

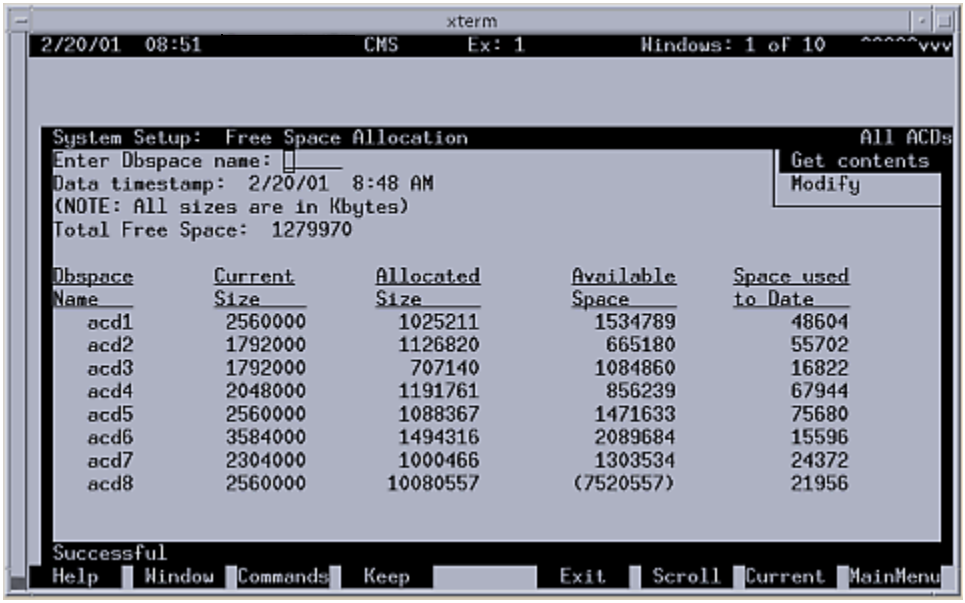
   The system displays the CMS main menu.

2. Press **Enter** to accept the default terminal type.

3. Select **System Setup** > **Free Space Allocation**.

4. Verify that the amount of available space is positive for each ACD and make any necessary adjustments. Your system will display any negative space in parentheses.

   For example, in the following **Free Space Allocation** window, acd8 has negative space available.



   If the **Total Free Space:** field shows that there is not enough space available to make the adjustment, you must modify data storage allocation or add an additional hard drive.

5. Add additional space to any ACDs with negative values.

   For more information about free space allocation, see *Avaya Call Management System Release 3 Version 11 Administration*, 585-215-515.

Performing a backup of the system files

After the base load upgrade has completed successfully, perform a backup to create a reliable copy of the computer system files. For instructions on how to backup the system files, see Backing up your CMS system data on page 20.

Performing a backup of the CMS data

After the base load upgrade has completed successfully, perform a backup to create a reliable copy of the computer CMS data files. For instructions on how to backup the CMS data, see Backing up your CMS data on page 22.