



# **Avaya Call Management System (CMS)**

Release 12

Sun Enterprise 3500 Computer

CMS Upgrade Express (CUE)

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"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.

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<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**.

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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.

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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)
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- 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

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- System administration documents
- Security documents
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- Telecommunications security experts

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<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](mailto:crminfodev@avaya.com).

#### Acknowledgment

This document was written by the CRM Information Development group.

**Avaya Call Management System (CMS)  
Release 12  
Sun Enterprise 3500 Computer  
CMS Upgrade Express (CUE)**

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# Preface

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## Overview

*Avaya Call Management System (CMS) Release 12 Sun Enterprise 3500 Computer CMS Upgrade Express (CUE)* is written for technicians who are upgrading an Enterprise 3500 computer from CMS R3V6, R3V8, R3V9, R3V11, or R12 to CMS R12.

**Note:**

CUE *cannot* be used to upgrade a Sun SPARCserver, Ultra 5, or Enterprise 3000 computer to R12. You must follow the procedures found in *Avaya CMS Release 3 Version 11 Platform Upgrade and Data Migration* to upgrade to CMS R12.

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## Related documents

The following table lists sources for additional information about the Enterprise 3500 computer. To order any of these documents, call the Publications Center at 1-800-457-1235 (United States and Canada) or +1-207-866-6701 (outside the United States and Canada).

Title	Document number
<i>Avaya CMS Release 12 CMS Upgrade Express (CUE) Customer Requirements</i>	07-300010
<i>Avaya CMS Sun Enterprise 3500 Computer Hardware Installation, Maintenance, and Troubleshooting</i>	585-215-873
<i>Avaya CMS Sun Enterprise 3500 Computer Connectivity Diagram</i>	585-215-877

## Support

If you need assistance with a problem, use the support information and help lines presented below.

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### Frequently asked questions (FAQs)

For solutions to common problems, customers and Avaya technicians can access technical support FAQs at:

<http://www.avaya.com>

Select **Support > Call Center/CRM** and select the product for which you need support. Please check this information before you call in a trouble ticket. Doing so could save you time and money.

---

### Customer support for the United States

Customers can report problems and generate trouble tickets by calling:

1-800-242-2121

The customer is prompted to identify the type of problem (that is, Automatic Call Distribution, hardware, or Avaya CMS) and is then connected to the appropriate service organization.

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### Technician support for the United States

Avaya technicians can receive help by calling:

1-800-248-1234

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### Customer and technician support outside the United States

For customer and technician support outside the United States, see the Avaya Web site:

<http://www.avaya.com>

Select **Support > Escalation Lists**. For escalation telephone numbers outside the United States, select **Global Escalation List**.



# Preparing for the upgrade

Before you begin a CUE upgrade, use the following checklist of topics to prepare for the upgrade:

Topic	✓
<a href="#">Verifying that the customer has prepared their system for an upgrade</a> on page 8	
<a href="#">Required documentation</a> on page 8	
<a href="#">Remote support</a> on page 8	
<a href="#">Trouble escalation</a> on page 8	
<a href="#">Switch compatibility</a> on page 9	
<a href="#">Hardware additions</a> on page 9	
<a href="#">Software considerations</a> on page 10	
<a href="#">Customization issues</a> on page 10	
<a href="#">Disk mirroring</a> on page 11	
<a href="#">Parts list</a> on page 11	
<a href="#">Checking for printer requests and large mail files</a> on page 12	
<a href="#">Checking for ACD 1</a> on page 13	
<a href="#">Checking for a symbolic link between /etc/hosts and /etc/inet/hosts</a> on page 14	

## Verifying that the customer has prepared their system for an upgrade

Before a CUE upgrade begins, maintenance backups and a CMSADM backup must be done by the customer. If the customer has not done these backups, the upgrade cannot begin. Refer the customer to *Avaya Call Management System (CMS) Release 12 CMS Upgrade Express (CUE) Customer Requirements*. Verify that the backups have been done as described in the *Customer Requirements* document before you begin the upgrade.

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## Required documentation

The site technician must have a copy of these instructions before beginning the upgrade.

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## Remote support

All upgrade procedures are done at the customer site. However, when the upgrade is being supported by remote personnel, such as CMS Provisioning, the system commands used in this document should be done by the remote personnel so that they can monitor the progress of the upgrade. Run the commands from the local console only when instructed to do so, or when there is no remote support.

---

## Trouble escalation

If problems occur during the upgrade procedure:

1. Escalate the problem through normal channels.
2. Inspect the upgrade log file that is located at `/var/log/cvuelog`.
3. If the problem persists, shut down the system, reinstall the customer's old disk configuration, and bring the system back up under the old CMS load.



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## Switch compatibility

CMS R12 does not support R7 and earlier switches. When upgrading to CMS R12, the switch must be at least R8 or later. If the current switch is administered in CMS as R7 or earlier, the upgrade extract tool will recognize this incompatibility and require you to select a newer switch model before the upgrade can continue.

CMS R12 does not support X.25 switch links. The upgrade extract tool will recognize this incompatibility and require you to enter a host name or IP address and TCP port before the upgrade can continue. Determine the host name or IP address and TCP port before you begin the upgrade.

**Note:**

If the host name or IP address and TCP port information is not known during the CUE upgrade, you can enter fictitious information to get through the upgrade, but the switch links will not become active until you go back and update the switch setup information with accurate information.

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## Hardware additions

Avoid hardware additions whenever possible during an upgrade. For example, if the customer wants to increase the amount of RAM that is in the computer, add it only after verifying that the upgrade was successful. Install the RAM as described in the maintenance and troubleshooting document for the computer.

## Software considerations

In addition to the standard set of software installed during a CUE upgrade, the customer may also purchase the latest version of the Informix SQL software. You must confirm whether the customer has purchased this software so you can properly answer questions during the extract process. See the SAP order to verify this information.

The customer may also purchase the latest version of the Open Database Connectivity (ODBC) software. You must confirm whether the customer has purchased this software so you can properly answer questions during the extract process. See the SAP order to verify this information.

Whether or not the customer has purchased Visual Vectors server software, it will be installed during the upgrade. Any existing layout files will be saved during the upgrade.

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## Customization issues

If the customer's CMS computer has third-party software or customization that was added to the standard set of CMS-related software, such as pseudo-ACDs, those software packages and customizations are not preserved by the upgrade process. The customer or PSO must collect, reinstall, recompile, and reconfigure any non-standard CMS software after the upgrade is completed and approved.

The customer data copied during the upgrade procedure includes information such as the following:

- License information
- User login IDs and passwords
- System name and IP address
- Serial printer administration
- CMS administration, setup, and authorizations

For a complete list of the files copied during the upgrade, see the `/var/log/cvue1og` file after the upgrade is complete. A copy of the old system's `/etc/vfstab` file is saved in the `cvue1og` file.

---

## Disk mirroring

The CUE process can be used to automatically add disk mirroring to a nonmirrored system. However, the CUE upgrade kit used with the procedures in this document *cannot* be used to add mirroring to the system.

If the customer has purchased additional disk drives for the purpose of adding mirroring independent of the CUE process, you must first upgrade the computer using the CUE nonmirrored upgrade process before you manually add mirroring to the system.

 **Important:**

During the CUE upgrade, do not insert any disks that were not part of the CUE kit.

After you have completed the CUE nonmirrored upgrade process, use the instructions given in *CMS R12 Software Installation, Maintenance, and Troubleshooting*, 585-215-117, to add mirroring to the system.

---

## Parts list

The following parts are delivered to the customer's site:

- One boot disk drive (labeled "Boot Disk - Slot 0")
- Optionally, up to three blank formatted data disk drives which will become the additional data disk drives

The quantity of optional data disks depends on how many the customer ordered.

- The following blank tapes (only one is used for the upgrade):
  - One 170-meter, 8-millimeter, Mammoth blank tape
  - One DDS4, 20/40-GB, 4-millimeter blank tape
- Upgrade tool CD-ROM
- Blank labels that are used to label the old disk drive configuration
- A complete set of system software on CD-ROM, including:
  - R12 CMS
  - R12 Supplemental Services
  - Solaris 9 Upgrade
  - Informix IDS

## Preparing for the upgrade

- Informix ILS
- Informix SQL (optional)
- Open Database Connectivity (ODBC) (optional)
- Hardware Drivers
- Visual Vectors Server
- Call Center 2.0 and CMS R12 Documentation Library

### Important:

The release numbers on the upgrade tool CD-ROM and the CMS software CD-ROM must match the release numbers that are labeled on the new boot disk drives. If the release numbers do not match, escalate through normal channels. The following table shows an example of how the CD-ROMs and disks are labeled.

Upgrade tool CD-ROM	CMS CD-ROM	Boot disk drives
v12cue1d.1 For r3v12ad.d	Load: r3v12ad.d	Comcode XXXXXXXXXX R12 - Issue 1.0 For CMS r3v12ad.d Use CUE v12cue1d.1 Boot Disk

---

## Checking for printer requests and large mail files

The upgrade extract process first copies the files that are being migrated to the `/var/tmp/new` directory for the new system, then copies the files to tape. If the system does not have enough disk space to create this first copy to `/var/tmp/new`, the system may run out of space and the extract will fail.

Before you continue with the upgrade, check the following directories for old print requests and large, unneeded mail files that may be taking up space:

- `/var/spool/lp/requests/<uname>`
- `/var/spool/lp/tmp/<uname>`
- `/var/mail/root`
- `/var/mail/root2`
- `/var/mail/cms`

Delete any unneeded files.

---

## Checking for ACD 1

The upgrade tool cannot upgrade a system where ACD 1 is not administered.

To determine if the system does not have ACD 1 administered:

1. Log on to CMS.
2. Select **System Setup > Switch Setup > List All** to display a list of the administered ACDs. This list will show if ACD 1 is not administered.
3. To add temporary ACD 1:
  - a. Enter:  

```
cmsadm
```
  - b. Select the number that corresponds to the `acd_create` option.  
This adds the first unassigned ACD, which will be ACD 1.
  - c. Enter the switch name and switch model, enable vectoring, enable disconnect supervision, and enter **1** for the local port and enter **1** for the remote port.
  - d. When you select a link device, use either TCP/IP with an invalid IP address, or use X.25 and select one of the loopback links. Since the ACD is deleted after the upgrade, it is acceptable to assign an invalid IP address or loopback link.
  - e. For the remaining options, use the defaults or minimum values.

---

## Checking for a symbolic link between /etc/hosts and /etc/inet/hosts

If the CUE extract process detects a unique `/etc/hosts` file *and* a unique `/etc/inet/hosts` file, the process cannot merge the differences between the two "hosts" files. The `/etc/hosts` file must be a symbolic link to `/etc/inet/hosts`.

To determine if the `/etc/hosts` file is a symbolic link to the `/etc/inet/hosts` file:

1. Enter:

```
ls -l /etc/hosts
```

A message similar to the following should be displayed:

```
lrwxrwxrwx 1 root root 12 Feb 23 2002 /etc/hosts -> ./inet/hosts
```

2. Do one of the following:

- If a symbolic link for `/etc/hosts` to `./inet/hosts` is displayed (similar to what is shown above), continue with [Extracting the customer's administration and options](#) on page 17.
- If the system does not display a symbolic link for `/etc/hosts` to `./inet/hosts` and the system is operating properly, continue with Step 3.

3. Enter:

```
ifconfig -a
```

A message similar to the following is displayed:

```
hme0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 2
      inet 192.168.2.1 netmask ffffffff broadcast 192.168.2.255
      ether 8:0:20:7b:ab:dc
```

4. Enter:

```
more /etc/hosts
```

A message similar to the following is displayed:

```
127.0.0.1 localhost
192.168.2.1 cvue loghost cvue.tmpdomain.org
```

5. Compare the host network information from the `/etc/hosts` file to the output of the network information displayed with the `ifconfig` command. If the host IP addresses match (as highlighted in the above examples), the `/etc/hosts` file is probably the correct hosts file. However, since multiple administrators may have independently modified either file, both files could contain important information.

After the CUE copy process, you will need to ensure that the `/etc/hosts` file and symbolic link are restored to their proper state. Inform the customer that two independent hosts files exist on the original system. Let the customer know that both files will be preserved, but that the customer is responsible for merging any relevant information into the `/etc/inet/hosts` file after the upgrade.

The `/etc/hosts` file from the original system will be preserved as `/manual_merge/etc/hosts` on the new system. The `/etc/inet/hosts` file from the original system will be preserved as `/etc/inet/hosts` on the new system. Instructions for moving the `/etc/inet/hosts` file to `/etc/inet/hosts.orig` are provided later in this document.

## Preparing for the upgrade



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## Extracting the customer's administration and options

To minimize the time that the system is out of service during the upgrade, you can extract the customer's administration and options while the system is operating, but do not allow the customer to make any administration changes once the extract process begins.

### **Important:**

If the upgrade is being supported by remote personnel, such as CMS Provisioning, stop here and contact the provisioning group. When the upgrade is being supported by remote personnel, the system commands in this section are for use by remote personnel to monitor the progress of the upgrade. Run the commands from the local console only when instructed to do so, or when there is no remote support.

To extract the customer's administration and options:

1. For the tape being used with the upgrade, check for the following:
  - Make sure that you are using the correct tape.
  - Make sure that the tape is not write-protected.
2. Label the blank tape "Upgrade Extract," and insert the tape into the tape drive.

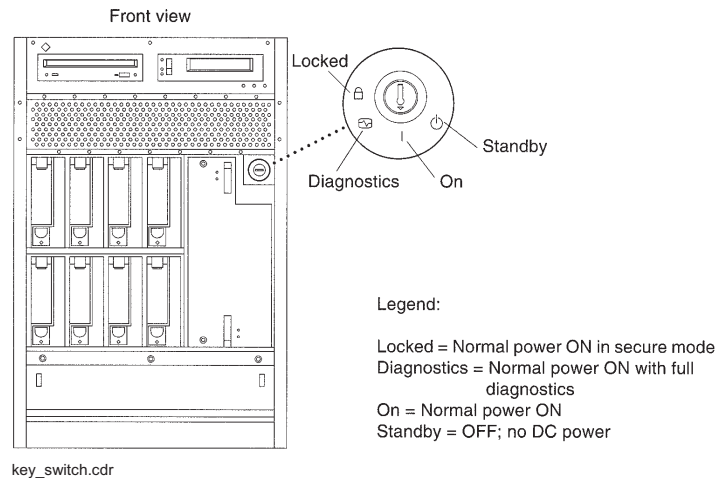
### **Important:**

If the system has more than one tape drive, the upgrade program defaults to the tape drive that has a tape installed and that has the lowest SCSI ID. To help prevent using the wrong tape drive, remove the tapes from any other tape drives.

3. Note the original position of the key switch. You must return the key switch to this original position later during the upgrade.

## Extracting the customer's administration and options

- If the key switch is in the "Locked" or "Diagnostics" position, move the key switch to the vertical "On" position. See the following figure.



- Log on as root.

- Enter:

```
cd /
```

- Load the upgrade tool CD-ROM.

The File Manager window may open. Click the cursor in an XTERM window.

- After waiting about 15 seconds, enter `mount` to verify that the CD-ROM is detected.

A list of devices and file systems that are currently mounted is displayed. The final line should show something similar to the following:

```
.  
.  
/cdrom/r12cue on /vol/dev/dsk/cMt6d0/r12cue read only/XX/XX/XX on  
<time stamp>
```

- Enter the following commands:

```
cd /cdrom/cdrom0
```

```
./cvue_extract
```

The extract process begins. A message similar to the following is displayed:

```
Using /var/tmp/new as temporary directory.  
CUE VERSION: v12cue1X.N  
Current CMS Version is : r3vNNxx.x  
Checking for valid platform (get_server_platform)
```

10. The extract process first verifies whether the platform you are upgrading is supported by CMS R12. One of the following occurs:

- If the platform is supported for CUE upgrades, the following message is displayed and the process continues with Step 11.

```
Your system is a(n) Platform_Type. This platform is supported by CMS R12.
```

- If the platform is not supported, a message similar to the following is displayed. You cannot continue with the CUE upgrade:

```
Your system is <a(n) Platform_Type or not supported>. This platform is no longer supported by CMS R12. Please read the message that follows ...
```

ERROR:

```
You have chosen to upgrade to CMS R12 from a CMS platform no longer supported by CMS R12. Please consult the Avaya CMS R3V11 Platform Upgrade and Data Migration manual for instructions on migrating data from unsupported CMS platforms.
```

```
Exiting CMS Upgrade Express ...
```

11. The extract process then verifies whether the CMS load you are upgrading from can be upgraded to CMS R12 using CUE. One of the following occurs:

- If the CMS load is supported for CUE upgrades, the following message is displayed and the process continues with Step 12.

```
Continuing with CMS Upgrade Express ...
```

- If the CMS load is not supported, a message similar to the following is displayed and you cannot continue with the CUE upgrade:

```
You have chosen to upgrade to CMS R12 from a CMS version no longer supported by CUE. Please consult the Avaya CMS R3V11 Platform Upgrade and Data Migration manual for instructions on migrating data from unsupported CMS versions.
```

```
Exiting CMS Upgrade Express ...
```

## Extracting the customer's administration and options

12. The following message about supported tape drives is displayed:

```
##### WARNING #####
Only the following tape drives will be supported in CMS R12:

SCSI cartridge tape - 4-8 GB (SLR5)
SCSI 8mm tape - 14 GB
SCSI 4mm or 8mm tape - 20-40 GB

You must use a supported tape drive to continue with the CUE
upgrade.

Please enter (q) to quit, any other key to continue:
```

13. Do one of the following:

- If the tape drive you are using is not supported, press **q**. Restart the extract process after installing a supported tape drive.
- If the tape drive you are using is supported, press **Enter** to continue.

**Tip:**

If you want to track the progress of the extract from a different XTERM window, or from a remote or local terminal, use the following command:

```
tail -f /var/tmp/new/var/log/cvuelog
```

14. The extract process next checks the tape and the tape drive to determine if the tape is defective, write-protected, or not compatible with the tape drive. The following message is displayed:

```
Testing tape on /dev/rmt/N..
```

15. One of the following occurs:

- If the tape and tape drive are operational, no error messages are displayed and the extract continues with Step 16.
- If the tape or tape drive are not operational, messages similar to the following are displayed:

```
tar: /dev/rmt/N: Permission denied
Tape test failed!! Could not write and then read a file
from the tape at /dev/rmt/N.
Check the following items for possible problems:
  Verify the tape is not write-protected
  Verify the correct type of tape is in the tape drive
  Verify the tape is not defective
/cvue_extract[982]:TAPETESTFAILED:not found
```

Make sure the tape is not write-protected and is the correct tape for the tape drive. Try cleaning the tape drive or using a different tape and start over with Step 1.

16. The extract process next runs the CMS converter tool. Messages similar to the following are displayed:

```
Admin data will be spooled to /dev/rmt/N
Converter started <timestamp>
/var/tmp/new/adminsave/cmsadmin.saved
.
.
Converter completed successfully <timestamp>
Converter completed successfully.
```

17. The extract process next checks to see if ACD 1 is administered. One of the following occurs:

- If error messages are not displayed, ACD 1 is administered, and the extract continues with Step 18.
- If the following error messages are displayed, ACD 1 is not administered, and you must temporarily add ACD 1:

```
ERROR:
ACD 1 is currently administered as a skipped ACD.
CUE cannot upgrade when ACD 1 is a skipped ACD.
Please run cmsadm, add a temporary ACD 1, then run
"./cvue_extract" again.
#
```

To add temporary ACD 1:

- i. Enter:

```
cmsadm
```

- ii. Select the number that corresponds to the `acd_create` option.  
This adds the first unassigned ACD, which will be ACD 1.
- iii. Enter the switch name and switch model, enable vectoring, enable disconnect supervision, and enter 1 for the local port and enter 1 for the remote port.
- iv. When you select a link device, use either TCP/IP with an invalid IP address, or use X.25 and select one of the loopback links. Since the ACD is deleted after the upgrade, it is acceptable to assign an invalid IP address or loopback link.
- v. For the remaining options, use the defaults or minimum values.
- vi. Return to Step 9 and start the extract process again.

## Extracting the customer's administration and options

18. CMS R12 supports switch releases R8 and later, so the switches (ACDs) may need to be upgraded when the CMS is upgraded to R12. The extract process checks each ACD to see if any of them are administered with a switch model of R7 or earlier. One of the following occurs:

- If all of the ACDs are supported by R12, the extract continues with Step 20.
- If any ACD is administered using an unsupported switch model, the following messages are displayed and the extract continues with Step 19:

```
The switch release Definity-<release> administered for <acd_name>
(ACD <acd number>) is no longer supported.

Select the model of switch for this ACD:
    1) Definity-R8
    2) Definity-R9/R10
    3) MultiVantage R1
    4) Communication Mgr R2
Enter choice (1-4, or q to quit):
```

19. Enter the upgraded switch model for the ACD. One of the following occurs:

- If another ACD is administered using an unsupported switch model, the extract returns to Step 18.
- If no other ACDs are administered using an unsupported switch model, the extract continues with Step 20.

20. CMS R12 supports switch links that use TCP/IP only (CMS R12 does not support X.25 links), so the switch link may need to be upgraded when the CMS is upgraded to R12. The extract process next checks to see if any ACD switch links use X.25. One of the following occurs:

- If no ACDs use X.25 for the switch link, the extract continues with Step 26.
- If any ACD uses an X.25 switch link, the following messages are displayed and the extract continues with Step 21:

```
Check switch connections (check_x25_con)

WARNING:
CMS R12 no longer supports X.25 as a valid switch connection.

ACD <acd_name> (ACD <acd number>) is linked via X.25 but now
requires a TCP/IP connection. Please provide TCP/IP information
in the prompts that follow:

Enter switch host name or IP Address or q to quit:
```

21. Enter the host name or IP address of the switch.

Messages similar to the following are displayed:

```
You have entered the following TCP/IP information for
<acd_name> (ACD <acd number>):
*****
Host name or IP address: <host_name or IP_address>
*****

If you would like to make changes to the entry above,
please enter "y" for Yes or "n" for No: (default: n)
```

22. Do one of the following:

- If the assignment is correct, press **Enter**. The extract continues with Step 23.
- If the assignment is not correct, enter **y**. The following messages are displayed and the extract returns to Step 21.

```
CMS Upgrade Express is now returning to TCP/IP information prompts...

Revising TCP/IP Host Name <host_name or IP_address> per user request ...

Enter switch host name or IP Address or q to quit:
```

23. The following message is displayed:

```
Enter switch TCP port number (5001-5999 or q to quit): (default: 5001)
```

24. Enter the switch TCP port number.

Messages similar to the following are displayed:

```
You have entered the following TCP/IP information for <acd_name>
(ACD <acd number>):
*****
TCP Port Number: <port_number>
*****

If you would like to make changes to the entry above,
please enter "y" for Yes or "n" for No: (default: n)
```

## Extracting the customer's administration and options

25. Do one of the following:

- If the assignment is correct, press **Enter**. The following message is displayed.

```
...CMS Upgrade Express is updating <acd_name> (ACD <acd number>)
with TCP/IP switch information.
```

One of the following occurs:

- If there are more ACDs that must be converted to TCP/IP, the extract returns to Step 20.
  - If there are no more ACDs that must be converted to TCP/IP, the extract continues with Step 26.
- If the assignment is not correct, enter **y**. The following messages are displayed and the extract returns to Step 24.

```
CMS Upgrade Express is now returning to TCP/IP information prompts...

Revising TCP Port Number <port_number> per user request ...

Enter switch TCP port number (5001-5999 or q to quit): (default: 5001)
```

26. The extract process continues and a message similar to the following is displayed:

```
check_x25_con has validated the setup.out file for further
processing.
```

27. The extract process checks to see if you currently have any installed feature packages. If a feature package is installed, a message similar to the following is displayed:

```
The Feature Package file is now being converted to the R12 format.
```

28. The extract process checks the current version of Solaris and messages similar to the following are displayed:

```
The current version of Solaris on this system is 5.N
It will be replaced with Solaris 5.9 as part of the upgrade
```



29. The extract process continues and the following message is displayed:

```
Please wait as administration files are extracted ...  
.....
```

Extracting the administration files will take several minutes. When finished, the following messages are displayed:

```
NOTE: Be sure to review the cvuelog for any files  
to be merged manually in the upgraded system.
```

30. The extract process checks to see if Visual Vectors server software is currently installed on the system. If Visual Vectors server software is detected, the following message is displayed:

```
INFORMATION:  
CUE has detected the existence of the Visual Vectors package.  
Files under the /opt/cc/aas/vector directory will be preserved  
during this upgrade.
```

31. The extract process continues and the following messages are displayed:

```
NN blocks  
NNNNN blocks
```

32. The extract process checks to see if the `/etc/hosts` file is a symbolic link to the `/etc/inet/hosts` file. If it is not a symbolic link, the following message is displayed:

```
WARNING:  
One or more differences were found between  
the /etc/hosts and the /etc/inet/hosts files.  
The /etc/hosts file has been preserved  
and placed in the /manual_merge directory.  
The /etc/inet/hosts file has been preserved  
and will be placed in /etc/inet/hosts in the upgraded system.  
  
Please review the /manual_merge/README file  
to see a more detailed report of the difference(s).  
IMPORTANT: The customer is responsible for determining  
the proper entries in the /etc/inet/hosts file  
and must link /etc/hosts to it for system conformity.
```

## Extracting the customer's administration and options

33. The extract process checks to see if ISQL software version 7.32.UC1 is currently installed on the system. One of the following occurs:

- If ISQL version 7.32.UC1 is currently on the system, it is automatically installed as part of the upgrade. Continue with Step 34.
- If an older, incompatible version of ISQL is installed, the following messages are displayed and you continue with Step 35:

```
CUE found that ISQL is installed on the current system.  
If ISQL will continue to be used after the upgrade, CMS  
requires that the customer purchase the new ISQL license.  
ISQL will not be installed if the customer has not  
purchased or does not agree to the purchase of the  
new ISQL license.
```

```
Enter 'y' if the customer has purchased or agrees to purchase  
the new ISQL license.
```

```
Enter 'n' if the customer has not purchased or does not agree  
to purchase the new ISQL license.
```

```
Enter (y/n):
```

- If ISQL is not currently installed, the following messages are displayed and you continue with Step 35:

```
CUE did not find ISQL installed on the current system.  
ISQL will not be installed if the customer has not  
purchased or does not agree to the purchase of the  
new ISQL license.
```

```
Enter 'y' if the customer has purchased or agrees to purchase  
the new ISQL license.
```

```
Enter 'n' if the customer has not purchased or does not agree  
to purchase the new ISQL license.
```

```
Enter (y/n):
```

34. The following messages are displayed and you continue with Step 36:

```
Your current version of ISQL is 7.32.UC1.  
ISQL will be installed.
```

35. Do one of the following:

- If the optional package ISQL was purchased as part of the upgrade (check the SAP order), answer **y** to the question. The following message is displayed and you continue with Step 36:

```
ISQL will be installed.
```

- If ISQL was not purchased as part of the upgrade, enter **n**. If you enter **n**, ISQL is not installed and the following message is displayed. Continue with Step 36:

```
ISQL will not be installed in the upgraded system.
```

36. The extract process continues and the following message is displayed:

```
Supplemental Services cssxXXxx.x will be installed.
```

37. The extract process checks to see what version of ODBC, if any, is currently installed on the system. One of the following occurs:

- If ODBC version 4.2 is currently on the system, it is automatically installed as part of the upgrade. Continue with Step 39.
- If ODBC is not installed, or if the current version is earlier than version 4.2, the following messages are displayed and you continue with Step 38:

```
***** ODBC INSTALLATION MESSAGES *****

CUE did not find the supported ODBC version installed on the
current system. ODBC will not be installed if the customer has not
purchased or does not agree to the purchase of the new ODBC
license.

Enter 'y' if the customer has purchased or agrees to purchase
the new ODBC license.

Enter 'n' if the customer has not purchased or does not agree
to purchase the new ODBC license.

Enter (y/n) (default: n):
```

38. Do one of the following:

- If the optional package ODBC was purchased as part of the upgrade (check the SAP order), answer **y** to the question. Continue with Step 39.
- If ODBC was not purchased as part of the upgrade, enter **n**. If you enter **n**, ODBC is not installed and the following message is displayed. Continue with Step 40:

```
ODBC will not be installed in the upgraded system.
```

## Extracting the customer's administration and options

39. The following message is displayed:

```
ODBC will be installed.
```

40. The extract process continues and the following messages are displayed:

```
<software package> will be installed.  
<software package> will be installed.  
.  
.  
CMS default backup device will be checked.  
  
Sendmail permissions will be fixed.  
  
Serial printers will be administered
```

41. The extract process next checks to see if the OpenBoot PROM (OBP) must be patched. The following messages are displayed (no input is required):

```
Warning: you must close all applications before running this script  
  
Patch configuration started: <time stamp>  
  
Patch configuration in RUN NOW mode. Patch install will  
occur immediately (no reboots)  
Running in NO REBOOT mode
```

42. One of the following occurs:

- If the OBP is not up-to-date, messages similar to the following are displayed (no input is required):

```
Spooled XXXXXX-XX (OBP)
YYYYYY-YY is not needed on this platform

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.

.
.
Patch installation completed: <time stamp>

Patches were installed without rebooting.
You should reboot at the earliest convenience. To reboot run:

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

16 blocks
```

- If the OBP is up-to-date, messages similar to the following are displayed (no input is required):

```
XXXXXX-XX is already installed
YYYYYY-YY is not needed on this platform
There are no Solaris patches to install.
```

43. The extract process continues and the following messages are displayed:

```
Merging cvue_file_properties with cvuelog
Copying admin to tape.
The cvue_extract process is complete.
#
```

44. Enter:

```
pg /var/tmp/new/var/log/cvuelog
```

The temporary upgrade log file is displayed. Check for failure messages (FAIL) or other indications that the extract process did not successfully complete. This file also contains a list of files that are being copied to the new system. The list of files may be useful for later troubleshooting.

45. Remove the tape, set the write-protect switch on the tape to read-only, and reinsert the tape.

## Extracting the customer's administration and options

46. Enter:

```
ls -l /dev/dsk/c0t0d0s0
```

Note whether the path shows `sbus@2` (Enterprise 3500) or `sbus@3` (Enterprise 3501 or 3503). This information will be used later in the upgrade. Enter the sbus path here:

47. Enter:

```
/usr/sbin/shutdown -y -i0 -g0
```

This shuts down the computer. The `ok` prompt is displayed.

48. Turn the power switch on the CMS computer to off, and turn off the power to any external SCSI disk drives and tape drives.

49. Continue with [Removing and replacing disk drives](#) on page 31.



## Removing and replacing disk drives

This section contains the procedures that are required to upgrade the disk drives to CMS R12. Using these procedures, you must remove the old disk drives in the computer and replace them with new disk drives that are preloaded with the CMS R12 software.

 **CAUTION:**

Customers *must not* reuse their old disk drives as part of the upgrade procedure. These old disk drives should be saved to be used for system recovery in case any problems occur during the upgrade procedure.

---

### Prerequisites

Obtain an ESD wrist strap before beginning this procedure.

---

## Disk upgrade procedures

To upgrade the disks, use the following checklist to keep track of each procedure:

Procedure	✓
<a href="#">Removing and labeling the old disk drives</a> on page 32	
<a href="#">Installing the new boot disk drive</a> on page 34	
<a href="#">Bootting up the system with the new boot disk drive</a> on page 35	
<a href="#">Verifying that the system recognizes the new boot disk drive</a> on page 38	
<a href="#">Checking the status of the boot disk drive</a> on page 38	
<a href="#">Checking the status of the tape drives</a> on page 39	
<a href="#">Verifying that the upgrade can continue</a> on page 39	

---

## Removing and labeling the old disk drives

 **CAUTION:**

All old disk drives must be removed from the system and replaced with the disk drives from the upgrade kit. Do not leave any old disk drives in the system.

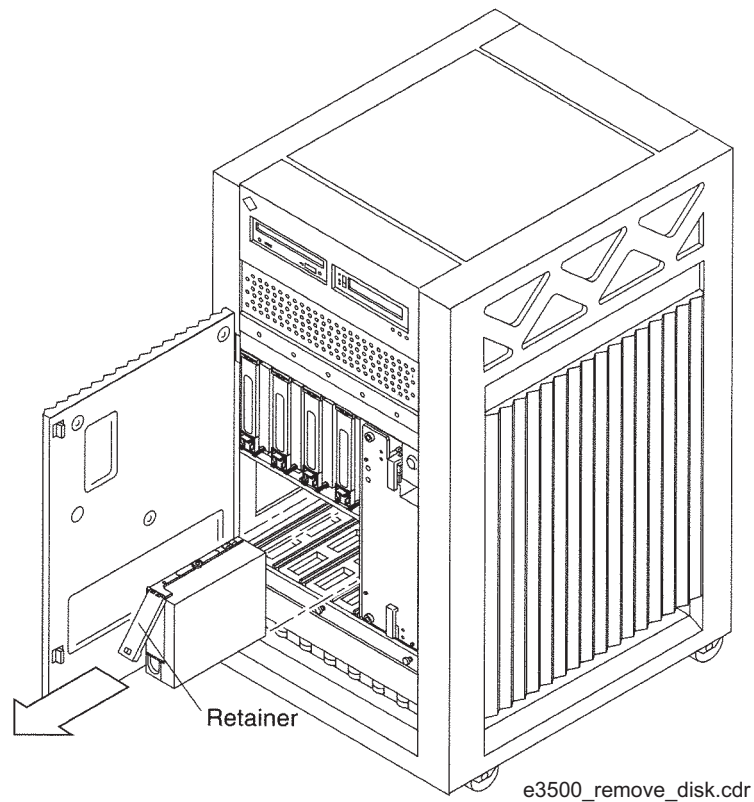
To remove the existing disk drives from an Enterprise 3500 computer:

1. If you have not already done so, enter the following command to shut down the computer:  

```
/usr/sbin/shutdown -y -i0 -g0
```
2. Turn off the power to the computer using the key switch on the front of the computer and the power switch on the back of the computer.
3. For ESD isolation, verify that the AC power cord is plugged in.
4. Open the front door of the system.
5. Attach an ESD wrist strap to the metal chassis of the computer and to your wrist.
6. While the original disk drives are still in the computer, use the colored labels from the upgrade kit to label each disk drive with the slot number. Save the old disk drives in case you have to reinstall the original configuration.



7. Unlatch the disk drive retainer. Use the extended, unlocked retainer as a handle. See the following figure.



8. Pull on the retainer to slide the disk drive out of the chassis.
9. Repeat this procedure for each disk drive that is installed.

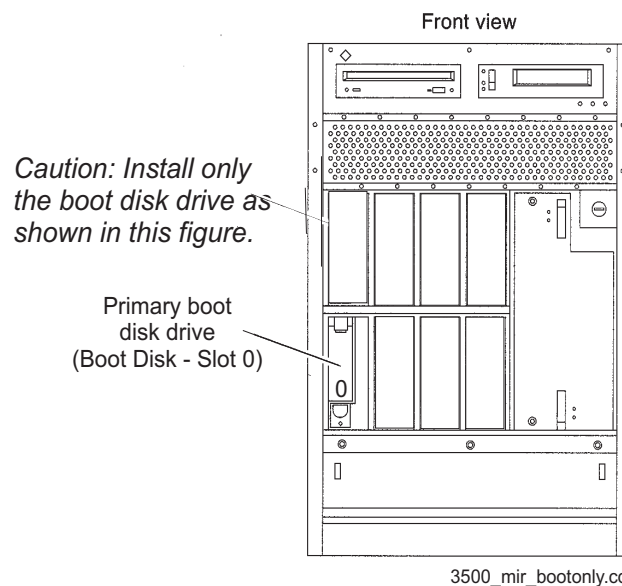
## Installing the new boot disk drive

To install the new boot disk drive:

**⚠ CAUTION:**

*Do not* install any other disk drives when installing the boot disk drive. These other disk drives will be installed later.

1. Attach an ESD wrist strap to the metal chassis of the computer and to your wrist.
2. Install the primary boot disk drive in Slot 0. This disk is labeled “Boot Disk - Slot 0.” See the following figure.



3. Disconnect the ESD wrist strap.
4. Continue with [Booting up the system with the new boot disk drive](#) on page 35.

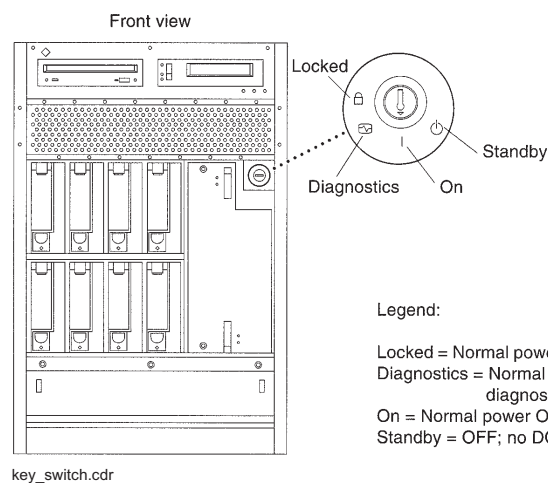
## Booting up the system with the new boot disk drive

### Note:

When the upgrade is being supported by remote personnel, such as CMS Provisioning, the system commands in this section are for use by remote personnel to monitor the progress of the upgrade. Run the commands from the local console only when instructed to do so, or when there is no remote support.

To boot up the system with the new boot disk drive:

1. Turn on all external SCSI devices, starting with the device farthest from the system and working toward the system.
2. Turn on the system monitor.
3. Turn the key switch to the vertical "On" position. Do not turn the key switch to the "Locked" or "Diagnostics" position.



4. Close the front door of the system.

The system begins to boot up. One of the following occurs:

- If the EEPROMs are correctly set to recognize the disk boot path, the following messages are displayed:

```
Cannot open '/etc/path_to_inst'
Program terminated
ok
```

Continue with Step 5.

## Removing and replacing disk drives

- If the EEPROMs are *not* correctly set to recognize the disk boot path, the following messages are displayed:

```
.  
.
Can't open boot device
ok
```

Do one of the following:

- If the sbus value from Step 46 on page 30 is `sbus@2`, enter:

```
boot /sbus@2,0/SUNW,socal@d,10000/sf@0,0/ssd@0,0 -ar
```

- If the sbus value from Step 46 on page 30 is `sbus@3`, enter:

```
boot /sbus@3,0/SUNW,socal@d,10000/sf@0,0/ssd@0,0 -ar
```

The system resets and begins to boot up again. Messages similar to the following are displayed:

```
Rebooting with command: boot -ar
Boot device: /sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@0,0 File and args: -ar
Enter filename [kernel/sparcv9/unix]:
```

Continue with Step 6.

5. Enter:

```
boot -ar
```

The system resets and begins to boot up again. Messages similar to the following are displayed:

```
Rebooting with command: boot -ar
Boot device: /sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@0,0 File and args: -ar
Enter filename [kernel/sparcv9/unix]:
```

6. Press **Enter** to accept the default value.

The following message is displayed:

```
Enter default directory for modules [/platform/SUNW,Ultra-Enterprise/kernel
/platform/sun4u/kernel /kernel /usr/kernel]:
```

7. Press **Enter** to accept the default value.

The following message is displayed:

```
Name of system file [etc/system]:
```

8. Press **Enter** to accept the default value.

The following messages are displayed:

```
SunOS Release 5.9 Version Generic_XXXXXX-XX 64-bit
Copyright 1983-2003, Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
-
The /etc/path_to_inst on your system does not exist or is empty.
Do you want to rebuild this file [n]?
```

 **Important:**

Enter: **y**

The following message is displayed:

```
root filesystem type [ufs]:
```

9. Press **Enter** to accept the default value.

The following messages are displayed:

```
Enter physical name of root device
[/sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@w<WWN>,0:a]:
```

10. Press **Enter** to accept the default value.

The system begins to boot up. Note that during boot-up, you might see error messages concerning hardware for which software is not yet installed. This will be corrected later in the upgrade procedure when the extracted customer options are installed.

**Note:**

If the boot fails, turn off the power to the computer and check all device cables. Cycle power on all external devices. Start again with Step 1.

11. After the system reboots, log in as `root`.
12. If prompted for a password, press **Enter**. (At this point in the upgrade, there is no password.)
13. Enter:
- ```
pkginfo -x cms
```
- Note the new CMS load and make sure that it matches the expected upgrade load.
14. Continue with [Verifying that the system recognizes the new boot disk drive](#) on page 38.

---

## Verifying that the system recognizes the new boot disk drive

To verify that the system recognizes the new boot disk drive:

1. Enter:

```
format
```

A message similar to the following is displayed:

```
Searching for disks...done

AVAILABLE DISK SELECTIONS:
    0. c0t0d0 <SUN36G cyl 24620 alt 2 hd 27 sec 107>
       /sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@w<WWN>,0
Specify disk (enter its number):
```

The message displays the boot disk drive.

2. Enter: 0
3. Enter: q
4. Continue with [Checking the status of the boot disk drive](#) on page 38.

---

## Checking the status of the boot disk drive

To check the status of the boot disk drive:

1. Enter:

```
. /opt/informix/bin/setenv
```

2. Enter:

```
onstat -d | egrep "On-Line"
```

A message similar to the following is displayed. If the boot disk is not on-line, escalate through normal channels.

```
Informix Dynamic Server Version 9.40.UC1      -- On-Line -- Up
00:03:46 -- 78848 Kbytes
```

3. Continue with [Checking the status of the tape drives](#) on page 39.

---

## Checking the status of the tape drives

To check the status of the tape drives:

1. Enter:

```
ls -l /dev/rmt/*mbn | wc -l
```

The number of installed tape drives is displayed.

2. Note whether the number of tape drives that is displayed matches the number of tape drives that are connected to the system.
3. Continue with [Verifying that the upgrade can continue](#) on page 39.

---

## Verifying that the upgrade can continue

To continue with the upgrade, do one of the following:

- If the disk drive and tape drive status is correct, continue with [Copying and activating the customer's administration and options on page 41](#).
- If the disk drive and tape drive status is not correct, do the following:
  - a. Enter the following commands. These commands shut down the system and force a reconfiguration the next time that the system boots.

```
cd /  
touch /reconfigure  
/usr/sbin/shutdown -y -i0 -g0
```
  - b. Turn off the system.
  - c. Turn off the system monitor.
  - d. Turn off any external SCSI devices, starting with the device that is closest to the system and working toward the farthest device.
  - e. Check all device cables. Cycle power on all external devices.
  - f. Restart with [Verifying that the system recognizes the new boot disk drive](#) on page 38. If the number of disks and tape drives still do not match, escalate through normal channels.

## Removing and replacing disk drives



# ■ ■ ■ ■ ■ ■

## Copying and activating the customer's administration and options

To copy and activate the customer's administration and options, use the following checklist to keep track of each procedure:

| Procedure                                                                                      | ✓ |
|------------------------------------------------------------------------------------------------|---|
| <a href="#">Installing CMS patches</a> on page 43                                              |   |
| <a href="#">Copying customer data</a> on page 45                                               |   |
| <a href="#">Checking file differences between the old system and the new system</a> on page 47 |   |
| <a href="#">Linking the /etc/hosts file</a> on page 49                                         |   |
| <a href="#">Installing the remaining disk drives</a> on page 50                                |   |
| <a href="#">Verifying that the system recognizes all disk drives</a> on page 51                |   |
| <a href="#">Checking the status of the disks</a> on page 53                                    |   |
| <a href="#">Activating customer options</a> on page 54                                         |   |
| <a href="#">Removing temporary ACD 1</a> on page 60                                            |   |
| <a href="#">Turning on CMS</a> on page 61                                                      |   |
| <a href="#">Verifying that CMS is operating</a> on page 61                                     |   |
| <a href="#">Checking "manual merge" discrepancies</a> on page 62                               |   |
| <a href="#">Checking Free Space Allocation</a> on page 63                                      |   |
| <a href="#">Turning on Visual Vectors server (optional)</a> on page 64                         |   |
| <a href="#">Updating the switch setup</a> on page 64                                           |   |
| <a href="#">Setting the Informix configuration parameters</a> on page 65                       |   |
| <a href="#">Removing the upgrade files</a> on page 65                                          |   |
| <a href="#">Migrating customer data</a> on page 67                                             |   |
| <a href="#">Resetting the CONSOLE parameter</a> on page 71                                     |   |

## Copying and activating the customer's administration and options

| Procedure                                                                   | ✓ |
|-----------------------------------------------------------------------------|---|
| <a href="#">Replacing the customer's tapes</a> on page 72                   |   |
| <a href="#">Checking the status of the disks</a> on page 72                 |   |
| <a href="#">Turning the upgraded system over to the customer</a> on page 72 |   |

**Note:**

When the upgrade is being supported by remote personnel, such as CMS Provisioning, the system commands in this section are for use by remote personnel to monitor the progress of the upgrade. Run the commands from the local console only when instructed to do so, or when there is no remote support.

---

# Installing CMS patches

If the new CMS load has any patches, those patches must be installed on the system. These patches are on the CMS software CD-ROM, not the upgrade tool CD-ROM. The CMS software CD-ROM is included in the upgrade kit.

If there are patches on the CMS software CD-ROM, it will be labeled similar to “CMS Patch Issue 2.” If there are no patches on the CD-ROM, continue with [Copying customer data](#) on page 45.

If the CMS software CD-ROM does have patches, continue with this procedure.

To install CMS patches:

1. Enter:

```
cd /
```

2. Enter:

```
eject cdrom
```

3. Remove the upgrade tool CD-ROM. Save the CD-ROM for when you remove the upgrade files.

4. Load the CMS software CD-ROM.

The File Manager window should open. Click the cursor in an XTERM window.

**Note:**

If the File Manager window does not open, enter the following commands to start the volume manager:

```
/etc/init.d/volmgt stop
```

```
/etc/init.d/volmgt start
```

The File Manager window will open. Click the cursor in an XTERM window.

5. After about 15 seconds, enter:

```
cmsvc
```

The CMS services menu is displayed.

6. Enter the number that corresponds to the `load_a11` option.

## Copying and activating the customer's administration and options

7. One of the following occurs:

- If no patches are found on the CD-ROM, the following messages are displayed:

```
No CMS patches found on the CD.  
Please check the CD and try again.
```

Continue with Step 9.

- If patches are found on the CD-ROM, a list of the patches is displayed.

8. Enter: **y**

The system installs the patches. As it does so, messages similar to the following are displayed for each patch installed:

```
@(#) installpatch 1.0 96/04/01  
cmspx-s  
Generating list of files to be patched...  
Creating patch archive area...  
Saving a copy of existing files to be patched...  
xxxx blocks  
      File compression used  
Installing patch packages...  
  
Doing pkgadd of cmspx-s package:  
Installation of cmspx-s was successful.  
  
Patch packages installed:  
      cmspx-s  
  
Patch installation completed.  
  
See /cms/patch/cmspx-s/log for more details
```

9. After all patches are installed, or if there are no patches on the CD-ROM, enter:

**eject cdrom**

10. Continue with [Copying customer data](#) on page 45.

---

## Copying customer data

To copy the customer's data from the upgrade backup tape onto the system:

1. Verify that the customer's "Upgrade Extract" tape is write-protected and is inserted in the correct tape drive. Remove tapes from any other tape drives connected to the system.
2. Load the upgrade tool CD-ROM. The CD-ROM is already in the drive if you did not have to install any CMS patches.

The File Manager window should open. Click the cursor in an XTERM window.

**Note:**

If the File Manager window does not open, enter the following commands to start the volume manager:

```
/etc/init.d/volmgt stop  
/etc/init.d/volmgt start
```

The File Manager window will open. Click the cursor in an XTERM window.

3. After about 15 seconds, enter:

```
cd /cdrom/cdrom0
```

4. Do one of the following:

- If running the command locally at the console, enter:

```
./cvue_copy
```

- Optionally, if running the command remotely on a dial-up line, enter:

```
nohup ./cvue_copy | tee /nohup.out
```

**⚠ CAUTION:**

If the dial-up modem line is dropped after starting this command with `nohup`, reconnect to the system, but *do not* rerun this command. Use `tail -f /nohup.out` to view the progress of the command. When finished viewing the `nohup.out` file, press **Del** to break out of the command.

During the copy process, the status lamp on the tape drive flashes, and a list of files being copied is displayed:

```
Reading admin data from /dev/rmt/X  
.  
.
```

## Copying and activating the customer's administration and options

5. After the customer's files have been copied from tape onto the system, the following messages are displayed:

```
.  
.x ./export/home/.geo, 85 bytes, 1 tape blocks  
Finished reading admin data from /dev/rmt/X
```

6. The copy process then executes the `disk_space` command to initialize the boot disk, which will take from three to five minutes. The following messages are displayed:

```
Running cmssvc disk_space command to initialize boot disk.  
  
Initializing the boot disk (this may take several minutes!) ....  
The CUE Copy process is complete...<time stamp>  
cvue#
```

### CAUTION:

If the tape copy fails, try cleaning the tape drive and restart the copy with Step 4. If the tape copy continues to fail, the tape is probably faulty. You must shut down the system, reinstall the original disk drives, boot the system, and restart the extract with a *new* blank tape. See [Extracting the customer's administration and options](#) on page 17.

7. If the tape copy is successful, continue with [Checking file differences between the old system and the new system](#) on page 47.

### Important:

Do not open any new windows on the local console. Do not eject the CD-ROM.

---

# Checking file differences between the old system and the new system

When upgrading an older system, file properties may be updated with the new version of CMS, Solaris, and other software that is installed. In addition, files used on the old system could be renamed or are not required on the new system. The procedures in this section show you how to check for these differences.

 **Important:**

The CUE master disks are created with the correct file properties. It is important to look for discrepancies, but before you change any file properties, be advised that the upgraded system will operate properly as installed. Any changes to file properties must be reviewed by a knowledgeable person to correctly assess the final status of each file.

There are two procedures to check file properties:

- [Verifying files using pkgchk](#) on page 47
- [Comparing directory and file permissions](#) on page 48

---

## Verifying files using pkgchk

The `pkgchk` command is a CMS tool that checks specific system files in the new system for directory/file permissions, modes, ownership, file size, and file checksum discrepancies. Although the system may display error messages when using this tool, it does not mean that the system will not function properly.

If you find any permission, mode, and ownership discrepancies between what was expected and what it actually is, and if you think the discrepancies may cause problems, use the `chmod` and `chown` commands to fix the discrepancies. You can ignore any modtime, file size, and file checksum discrepancies.

To check files using the `pkgchk` tool:

1. Enter:

```
pkgchk -n cms
```

2. Determine if the files listed require attention.

---

## Comparing directory and file permissions

The `verify_fileproperties` command is a CMS tool that compares the file permissions and modes from the old system with the file permissions and modes on the new system. Any differences found are placed in the `/var/log/cvue_file_diff` file.

To compare directory and file permissions:

1. Enter:

```
cd /cdrom/cdrom0
```

2. Enter:

```
./verify_fileproperties
```

To run this command in the background, enter:

```
nohup ./verify_fileproperties /nohup.out&
```

This begins the comparison of the directory and file permissions.

3. After the command is finished, one of the following occurs:

- If no differences were found, the following message is displayed:

```
No file permission differences were found
#
```

- If differences were found, the following message is displayed:

```
See /var/log/cvue_file_diff for differences
#
```

4. To view the property differences, enter:

```
pg /var/log/cvue_file_diff
```

The file property differences are displayed. If any file properties are not appropriate, correct them.

5. Continue with [Linking the /etc/hosts file](#) on page 49.



---

## Linking the /etc/hosts file

If the original system displayed a symbolic link for `/etc/hosts` to `/etc/inet/hosts`, this procedure is not needed. Continue with [Checking the status of the disks](#) on page 53.

If the original system did not display a symbolic link for `/etc/hosts` to `./inet/hosts` and the original system was operating properly, you must restore the `/etc/hosts` file temporarily until the customer has time to merge any relevant information into a single "hosts" file.

To restore the `/etc/hosts` file:

1. Enter the following commands:

```
mv /etc/inet/hosts /etc/inet/hosts.orig
cp -p /manual_merge/etc/hosts /etc/inet/hosts
```

2. Enter:

```
ls -l /etc/hosts
```

A message similar to the following is displayed:

```
lrwxrwxrwx  1 root  root           12 Feb 23  2002 /etc/hosts -> ./inet/hosts
```

3. Do one of the following:

- If a symbolic link for `/etc/hosts` to `./inet/hosts` is displayed (similar to what is shown above, continue with Step 6.
- If the system does not display a symbolic link for `/etc/hosts` to `./inet/hosts` and the original system was operating properly, continue with Step 4.

4. Enter the following commands:

```
cd /etc
ln -s ./inet/hosts /etc/hosts
```

5. Verify that the files are linked by repeating Step 2.

6. Inform the customer they need to merge any relevant information from the `/etc/inet/hosts.orig` file into the `/etc/hosts` file, and that in the future they should verify `/etc/hosts` is a symbolic link to `/etc/inet/hosts` before making modifications to the `/etc/hosts` file.

7. Continue with [Checking the status of the disks](#) on page 53.

8. Continue with [Installing the remaining disk drives](#) on page 50.

---

## Installing the remaining disk drives

If the customer did not order any extra disk drives, continue with [Activating customer options](#) on page 54.

For any systems where the customer ordered additional disk drives, you must install the balance of the disk drives at this time.

 **CAUTION:**

To install the remaining disk drives:

1. Unlock and open the front door.
2. Attach one end of an ESD antistatic wrist strap to the system chassis sheet metal and attach the other end to your wrist.
3. Insert all disk drives into the required slots. For an Enterprise 3500 nonmirrored system, install the first data disk in slot 1, the second data disk in slot 2, and the third data disk in slot 3 (do not skip any slots).
4. When all of the disks have been inserted, enter:

```
luxadm insert
```

A message similar to the following is displayed:

```
Please hit <RETURN> when you have finished adding Fibre Channel  
Enclosure(s)/Device(s) :
```

5. Press **Enter**.

A message similar to the following is displayed:

```
Waiting for Loop Initialization to complete...  
New Logical Nodes under /dev/dsk and /dev/rdisk :  
  cXtXd0s0  
  cXtXd0s1  
  cXtXd0s2  
  .  
  .  
  .  
  cXtXd0s6  
  cXtXd0s7  
No new enclosure(s) were added!
```

**Note:**

The length of the message depends on the number of disk drives you installed. Ignore the message No new enclosure(s) were added.

6. Disconnect the ESD wrist strap.
7. Close and lock the front door.
8. Continue with [Verifying that the system recognizes all disk drives](#) on page 51.

---

## Verifying that the system recognizes all disk drives

To verify that the system recognizes all disk drives:

1. Log in to the system as root.
2. At the system prompt, enter:

```
format
```

A message similar to the following is displayed:

```
Searching for disks...done

AVAILABLE DISK SELECTIONS:
  0. c0t0d0 <SUN36G cyl 24620 alt 2 hd 27 sec 107>
     /sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@w<WWN>,0
  1. c0t1d0 <SUN36G cyl 24620 alt 2 hd 27 sec 107>
     /sbus@X,0/SUNW,socal@d,10000/sf@0,0/ssd@w<WWN>,0
```

The message displays the number of disks recognized by the system. The number of disks that are installed on the system must match the number that is shown with the **format** command. Ignore the controller and boot path values at this time.

3. Enter: 0
4. Enter: q
5. Do one of the following:
  - If all of the disks were recognized, continue with [Checking the status of the disks](#) on page 53.
  - If not all of the disks were recognized:
    - i. Enter the following commands. These commands shut down the system and force a reconfiguration the next time that the system boots.

```
cd /
touch /reconfigure
/usr/sbin/shutdown -y -i0 -g0
```
    - ii. Turn off the system.
    - iii. Turn off the system monitor.

## Copying and activating the customer's administration and options

- iv. Turn off any external SCSI devices, starting with the device that is closest to the system and working toward the farthest device.
- v. Check all device cables. Cycle power on all external devices.
- vi. Restart with [Verifying that the system recognizes all disk drives](#) on page 51. If the number of disk drives still do not match, escalate through normal channels.

## Checking the status of the disks

Verify that the disk drives are in good condition by checking their status.

To check the status of the disk drives:

1. Enter:

```
. /opt/informix/bin/setenv
```

2. Enter:

```
onstat -d | egrep "PD|X" | pg
```

One of the following occurs:

- If nothing other than the command prompt is displayed, continue with Step 3.
- If any lines are displayed, the disk may require maintenance. Escalate through normal channels.

3. Enter:

```
metadb -i
```

Messages similar to the following are displayed:

|   | flags | first blk | block count |                   |
|---|-------|-----------|-------------|-------------------|
| a | u     | 16        | 8192        | /dev/dsk/c0t0d0s1 |
| a | u     | 8208      | 8192        | /dev/dsk/c0t0d0s1 |
| a | u     | 16400     | 8192        | /dev/dsk/c0t0d0s1 |

This command shows the database replicas. There should be three replicas for the boot disk. If the correct number of replicas are not shown, escalate using the normal channels.

4. Enter:

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

This reports the state of each disk segment and metadvice. One of the following occurs:

- If nothing is displayed, continue with Step 5.
- If any lines are displayed, the disk may require maintenance. Escalate through normal channels.

5. Continue with [Activating customer options](#) on page 54.

## Activating customer options

The activate process can take from as little as a few minutes to as much as 1 to 2 hours to complete. The amount of time depends on the number of customer options, the number and size of the disk drives, the number of ACDs, and so on.

To activate the customer's software options:

1. Enter:

```
cd /cdrom/cdrom0
```

2. Do one of the following:

- If running the command locally at the console, enter:

```
./cvue_activate
```

- Optionally, if running the command remotely on a dial-up line, enter:

```
nohup ./cvue_activate | tee /nohup.out
```

### CAUTION:

If the dial-up modem line is dropped after starting this command with `nohup`, reconnect to the system, but *do not* rerun this command. Use `tail -f /nohup.out` to view the progress of the command. When finished viewing the `nohup.out` file, press **Del** to break out of the command.

**For On Site Personnel:** If the upgrade is being supported by remote personnel (for example, CMS Provisioning), use the following command from the local console during the copy and activate process to view the upgrade log file and track the progress of the upgrade:

```
tail -f /var/log/cvuelog
```

When finished viewing the `/var/log/cvuelog` file, press **Del** to break out of the command.

3. One of the following occurs:

- If the copy was not successful, the following message is displayed and you must run copy again (see [Copying customer data](#) on page 45):

```
cvue_copy not successful, run the cvue_copy again
```

- If the copy completed successfully, the system begins activating the customer's options. Messages such as the following are displayed:

```
CUE VERSION: R12cueXX.X

..
S00Sethostname Start Time -> <time stamp>

S00Sethostname End Time -> <time stamp>

S00install_sql Start Time -> <time stamp>

.
.
```

4. The system continues activating the customer's options. Messages similar to the following are displayed to show that serial printers are readministered (network printers must be readministered after the upgrade):

```
.
.
S12AdministerPrinters Start Time -> <time stamp>

S12AdministerPrinters End Time -> <time stamp>

.
.
```

5. The system continues activating the customer's options. Messages similar to the following are displayed:

```
.
.
S70converter End Time -> <time stamp>

S80cmssetup Start Time -> <time stamp>
CMS setup started <time stamp>
Schema updated started <time stamp>

.
.
```

If you are looking at the `/var/log/cvue1log` file during CMS setup (the `S80cmssetup` script), you may see failure messages about the SQL database. You may ignore these messages. CMS setup takes several minutes to complete.

## Copying and activating the customer's administration and options

6. The system continues activating the customer's options. Messages similar to the following are displayed:

```
.
.
Customer CMS data successfully initialized <timestamp>
.....
Computing space requirements and dbspace availability.

Setup completed successfully.

S80cmssetup End Time -> <time stamp>
.
.
```

7. The system continues activating the customer's options. Messages similar to the following are displayed:

```
.
.
S81cmsfeatpkg Start Time -> <time stamp>

S81cmsfeatpkg End Time -> <time stamp>
.
.

S99instUSProvisioning Start Time -> <time stamp>
Copying Provisioning upgrade files to /usr/spool/uucppublic

S99instUSProvisioning End Time -> <time stamp>
```

8. The system then does an automatic shutdown. Messages similar to the following are displayed before the system shuts down automatically:

```
S99mirror_shutdown Start Time -> <time stamp>
Disk mirroring not authorized, proceeding to shut down system.

Shutting down to init 0 with /usr/sbin/shutdown -y -i0 -g0

Shutdown started. <time stamp>

Changing to init state 0 - please wait
S99mirror_shutdown End Time -> <time stamp>
The CUE Activate process is complete.
#
```



 **Important:**

If the activate process does not complete and the automatic shutdown does not occur, one or more of the activate scripts failed. To recover from this condition, see [Recovering from failed installation scripts](#) on page 58.

The `ok` prompt is displayed.

9. Enter the following command at the `ok` prompt:

```
copy-clock-tod-to-io-boards
```

The `ok` prompt is displayed.

10. Return the key switch to the position that was used by the customer before the upgrade was started.
11. Enter:

```
boot
```
12. The system reboots. Ignore any warning messages during the reboot.
13. Continue with [Removing temporary ACD 1](#) on page 60.

## Recovering from failed installation scripts

If an error message is displayed, such as the following, a failure occurred in one of the installation scripts.

```
ERROR[1]: FUNCTION S00install_sql() FAILED at <time stamp>
script /adminsave/init.d/S00install_sql failed
```

You may be able to recover and continue with the upgrade. Some of the installation scripts can be skipped during this part of the upgrade. However, any script that is skipped during this part of the upgrade must be installed later using the standard software installation procedures found in the CMS software installation document.

The following table lists all of the possible software installation scripts, and explains what to do if one of them fails during the upgrade. When identifying the installation scripts, be aware that each script is numbered with a prefix (for example, S04) before the script name.

| Script name         | Description             | How to recover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| install_sql         | ISQL software           | All of these scripts install optional software or drivers needed by the customer. You can skip the script and reinstall the software later. To skip the script:<br>1. Enter: <code>cd /adminsave/init.d</code><br>2. Enter: <code>mv <i>scriptname</i> /adminsave/</code> where <i>scriptname</i> is the name of the script.<br>3. Enter: <code>cd /cdrom/cdrom0</code><br>4. Run the <code>./cvue_activate</code> command again.<br>5. Install the software package that you skipped before you migrate the customer's data.<br>After each script is executed, a copy of the script is automatically moved to the directory <code>/adminsave/init.d.completed</code> . |
| install_nts         | NTS drivers             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| install_odbcX_X     | ODBC software           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| init_visual_vectors | Visual Vectors software |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Script name          | Description                                                      | How to recover                                                                                                    |
|----------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| sethostname          | Sets the host name                                               | For these scripts, do not attempt to continue with the upgrade. Escalate the problem through the normal channels. |
| install_supplemental | Supplemental services                                            |                                                                                                                   |
| sqlhosts             | SQL hosts file setup                                             |                                                                                                                   |
| dev_links            | Cleans up WWN and resets Informix paths (3500 and Sun Fire only) |                                                                                                                   |
| fixsendmail          | Restores proper permissions                                      |                                                                                                                   |
| AdministerPrinters   | Administers serial printers                                      |                                                                                                                   |
| modifyfile           | Restores CMS setup information                                   |                                                                                                                   |
| checkdevices         | Checks for devices                                               |                                                                                                                   |
| add_disks            | Adds data disks                                                  |                                                                                                                   |
| storage              | Data storage allocation                                          |                                                                                                                   |
| converter            | Preserves CMS setup data                                         |                                                                                                                   |
| cmssetup             | CMS setup command                                                |                                                                                                                   |
| cmsfeatpkg           | Feature package setup                                            |                                                                                                                   |
| instUSProvisioning   | Installs United States provisioning scripts                      | For these scripts, do not attempt to continue with the upgrade. Escalate the problem through the normal channels. |
| mirror_shutdown      | Mirrors the disks and shuts down the system                      |                                                                                                                   |

## Removing temporary ACD 1

If you created temporary ACD 1 during the extract process of the upgrade, you must now remove that ACD. If you did not add any temporary ACDs, continue with [Turning on CMS](#) on page 61.

To remove temporary ACD 1:

1. Enter:

```
cmsadm
```

The CMS Administration menu is displayed.

2. Enter the number that corresponds to the `acd_remove` option.

3. Enter ACD 1.

A warning message is displayed.

4. Enter: `y`

5. Continue with [Turning on CMS](#) on page 61.

---

## Turning on CMS

To turn on CMS:

1. Enter:

```
cmsadm
```

The CMS Administration menu is displayed.

2. Enter the number that corresponds with the `run_cms` option.
3. Enter 1 to turn on CMS.
4. Continue with [Verifying that CMS is operating](#) on page 61.

---

## Verifying that CMS is operating

To verify that CMS is operating properly:

1. Enter:

```
su - cms
```

The `$` prompt is displayed.

2. Enter:

```
cms
```

Ignore any messages about backups.

3. Display the CMS main window to verify that the status of the switch links before the upgrade match the status of the switch links after the upgrade. That is, if a switch link was operating before the upgrade, it should be operating after the upgrade. If a switch link that should be operating is not, make sure that data collection is turned on.
4. Continue with [Checking "manual merge" discrepancies](#) on page 62.

## Checking “manual merge” discrepancies

The `cvue_extract` command compares customer system files to the new Solaris operating system files installed on the CUE master disk. The new Solaris operating system files to be compared are located on the upgrade tool CD-ROM. The files on the upgrade tool CD-ROM are compared to files located on the customer's current system. Any files that show a difference between the upgrade tool CD-ROM and the current customer system are written to a manual merge directory.

Only files which are in the `okdiff` directory are copied to tape. CUE writes these files to tape during the `cvue_extract` process and the files will be copied to the directory `/manual_merge` on the CUE master disk during the `cvue_copy` process. These files are identified in `/var/log/cvuelog` file as “manual merge” discrepancies.

 **Important:**

The customer must look at the manual merge discrepancies outlined in the `/var/log/cvuelog` to see if they are Solaris changes (which should not be modified) or customer customization changes (which may need to be modified). The files that are identified could be important to the new system and the customer may find that these files need to be copied to a location that may eventually fix a problem. These files may contain networking information, customizations, or security settings that are critical to the customer.

To check for discrepancies between the old system and the new system:

1. Enter:

```
cat /var/log/cvuelog | grep "merged manually" | pg
```

2. Check the displayed messages and correct any problems that are found.

3. Continue with [Checking Free Space Allocation](#) on page 63.

## Checking Free Space Allocation

To check Free Space Allocation:

1. Go to the Free Space Allocation window that is located in the CMS System Setup subsystem.
2. Verify that the amount of available space is positive for each ACD and make any necessary adjustments.

For more information about Free Space Allocation, see *Avaya CMS R3V11 Administration*, 585-215-515.

Example:

In the Free Space Allocation window shown below, ACD 8 has negative space available.

```

System Setup: Free Space Allocation
Enter Dbspace name: 
Data timestamp: 2/20/01 8:48 AM
(NOTE: All sizes are in Kbytes)
Total Free Space: 1279970

Dbspace      Current      Allocated      Available      Space used
Name         Size         Size            Space          to Date
-----
acd1         2560000     1025211        1534789        48604
acd2         1792000     1126820        665180         55702
acd3         1792000     707140         1084860        16822
acd4         2048000     1191761        856239         67944
acd5         2560000     1088367        1471633        75680
acd6         3584000     1494316        2089684        15596
acd7         2304000     1000466        1303534        24372
acd8         2560000     10080557      (7520557)      21956

Successful
  
```

If the **Total Free Space:** field shows that there is not enough space available to make the adjustment, it will be necessary to modify Data Storage Allocation or add an additional hard drive.

3. Log out of CMS.
4. At the \$ prompt, enter:  
`exit`
5. Continue with [Turning on Visual Vectors server \(optional\)](#) on page 64.

## Turning on Visual Vectors server (optional)

If your installation uses the Visual Vectors server, you must now turn on the software. If you do not use Visual Vectors, continue with [Updating the switch setup](#) on page 64.

To turn on the Avaya Visual Vectors software:

1. Stop and restart AOM by entering the following commands:

```
aom stop  
aom start
```

2. Enter:

```
setupaas
```

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

3. Enter the number associated with the `run_vvs` option.
4. Enter the number associated with the `Turn VVS On` option.
5. Continue with [Updating the switch setup](#) on page 64.

---

## Updating the switch setup

In many cases, the switch is upgraded to a new release when the CMS is upgraded. In addition, the links from the switch to the CMS must have been converted to TCP/IP if the original link was X.25. Verify switch setup for any ACDs where the switch model or link type was changed.

If the switch model or link type has changed, you must do the following:

- Check the switch links on the CMS main window and verify that the switch links are up.
- If the links are not active, check the administration of each ACD on the CMS using the `swsetup` option of the `cmssvc` command. CMS must be turned off to administer the ACDs. For more information about converting links, see *CMS Switch Connections, Administration, and Troubleshooting*, 585-215-876. Remember to turn CMS on after setting up the ACDs.
- Readminister the CMS version on the switch using the Feature Parameters form.
- If the conversion from X.25 to TCP/IP involves adding another network card to the CMS computer, this must be done after the upgrade is completed.

Continue with [Setting the Informix configuration parameters](#) on page 65.



---

## Setting the Informix configuration parameters

The Informix Dynamic Server (IDS) parameters for CMS must be adjusted to optimize system performance. Adjusting these parameters allows the system to fully use additional processors and memory.

**Note:**

During this procedure, both CMS and IDS must be turned off.

To adjust the IDS parameters, see the section “Setting the Informix configuration parameters for CMS” in the chapter “Installing CMS and Supporting Software” of *CMS R12 Software Installation, Maintenance, and Troubleshooting*, 585-215-117.

Continue with [Removing the upgrade files](#) on page 65.

---

## Removing the upgrade files

The files used for the upgrade must be removed.

To remove the upgrade files:

1. Enter:

```
cd /cdrom/cdrom0
```

**Note:**

If the above command does not work, enter the following commands to start the volume manager:

```
/etc/init.d/volmgt stop
```

```
/etc/init.d/volmgt start
```

2. Do one of the following:

- If running the command locally at the console, enter:

```
./cvue_cleanup
```

- Optionally, if running the command remotely on a dial-up line, enter:

```
nohup ./cvue_cleanup | tee /nohup.out
```

The following message is displayed:

```
Beginning cvue_cleanup process...please wait.
```

## Copying and activating the customer's administration and options

### CAUTION:

If the dial-up modem line is dropped after starting this command with `nohup`, reconnect to the system but *do not* rerun this command. Use `tail -f /nohup.out` to view the progress of the command. When finished viewing the `nohup.out` file, press **Del** to break out of the command.

- Note that since the number of files to remove is large, this procedure takes several minutes to complete. When the files are removed, the following message is displayed:

```
The cvue_cleanup process is complete...Wed Aug 23 13:56:00 MDT 2000
#
```

- Enter:

```
cd /
```

- Enter:

```
eject cdrom
```

- Remove the upgrade tool CD-ROM. Save the CD-ROM with the other customer software in case you have to run the upgrade tool again.
- Continue with [Migrating customer data](#) on page 67.

---

## Migrating customer data

The following customer data must be migrated from the maintenance backup tapes:

- [Migrating system administration data](#) on page 67
- [Migrating agent and call center administration data](#) on page 69

---

## Migrating system administration data

### CAUTION:

Perform this step only once. Attempting to migrate system administration data more than once causes catastrophic errors from which you are unable to recover. Failure to heed this warning may irretrievably destroy data.

To migrate the system administration data:

1. If CMS is not turned on, do the following:
  - a. Enter:  

```
cmsadm
```

The CMS Administration menu is displayed.
  - b. Enter the number for the `run_cms` option.
  - c. Enter 1 to turn on CMS.
2. Log on to CMS.  
The CMS main window is displayed.
3. From the CMS main menu, select **System Setup > CMS State** to put CMS into single-user mode.
4. Insert the most recent incremental maintenance backup tape into the tape drive.

## Copying and activating the customer's administration and options

### 5. From the CMS Main Menu, select **System Setup > R3 Migrate Data**.

The following is displayed:

```

3/ 9/01  21:19 CMS                               Windows: 1 of 4   vvvv^vvv

System Setup: R3 Migrate Data                      All ACDs
  | Cancel
  | List devices
  | Run
  +-----+

Device name: default

Data type (Select one):
<x> System Administration data (single-user required)
< > Agent/Call Center Admin data (single-user required)
< > Historical data
      Stop date:
      Stop time: 11:59 PM

Specify ACD(s) to migrate (Select one):
<x> All ACDs
< > Single ACD
      from:      to:

Status:

Help      Window  Commands  Keep                               Exit  Scroll  Current  MainMenu
  
```

### 6. In the R3 Migrate Data window, select the options and enter the values that are indicated in the following table:

| Field          | Value to enter or option to select |
|----------------|------------------------------------|
| Device name    | The tape drive device name         |
| Data Type      | System Administration data         |
| Specify ACD(s) | All ACDs                           |

7. Press **Enter** to access the action list in the top right corner.

8. Select **Run** and press **Enter**.

The progress of the migration is displayed in the `Status` field. When the migration ends, the system indicates the success or failure of the migration in this field.

9. Press **F3** and select the UNIX option to display the UNIX prompt.

10. Enter:

```
pg /cms/migrate/r3mig.log
```

The customer migration log is displayed.

11. Look at the contents of the customer migration log and take any necessary corrective action. For help with interpreting the log, contact technical support or your customer representative.
12. To exit the UNIX window, enter:  

```
exit
```

---

## Migrating agent and call center administration data

To migrate agent and call center administration data:

1. Verify that the most recent incremental maintenance backup tape is in the tape drive.
2. From the CMS Main Menu, select **System Setup > R3 Migrate Data**.

The following is displayed:

```

3/ 9/01  21:19 CMS                               Windows: 1 of 4  vvvv^vvv

System Setup: R3 Migrate Data                               All ACDs
Device name: default                                       | Cancel
Data type (Select one):                                   | List devices
  < > System Administration data (single-user required)   | Run
  <x> Agent/Call Center Admin data (single-user required)  +-----
  < > Historical data
      Stop date:
      Stop time: 11:59 PM

Specify ACD(s) to migrate (Select one):
  <x> All ACDs
  < > Single ACD
      from:          to:

Status:

Help      Window  Commands  Keep          Exit      Scroll  Current  MainMenu
  
```

## Copying and activating the customer's administration and options

3. In the R3 Migrate Data window, select the options and enter the values that are indicated in the following table:

| Field          | Value to enter or option to select |
|----------------|------------------------------------|
| Device name    | The tape drive device name         |
| Data Type      | Agent/Call Center Admin data       |
| Specify ACD(s) | All ACDs                           |

4. Press **Enter** to access the action list in the top right corner.

5. Select **Run** and press **Enter**.

The progress of the migration is displayed in the `status` field. When the migration ends, the system indicates the success or failure of the migration in this field.

6. Press **F3** and select the UNIX option to display the UNIX prompt.

7. Enter:

```
pg /cms/migrate/r3mig.log
```

The customer migration log is displayed.

8. Look at the contents of the customer migration log and take any necessary corrective action. For help with interpreting the log, contact technical support or your customer representative.

9. To exit the UNIX window, enter:

```
exit
```

10. Select **System Setup > CMS State** to put CMS into multiuser mode.

11. Continue with [Resetting the CONSOLE parameter](#) on page 71.

---

## Resetting the CONSOLE parameter

After you have migrated the customer data and you are about to finish the upgrade, you must reset the CONSOLE parameter in the `/etc/default/login` file.

To reset the CONSOLE parameter:

1. Enter:

```
vi /etc/default/login
```

2. Search for the following lines:

```
.
.
# If CONSOLE is set, root can only login on that device.
# Comment this line out to allow remote login by root.
#
#CONSOLE=/dev/console
.
.
```

3. Delete the leading pound sign (#) on the `CONSOLE=/dev/console` line. It should look like the following:

```
.
.
# If CONSOLE is set, root can only login on that device.
# Comment this line out to allow remote login by root.
#
CONSOLE=/dev/console
.
.
```

4. Press **ESC**.

5. Enter:

```
:wq!
```

This writes and quits the file.

6. Continue with [Replacing the customer's tapes](#) on page 72.

## Replacing the customer's tapes

After migrating the customer's data, remove the tapes from the tape drives and replace any tapes that the customer originally had in the tape drives. These tapes that the customer had in the tape drives may be used for scheduled backups and must be replaced before leaving the customer site.

Continue with [Checking the status of the disks](#) on page 72.

---

## Checking the status of the disks

After migrating the customer's data, you should verify that the disks have synchronized successfully or are actively synchronizing.

To check the status of the disk drives:

1. Enter:

```
. /opt/informix/bin/setenv
```

2. Enter:

```
onstat -d | egrep "PD|X" | pg
```

One of the following occurs:

- If nothing other than the command prompt is displayed, continue with [Turning the upgraded system over to the customer](#) on page 72.
- If any lines display x, the disk requires maintenance. Escalate through normal channels.

---

## Turning the upgraded system over to the customer

After the data migration is complete, the customer must follow the post-upgrade procedures found in *Avaya Call Management System (CMS) Release 12 CMS Upgrade Express (CUE) Customer Requirements*. Inform the customer that they must follow these procedures to complete the upgrade.



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