Lucent Technologies
Bell Labs Innovations

CentreVu™ Call Management System

Release 3 Version 4
Upgrades and Migration

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Release 3 Version 4
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General Information

The *CentreVu™ CMS R3V4 Upgrades and Migration* (AT&T 585-215-806) document is written for technicians and AT&T call center customers. This document provides instructions for upgrading and updating CMS software and migrating CMS data.

Audience

The primary audiences for this document are:

- The customer CMS administrator
- Technical Service Center (TSC) engineers who provision the CMS and provide customer support
- AT&T field technicians who install the CMS host computer.

Organization of Document

This document is organized as follows:

Chapter 1	**Introduction**
Chapter 2	**Software Upgrades and Updates** This chapter describes how to upgrade existing CMS software to R3V4 CMS software. It also describes how to update R3V4 software.
Chapter 3	**User Interface** This chapter discusses the Release 3 (R3) CMS Migrate Data and the Release 2 (R2) CMS Migrate Data windows and their associated Acknowledge windows.
Chapter 4	***INTEL*-to-*Sun* Migration — R3V1, R3V2 → R3V4** This chapter discusses how to migrate data from an R3.0 and Release 3 Version 1 (R3V1) CMS on an *INTEL** platform to an R3V4 CMS on a *Sun*† *SPARCserver*‡ platform.
Chapter 5	***INTEL*-to-*INTEL* Migration — R3V1 → R3V4** This chapter discusses how to migrate data from an R3.0 and R3V1 CMS (single ACD) on an *INTEL* platform to an R3V4 CMS on the same platform.
Chapter 6	**3B2-to-*Sun* Migration — R2 → R3V4** This chapter discusses how to migrate data from an R2 CMS on a 3B2 computer to a multi-ACD R3V4 CMS environment on a *Sun SPARCserver* platform.
Chapter 7	**Non-EAS-to-EAS Migration — Generic 2.2** This chapter discusses how to migrate data from a *Sun SPARCserver* platform running on a G2.2 switch without Expert Agent Selection (EAS) to the same *Sun SPARCserver* platform running on a G2.2 switch with EAS.
Chapter 8	**Migration Log Messages** This chapter discusses the migration logs for R2 and R3 CMS migrations to R3V4.
Appendix A	**Fixing Migrated R2 Custom Reports** This appendix describes some of the steps you can do to get the migrated R2 custom reports to work in R3V4.

Appendix B	**Data Migration Tables** This appendix shows how the R3 CMS data and the R2 CMS data are migrated to the R3V4 system.

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Conventions Used in this Document

Table P-1 is an example of the text style conventions used in this book.

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Table P-1: Style Conventions

Use	When
`Constant Width`	• In general, anything seen on the screen/window will be in `Constant Width` including field entry items. For example: In the `Calculation name:` field, enter `ACDTIME/ACDCALLS`. Select `Dictionary` from the CMS Main Menu. The `Options >` menu appears. • `Constant width` is used when something is quoted from the system (`Add, field names`).
Italic	• References to other documents are in italics. For example, See the *CentreVu™ Call Management System R3V4 Custom Reports* (AT&T 585-215-802) document for more information. • References to file names and directories are in regular italics. For example, */cms, root*. • Trademarks are in italics.
Chapter Cross-References	Chapter/section cross-references will be: • See Chapter 3, “User Interface,” for more information. • See the “Removing a Software Package” section in this chapter.

Table P-1: Style Conventions (Contd)

Use	When
Window and Sub-System References	References to windows and subsystems will be initial cap. • In the ACD Administration: Activate Agent Trace window... • You set access permissions for CMS users from the User Permissions subsystem.
Screen-Labeled Keys (SLKs), Return, Shift,	Symbols are used as representatives of the keys. For example: Return, Esc, Shift, J, and others.
Main Menu	All occurrences of Main Menus are capitalized (for example, as in the CMS Main Menu).
Window Titles	All titles of windows are capitalized (for example, Split/Skill Report window).

Notes

The following is an example of the notes conventions:

Note

Note text is displayed in this section to the right of the Note icon.

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- Using the registered trademark or the trademark as a proper adjective modifying the common name of the product or service — never using the registered trademark or the trademark as a noun.

Terminology

This document uses the following terminology:

***Sun SPARCserver* Platform** refers to either the *Sun SPARCserver* 5, 10, or 20 computers which run either the R3V2 CMS or R3V4 *CentreVu* CMS software.

***INTEL* Platform** refers to the 3332, the *StarServer*, the 6386/33S, or the 6868/25S computers. These platforms may run either the R3.0, R3V1, R3V2, or CMS R3V4 software.

3B2 Platform refers to the 3B2 computer which runs the R2 CMS software application.

Related *CentreVu* CMS Publications

The following documents are available for the *CentreVu* CMS R3V4 product:

- *CentreVu™ Call Management System Release 3 Version 4 Administration, Issue 1* (AT&T 585-215-800)
- *CentreVu™ Call Management System Release 3 Version 4 Reports, Issue 1* (AT&T 585-215-801)
- *CentreVu™ Call Management System Release 3 Version 4 Change Description* — request the current issue (AT&T 585-215-803)
- *CentreVu™ Call Management System Release 3 Version 4 External Call History* Issue 1 (AT&T 585-215-804)
- *CentreVu™ Call Management System Release 3 Version 4 Sun® SPARCserver™ Computers Installation and Maintenance* Issue 1 (AT&T 585-215-807).

To order, call the GBCS Publication Fulfillment Center at **1-800-457-1235**.

Other Publications

The following documents are available to aid in the upgrade and migration process:

- *CMS Release 3 Version 2 Installation and Maintenance* (AT&T 585-215-122)
- *CMS R3.0 Administration* (AT&T 585-215-511)
- *CMS R3.0 Installation and Maintenance WGS* (AT&T 585-215-112).

CMS Helplines

If an installation problem arises that requires assistance, AT&T technicians or the customer may call the following numbers:

Customer Number

1-800-344-9670

The problem will be reported, and a trouble ticket will be generated so the problem can be escalated through the services organization.

The customer will be prompted to identify the type of problem (ACD, hardware, or *CMS R3V4*) and will be connected to the appropriate service organization.

Technician Number

1-800-248-1234

The technician should provide the TSC personnel with the customer's name, the password for the *root* login ID on the *Sun SPARCserver* computer, the phone number of the dial-in port, and a description of the problem.

If the TSC engineers cannot solve the problem, they will escalate it to the Customer Support Organization of AT&T Bell Laboratories.

International Support

For International Support contact your AT&T Representative/Distributor for more information.

Chapter 1
Introduction

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Table 1-2: **Supported Switch Releases** **1-4**

General Information

The *CentreVu™ CMS R3V4 Upgrades and Migration* (AT&T 585-215-806) document provides information on how to:

- Perform CMS software upgrades and updates on the following platforms:
  - — *Sun* SPARCserver†* Computer (5, 10, 20)
  - — 3332
  - — *StarServer®* computer
  - — 6386/33S
  - — 6386/25S
- Perform CMS data migrations.

Upgrades and Updates

You upgrade and/or update your CMS software to get additional functionality, to fix a problem, or to go to a new release of CMS.

Upgrades: A CMS upgrade involves moving the existing CMS from one release to another as in a move from R3V2 to R3V4 or from one load to another as in a move from the R3V4aj.a load to R3V4aj.b load. The upgrade provides additional functionality to the customer.

Depending on which release you upgrade from and to, the upgrade may involve more than just upgrading the software. You may have to upgrade both the software and hardware. If the upgrade involves a major release, data migration may also be necessary.

Updates: A CMS update involves updating or modifying the existing CMS software — unlike an upgrade where you move to another release/load. The purpose of the update is to provide additional functionality or to fix a problem. The update process involves downloading CMS update fields from a cartridge tape to the hard disk, installing the new files, and then rebooting.

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Migrations

A migration refers to the process of moving CMS data from one release to another either on an existing platform or a new platform. See Table 1-1 for migration scenarios.

Migrations are executed through the R3 Migrate Data or R2 Migrate Data menu items located on the CMS Main Menu/System Setup items.

The migrated data gives the existing or new platform an initial database from which to operate. The data includes:

- system administration data
  - — dictionary items [calculations and names (synonyms)]
  - — timetables and shortcuts (Release 3.0 [R3.0] CMS only; Release 2 [R2] CMS schedules are not migrated).
- ACD administration data
  - — exceptions (R3.0 only)
  - — split and agent names (synonyms).
- historical data
  - — agents, splits/skills
  - — trunks, trunk groups
  - — vectors, Vector Directory Numbers (VDNs), if applicable.
- custom reports (R2 custom reports may require tuning).

Moving multiple ACDs can cause collisions in the System Administration data. The following items are the potential collisions and their solutions:

- CMS User IDs
  - — Before you migrate data, CMS user IDs must be in lower case letters. This includes any existing R3.0 user IDs with upper-case letters.
  - — The migration program will not migrate CMS user IDs if these user IDs have already been established on the *Sun SPARCserver* Platform. The program reports the nonmigrated user IDs in the customer migration log.

    For these user IDs, the program will not migrate user interface attributes (color options, feature access, default values) from other ACDs. In addition, the migration program moves any custom reports, timetables/shortcuts, or menu additions owned by the nonmigrated user IDs to the *cms* user ID.

  - — *UNIX** system logins for CMS user IDs new to the *Sun SPARCserver* platform are created automatically.

- Custom reports
  - — The migration program makes nonunique custom reports (based on report group, report name, and CMS user ID) unique by renaming them. For example, the program renames the first nonunique report *temp1*, the second *temp2*, etc. The program identifies these custom reports in the customer migration log. You should change the names of these custom reports to something more meaningful after the migration.
  - — Timetables/shortcuts using these reports are still migrated but refer to the old custom report names instead. You need to modify the timetables/shortcuts to access the new name.
- Timetables/shortcuts

  Like custom reports, the migration program renames nonunique timetables or shortcuts to *temp1*, *temp2*, etc. The program reports these timetables/shortcuts in the customer migration log. You should change the names of these timetables/shortcuts to something more meaningful, or delete them if they are no longer needed.
- Dictionary

  The migration program discards all calculations, constants, and custom items with nonunique names. The program reports the discarded names/values in the customer migration log so you can re-enter them if desired.
- Menu additions
  - — The migration program discards menu additions that are not unique (based on the menu name and CMS user ID). The program reports discarded menu additions in the customer migration log.
  - — If the migrated menu additions use customized executables, the customer needs to migrate these executables as well.

*UNIX is a registered trademark of Novell, Inc.

Migration Matrix

The *CentreVu™ Call Management System Release 3 Version 4* (CMS R3V4) *Upgrades and Migration* (AT&T 585-215-806) document provides the following upgrade and migration scenarios (see Table 1-1):

Table 1-1: Migration Matrix

Existing Platform	Current Release of CMS	New Platform
3B2	R2	*Sun* with R3V4
*INTEL**	R3.0, R3V1, or R3V2	*Sun* with R3V4 Single and multiple ACDs.
INTEL	R3.0, or R3V1	Existing *INTEL* (current *UNIX*†) with R3V4 Single ACD
INTEL or *Sun*	R3.0, R3V1, or R3V2 Non EAS	Existing *INTEL* or *Sun* with EAS

*INTEL is a registered trademark of Intel Corp.
†UNIX is a registered trademark of Novell, Inc.

Supported Switch Releases

The CMS R3V4 supports the switch release upgrades shown in the following table. You can change the switch release using the `swsetup` command from the `cmssvc` menu. Note that once you change to a new switch release, it may not be possible to change back to the previous release (see Table 1-2).

Table 1-2: Supported Switch Releases

If the current switch type is...	Then it can be changed to...
System 85-R2V4	R2V4, G2.1, G2.2, G2.2/EAS, G3r, G3V2, G3V3.
DEFINITY® System G1.1	G1.1, G3i, G3r, G3V2, G3V3.
DEFINITY System G2.1	R2V4, G2.1, G2.2, G2.2/EAS, G3r, G3V2, G3V3.
DEFINITY System G2.2	G2.2, G2.2/EAS, G3r, G3V2, G3V3.
DEFINITY System G2.2/EAS	G2.2/EAS, G3V2, G3V3.
DEFINITY System G3i	G3i, G3r, G3V2, G3V3.
DEFINITY System G3r	G3r, G3V2, G3V3.

Table 1-2: Supported Switch Releases (Contd)

If the current switch type is...	Then it can be changed to...
System 85-R2V4	R2V4, G2.1, G2.2, G2.2/EAS, G3r, G3V2, G3V3.
DEFINITY System G3V2	G3V2, G3V3.
DEFINITY System G3V3	G3V3.
DEFINITY System G3V4	G3V4.

Note

If you are upgrading from a G3iV1 to a G3iV1.1 switch, leave the switch type on the CMS R3V4 set as G3i. If you do change the switch type on the CMS R3V4 to G3V2, make sure to change the CMS type on the switch to R3V4. Changing the settings does not add any features or increase your data capacities.

Note

If you are upgrading from a G3rV1 to a G3rV1.1 switch, leave the switch type on the CMS R3V4 set as G3r unless you have a need for any of the new capacities available from the G3rV1.1. The new capacities are 255 measured splits, 5200 measured agents, and 665 measured trunk groups.

If you want to use the new capacities, change the CMS type on the switch to R3V4 and the switch type on the CMS to G3V2. If you change the CMS and switch types, CMS vector contents will allow you to type in the “converse” vector step, but the switch will not accept a vector with this step.

Supported CMS Software Releases

The *CentreVu* CMS R3V4 supports migration from these CMS software loads:

- Release 2 CMS: Load 2.31, EDI Issue 1.4 or later
- Release 3 CMS: Load 3.2m5.1, EDI Issue 1.5 or later
- Release 3 Version 2 CMS: Load 31amh, EDI Issue 1.2 or later.

If your CMS software release is an earlier load than those listed above, you need to upgrade your CMS software prior to the migration.

Chapter 2
Software Upgrades and Updates

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General Information

This chapter describes how to do the following:

- Upgrade the existing CMS software to the *CentreVu*™ CMS R3V4 software.
- Upgrade the *CentreVu* CMS R3V4 software.
- Update the *CentreVu* CMS R3V4 software.

Displaying CMS-Related Software Packages

To display CMS software packages on a *Sun** *SPARCserver*† computer, enter the following command:

```
# pkginfo cms.*
```

The program responds:

```
application cms            Call Management System
application cms.x          Call Management System

    (where x + the field update number)
```

Note If more than one package is displayed (for example, `application cms.2`), you can determine that there is a field update installed.

To display CMS software packages on an *INTEL*‡ computer, enter the following command:

```
# displaypkg cms.*
```

The program responds:

```
#      The following software packages have been installed:
AT&T CentreVu(TM) Call Management System (r3v4xx.x)
   .
   .
   .
   .
```

*Sun is a registered trademark of Sun Microsystems, Inc.
†SPARCserver is a registered trademark of SPARC International, Inc.
‡INTEL is a registered trademark of Intel, Corp.

Upgrading CMS Software

This section describes how to upgrade CMS software on the following platforms:

- AT&T 6386 WGS 33/S
- AT&T 6386 WGS 25/S
- AT&T *StarServer*® S
- 3332
- *Sun SPARCserver* 5, 10, and 20 Computers.

From a WGS, *StarServer*, and 3332 Computer

The following procedures allow you to upgrade your CMS software at your convenience. Follow these instructions carefully. These procedures pertain to R3V2 to an R3V4 upgrade and an R3V4 upgrade.

Pre-Upgrade Procedure

You **must** complete the following steps prior to beginning the upgrade.

Warning **Failure to complete the pre-upgrade steps may result in an inability to recover from an unsuccessful upgrade, possible loss of data, and/or significant recovery time.**

1. As a precaution, ensure that copies of the current CMS R3V2 or CMS R3V4 software load and the latest full backup tapes are available.

   Failure Recovery: If you do not have a current CMS R3V2 or CMS R3V4 software load, call the AT&T Call Center Helpline at 1-800-344-9670. If you do not have a current full maintenance backup available, perform a full maintenance backup before proceeding with these steps.

2. From the system console, log in as *root*.
3. Verify that the tape drive status light is off and the drive is not being used for any other purpose (for example, scheduled backups).

   Failure Recovery: If the tape light remains on, do the following steps based on the host computer model you have:

AT&T 6386 *and StarServer computers*

a. Put a writable tape into the drive. Wait for the tape to reposition.
b. Eject the tape.
c. Put the tape back in and wait for it to reposition again.
d. Enter this command at the # prompt: `> /dev/scsi/qtape1`
e. The tape light should go out.

Model 3332 computers

a. Put a writable tape into the drive. Wait for the tape to reposition.
b. The tape light should go out.

4. Verify that the tunable parameters are set to the recommended CMS values by entering:

   `/cms/toolsbin/chktunes`

Note

This is only on the 3rakg load or later.

You will see the message `Checking the System Tunables for correct CMS values`. If a message displays indicating that the check was successful, continue with Step 5.

Failure Recovery:

If any messages display about the tunables not being correct, call the AT&T Call Center Helpline on 1-800-344-9670.

5. Enter the `cmsadm` command to display the CMS administration menu. Select the `backup` option.

   If CMS is turned on, it will be automatically turned off during the backup. The program takes approximately 50 minutes to write each tape needed for the backup. See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for more information on performing a CMSADM backup.

   Failure Recovery: The following error messages are the most common during a cmsadm backup and recovery.

   `– Request failed. See /cms/install/logdir/backup.log for more information.`

If the window displays this message, you need to restart the backup after correcting the problem. Follow these steps to correct the problem:

a. Replace the tape in the tape drive. The tape may not be seated correctly, or the tape may have been removed during the backup.

b. Turn off write protect if the black arrow in the upper left-hand corner of the cartridge tape is pointed to “safe.”

c. The tape is bad if this message also displays on the console terminal: `WARNING: ST01: HA 0 TC 3 LU 0: Err 60503005 CMD 0000000A Sense Key 00000004 Ext Sense 00000000.` Discard that tape and try another one.

The following error displays if you are performing a multiple tape backup, the tape you inserted is not the first tape (it is the second, third, etc.), and the tape is write protected.

```
– That didn’t work, cannot open “/dev/scsi/qtape1”
  Change to part X and press RETURN key. [q]
  Permission denied.
```

You do not have to restart the backup. Simply remove the tape from the tape drive, turn off write protect by moving the black arrow to point opposite “safe,” reinsert the tape into the drive, and continue the backup.

As the backup progresses, the program displays a series of dots to indicate that it is writing files to tape, one dot per file.

You may have a problem if you notice one of the following:

- You see that dots are not printing (wait at least 10 minutes or longer with a huge table).
- The tape is not spinning.
- Messages are not displayed informing you to change tapes or that the backup has completed.

If you encounter problems, call the AT&T Call Center Helpline on 1-800-344-9670.

Software Upgrade Procedure

The `installpkg` command will automatically upgrade your system.

Warning **Make sure you have the cartridge tape that contains the new base load or field update software.**

Caution You must have completed the Pre-Upgrade Procedure before you continue with the steps below. The upgrade procedure will result in approximately 30 to 60 minutes of outage on the CMS R3V4.

Note It is no longer necessary to turn off CMS; you will be prompted to do so in Step 10.

To upgrade CMS, use the following **required** procedures:

- Remove installed field updates (if present).
- Install the new CMS base package.

Use the following steps to upgrade your CMS software.

1. From the System Console, log in as *root*.
2. Enter the `installpkg` command.
3. When prompted, select the cartridge tape option, and press Return.
4. The program requests that the tape be inserted into the tape drive. Insert the CMS software package cartridge tape into the tape drive, wait for the tape drive to reposition, and then press Return .

   Failure Recovery: For Steps 4 through 6, proceed through the tasks below until you recover from the tape drive failure:

   - Retry:
     a. Follow the prompts to exit the `installpkg` program.
     b. Reposition the cartridge tape in the tape drive.
     c. Restart the Software Upgrade Procedures.
   - Reboot the CMS by entering the `shutdown -i6 -g0 -y` command. Restart the Software Upgrade Procedures.
   - If tape problems persist, call the AT&T Call Center Helpline on 1-800-344-9670.

5. When prompted, press Return to retension the tape. Retensioning the tape takes approximately 3 minutes.
6. After the tape retentions, the program displays information on selecting the packages to be installed. Press Return to continue.
7. Select the Call Management System package followed by Return.
8. Press Esc to indicate that all selections have been made. Press Return. Press Return again in response to the `REMINDER!` message.

   The program takes about 3 minutes to locate the CMS software on the tape and then verifies that the software packages required to run with CMS are present.

   Failure Recovery: If a required software package is missing, an error message appears indicating that CMS cannot be installed. Press Esc to stop the upgrade. Since CMS is still running the old load, stopping the upgrade now is not service affecting. Write down the missing package, and call the AT&T Call Center Helpline on 1-800-344-9670. If you turned CMS off, you can turn it back on.
9. The program now asks if you backed up your file systems. If you followed the pre-upgrade instructions, you have already backed up your file system. Enter y.

   If you did not follow the pre-upgrade instructions, enter n and refer to the Pre-Upgrade Procedure for information on backing up your file system. Then, restart the Software Upgrade Procedure.
10. Next, the program asks if you want to turn off CMS. Enter y to proceed with the upgrade.

    If you enter n, you will be returned to the system prompt.

    If you answer y, the program continues:

```
Stopping UNIX log ... done
>>Retaining customer data.
/etc/conf/init.d/ilog
/etc/conf/node.d/osm
/etc/logit
/usr/bin/cms
/usr/bin/cmsadm
. . . .
. . . .
. . . .
```

    The program takes about 5 to 10 minutes to remove the software associated with the previous issue of CMS. You may ignore any

errors or warnings that occur during this step and the next. Critical errors will be detected during the package audit.

11. When the appropriate software has been removed, the program begins the download of the new issue of CMS.

```
Removal of Call Management System (xxxxx) is complete
## Installing files from cartridge tape
. . . . . .
. . . . . .
. . . . . .
. . . . . .
```

The program takes about 10 to 20 minutes to download the CMS R3V4 software from the cartridge tape to the hard disk. As the software is downloaded, several rows of periods display to indicate progress. Next, a list of downloaded files displays.

12. After the download, the program audits the new package installation.

```
## Auditing package installation
```

The audit takes about 5 to 10 minutes to complete.

Failure Recovery: If the audit fails, perform the following steps:

- Write down the audit errors.
- Call the AT&T Call Center Helpline on 1-800-344-9670.
- Reboot CMS by entering the `shutdown -i6 -g0 -y` command.
- Restart the Software Upgrade Procedure.
- If the audit passes, proceed to Step 13. If the audit fails again, execute the `shutdown -i6 -g0 -y` command. Install the previous issue of CMS using the `installpkg` command.

13. If the audit is successful, the program upgrades your CMS data.

The upgrade of CMS data may take up to an hour — but in most cases takes significantly less time. Dots display to indicate progress.

Failure recovery: If the upgrade fails, call the AT&T Call Center Helpline on 1-800-344-9670.

In some cases, the *UNIX** kernel is rebuilt. If the rebuild fails, note the failure exactly, and call the AT&T Call Center Helpline on 1-800-344-9670.

14. If a message displays indicating an automatic shutdown is being initiated, you will need to reboot the system. You can do this in one of two ways:

    - Press the Return key which requires a manual reboot. **Wait** for the prompt `Reboot the system now` to appear, and then press the Reset button on the CMS processor.

      Warning Do not press Reset until you see the `Reboot the system now` message; otherwise, file system damage may occur.

    - Press the Esc key. The *UNIX* system prompt returns. Then, execute the `shutdown -i6 -g0 -y` command.

15. After the tape finishes rewinding (tape drive light is not lit), remove the cartridge tape.

16. The Technical Service Center (TSC) engineers need to set authorizations for CMS features purchased by the customer before CMS can be turned on.

Note Setting authorizations only has to be done on the original upgrade to CMS R3V4.

To set authorizations, use the *auth_set* option in the CMS Services (cmssvc) menu.

Do the following steps to run the *auth_set* option:

Access the CMS Services menu by entering:

```
#cmssvc
```

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The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

17. Enter 2 to select the *auth_set* option. The program responds:

```
Password:
```

18. Enter the appropriate password. The program responds:

```
Is this an upgrade? (y/n):
```

19. Enter `y` if it is an upgrade. The program responds:

Note

The following program response is for an R3V4-to-R3V4 upgrade. If you were doing an R3V2-to-R3V4 upgrade, the program response would be:

```
What version has the customer purchased?
   1) R3V1
   2) R3V2
   3) CentreVu(TM) CMS R3V4
Enter choice (1-3):
```

```
Purchased version is CMS R3V4. Is this correct?
```

20. Enter y. The program responds:

```
Authorize installation of forecasting package? (y/n):
                                                (default: x)
```

Note

The default value will be the same as the previous one unless the customer is buying new packages. If there are no changes in the packages, the technician can press **Return** at each prompt.

21. Enter y if the customer purchased Forecasting; otherwise, press **Return**. The program responds:

```
Authorize installation of vectoring package? (y/n):
                                                (default: x)
```

22. Enter y if the customer purchased Vectoring package; otherwise press **Return**. The program responds:

```
Authorize use of graphics feature? (y/n): (default: x)
```

23. Enter y if the customer purchased Graphics; otherwise, press **Return**. The program responds:

```
Authorize use of external call history feature? (y/n):
                                                 (default: x)
```

24. Enter y if the customer purchased the External Call History feature; otherwise, press Return. The program responds:

```
Authorize use of expert agent selection feature? (y/n):
                                                (default: x)
```

25. Enter y if the customer purchased the Expert Agent Selection feature; otherwise, press Return. The program responds:

```
Authorize use of external application feature? (y/n): (default: x)
```

26. Enter y if the customer purchased the External application feature; otherwise, press Return. The program responds

```
Enter the number of Simultaneous Supervisor logins the customer
has purchased (0-250): (default:0)
```

27. Enter the number of simultaneous logins purchased.The system responds:

```
Has the customer purchased AT&T CentreVu(TM) Report Designer?
(y/n): (default:n)
```

28. Enter y if the customer purchased the Report Designer feature; otherwise, press Return. The system responds:

```
Enter the maximum number of agents that can be administered
(xx-5200):
```

29. Enter the number of agents that can be administered. The system responds:

```
Enter the maximum number of ACDs that can be installed (1-4):
(default:<the current number>)
```

30. Enter the number of ACDs that can be installed.
    The system prompt returns to your screen.
31. The program takes a few minutes to initialize the system parameters.
32. If you don't run `auth_set` before turning on CMS, you will get the following message:

```
****WARNING:
        You must first run auth_set before turning on CMS after
        this upgrade is complete.
```

Note
This warning appears after the audit on the first upgrade to R3V4.

33. Turning on CMS initializes the communications link between the CMS software and the switch.

swsetup

From the `swsetup` option on the CMS Services menu, you can change the switch parameters. You need to perform this step if you are upgrading to a G3V4 switch.

Note
Do not confuse this option with the `setup` option which is for setting up CMS.

Note
When you change switch parameters, you should also check the parameters in the CMS System Setup: Data Storage Allocation window. In particular, if you enable vectoring, you will need to allocate space for VDNs and vectors. Changing the switch release may change the number of measured entities allowed and may also have an impact on the storage allocation for each entity.

1. Access the CMS Services menu by entering `cmssvc` at the system prompt. The CMS Services menu appears.
2. Enter `7` to select the `swsetup` option.
3. Answer the prompts that appear on the screen.

   You need the following information:

   - Switch name

- Switch model (release)
- Local port assigned to the switch
- Remote port assigned to the switch
- Link number.

The link number represents the port that is connected to the switch.

Restarting *CentreVu* CMS

Do the following to restart the *CentreVu* CMS software:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
  1) Turn on CMS
  2) Turn off CMS
  Enter choice (1-2):
```

3. Enter 1 to turn on *CentreVu* CMS.

The system responds:

```
Turning on X25, please wait

Starting the X.25 software — please wait
X.25 has found a valid license
The network has been brought up.

Please wait for initialization.


***CMS is now up***
```

The system prompt returns to your screen.

Post-Upgrade Procedure

After the upgrade, complete the following steps:

1. From the System Console, log in as *root*.
2. Enter the `cmsadm` command to display the CMS administration menu. Select the `backup` option.

   See Step 5 of the Pre-Upgrade Procedure for information about the cmsadm backup and the failure recovery steps.
3. Enter `exit` at the # prompt.
4. Log in as the CMS administrator.
5. A full CMS Maintenance Backup **must** be done prior to any incremental backups that are either scheduled or manually completed.

   Warning If this step is not completed, any incremental backups will fail, since they must follow a full backup of the current load.
6. Contact the AT&T Call Center Helpline (1-800-344-9670), and notify the agent that the upgrade to the new issue of CMS has been completed.

   Warning It is important to complete this step so the TSC can check the error logs and update its database.

This completes the upgrade of the Call Management System R3V4.

Software Compatibility

The following software is required for CMS R3V4 to operate correctly:

- *UNIX* System V/386 Release 3.2. Version 2.3 Maintenance Disk #1.
- Korn Shell Version 11/16/88d 386 Release 2.0
- *INFORMIX** SE 4.10.UD1 (Runtime Version)

  (*INFORMIX* SQL 4.10.UC2 [Development Version] is optional software with CMS R3V4.)
- X.25 Network Interface Software Version 1.2.1 SL1.51.1.25.

CMS R3V4 does not co-reside with other software packages. This includes both packages running concurrently and those merely installed. CMS R3V4 modifies the *UNIX* system tunable parameters automatically to accommodate system requirements.

This release of CMS R3V4 software is compatible only with Version 1.6 and later of the CMS R2 Migration (PG-3E257). Earlier issues of CMS R2 will not migrate successfully.

Hardware Compatibility

CMS R3V4 is certified to run on the following processor platforms:

- AT&T 6386 WGS 25/S
- AT&T 6386 WGS 33/S
- AT&T *StarServer* S
- NCR 3332.

For the 6386 processors, the alternate console configuration is required. In addition to the base processor, the following may be added based on customer configuration needs:

- GPSC-AT/E X.25 kit(s) and 2-port RS232 cable(s)
- 4/16 MB Memory Expansion Board
- N80387-6386/25 or 6386/33 math coprocessor
- IPC 1600 Ports Card(s) and Ports Cabinet(s), or *MEGAPLEX*†-96 board
- Remote Maintenance Package and software, Version 2.0.

For the *StarServer* S processor, the VGA 600 card and monitor is required for the console. In addition to the base processor, the following may be added based on customer configuration needs:

- Additional SIMM memory on the system board

*INFORMIX is a registered trademark of Informix Software, Inc.
†MEGAPLEX is a trademark of Equinox Systems, Inc.

- SCSI Streaming Tape Unit
- GPSC-AT/E X.25 kit(s) and 2-port RS232 cable(s)
- IPC 1600 Ports Card(s) and Ports Cabinet(s), or *MEGAPLEX*-96 board
- Remote Maintenance Package and software, Version 2.0.

For the 3332 processor, the following may be added based on your configuration needs:

- Additional SIMM memory on the system board
- SCSI Streaming Tape Unit
- GPSC-AT/E X.25 kit(s) and 2-port RS232 cable(s)
- *MEGAPLEX*-96 board (also IPC 1600)
- Kickstart 2.5 Remote Maintenance Board (RMB).

Switch Compatibility

CMS R3V4 has been certified with the ACD applications on the following switches:

- *DEFINITY*® Communications System Generic 2.1 Release 3.3 and later (QPPCN 629DR)
- *DEFINITY* Communications System Generic 2.2 Release 3.0 and later (with/without call center features) (QPPCN 696DR)
- *DEFINITY* Communications System Generic 3i Release 13.3 and later (QPPCN 576)
- *DEFINITY* Communications System Generic 3r Release 8.5 and later
- *DEFINITY* Communications System Generic 3s Release 14.2 and later
- *DEFINITY* Communications System Generic 3 Version 2 Load 82 and later (QPPCN 644 G3i/s/vs) (QPPCN 646 G3r)
- *DEFINITY* Communications System Generic 1.1 Release 7.1 (QPPCN 559DR) and later
- System 85 R2V4 Release 2.3 (QPPCN 560DR) and later
- *DEFINITY* Communications System Generic 3 Version 3 GA Release (QPPCN 701) and later

- *DEFINITY* Communications System Generic 3 Version 4.

Note

It may be necessary to upgrade the switch release before installing CMS R3V4 or before upgrading CMS. The required switch release for *DEFINITY* Generic 3r has been changed since CMS Issue 1.3.

From a *Sun SPARCserver* Computer

The following procedures allow you to upgrade your CMS software on your *Sun SPARCserver* computer. These procedures pertain to an R3V2 to R3V4 upgrade and an R3V4 upgrade. Follow these instructions carefully.

Caution To do an upgrade, you must have sufficient free space on your disk to accommodate all the data you want to collect. See the "Pre-Upgrade Procedures" section for details.

If your current disk space allocation specifies more items to be measured for longer lengths of time than you actually have space for on your disks, you must do the following:

- Purchase additional disks.
- Change the length of time for which the data is stored.
- Change the number of entities measured before you do an upgrade.

Pre-Upgrade Procedures

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2 or 3, all file systems must be mounted, and CMS must be turned OFF.

Note The upgrade process will take approximately 1 hour to complete.

Before you upgrade a system to a new base load or release, do the following:

- Make sure you have the following versions of software installed on your *Sun SPARCserver* computer:
  - *Solaris** 2.4
  - *SunLink*† X.25 *Network Interface Software Version* 8.02
  - *INFORMIX*-SE 5.04
- Do a full file system backup. See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-521-807) document for information on performing a CMSADM backup.

*Solaris is a registered trademark of Sun Microsystems, Inc.
†SunLink is a registered trademark of Sun Microsystems, Inc.

- Make sure you have the cartridge tape that contains the new base load or CMS CD-ROM that contains the new release.
- Verify you have sufficient space in */tmp* by entering the `df -l /tmp` command.

  Note *CentreVu* CMS requires 100,000 blocks.

- Verify you have sufficient space in */cms* by doing the following:
  1. Determine the amount of available space by entering the `df -l /cms` command.
  2. Determine the amount of space required by the current CMS package by entering the following command.

     `pkgparam cms IBSblocks IBSinodes`

     The number of blocks and inodes are displayed.

     Note *CentreVu* CMS R3V4 requires approximately 100,000 blocks and 1500 inodes.

  3. Compute the difference between the old and new load for blocks and inodes, and compare the amount of available space computed in Step 1.

To upgrade CMS, use the following **required** procedures:

- Remove installed field updates (if present).
- Remove the current CMS base load.
- Install the new *Solaris* patches (if needed).
- Install the new *CentreVu* CMS base package.

Removing Installed Field Updates

Do these steps to determine if a field update is installed.

1. Start the remove installed field update procedure by entering:

```
# pkginfo -x cms.*
```

The program responds:

```
application cms.2          Call Management System
                           (sparc) r3v4xxx
```

Note

Keep track of the *CentreVu* CMS load number for later use. If more than one package is displayed (for example, `application cms.2`), you can determine that there is a field update installed.

2. Enter the following information:

```
# pkgrm cms.2
```

The program responds:

```
The following package is currently installed:
    cms.2              Call Management System
                        (sparc) 3rxxx

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

3. Answer y.

The program responds with a list of files that will be changed due to the removal of the update:

```
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
## Removing pathnames in class <ind>
/cms/install/bin/upd_save <shared pathname not removed>
/cms/install/bin/turn_on_cms <shared pathname not removed>
/cms/install/bin/turn_off_cms <shared pathname not removed>
/cms/install/autoconfig <shared pathname not removed>
/cms/install/auditmap <shared pathname not removed>
## Removing pathnames in class <edit>
>> Leaving sun patches installed.
## Removing pathnames in class <sun_fix>
>> Leaving sun patches installed.
## Removing pathnames in class <op_fix>
>> Leaving other package fix files installed.
## Removing pathnames in class <data>
>> Retaining customer files and directories.
## Executing postremove script.
```

If the removal is successful, this message displays:

```
Restoring old CMS software
/cms/install/auditmap
/cms/install/autoconfig
/cms/install/bin/turn_off_cms
/cms/install/bin/turn_on_cms

Updating installation software database.

Removal of Call Management System (3rxxx) is complete
## Updating system information.

Removal of <cms.2> was successful.
```

The system prompt returns to your screen.

The installed field updates (if present) are removed from the CMS software. You can now remove the current CMS base package.

Removing Current CMS Base Package

Do these steps to remove the current CMS base package:

1. Start to remove the current CMS base package by entering:

```
# pkgrm cms
```

   The program responds:

```
The following package is currently installed:
   cms               Call Management System
                      (sparc) 3rxxx

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

2. Answer y. The system responds:

```
## Removing installed package instance <cms>

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

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

3. Answer y. The system responds:

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

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

4. Answer y . The system responds:

```
CMS will be removed from this machine; the data will be
preserved.

Are you sure this is correct? [y,n,?]
```

5. Answer y. The system responds:

```
All file systems should be backed up before continuing.
See the Maintenance chapter in the Sun CMS Installation and
Maintenance Manual for instructions.

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

Note If you have not backed up the file systems, answer "n."

6. Answer y if you have done backups. The system responds:

```
## Removing pathnames in class <ind>
/usr/lib/cms/trmaps
/usr/informix/etc/termcap
/usr/bin/cmssvc
   .
   .
   .
```

If the removal is successful, this message displays:

```
Removal of <cms> was successful.
```

The system prompt returns to your screen.

After you remove the current CMS base package, you can now install the new *CentreVu* CMS base package.

Installing New *Solaris* Patches

If *Solaris* patches are available, you must install them on your system.

Do these steps to install new *Solaris* patches:

Note The CD-ROM containing the new patches will be required in the CD-ROM drive.

1. Remove the CMS CD-ROM from its case. If you have an external CD-ROM drive, follow the steps below. Otherwise, go to Step 2.

a. Place the CMS CD-ROM in the CD-ROM caddy. When the CD-ROM is properly inserted in the caddy, the CD-ROM label is visible.

b. Insert the CD-ROM caddy into the CD-ROM drive slot.

c. Go to Step 5.

2. Open the CD-ROM drive tray by pressing the eject button on the CD-ROM drive unit.
3. Gently press the CD-ROM in place in the CD-ROM disk tray. When the CD-ROM is properly inserted in the disk tray, the CD-ROM label is visible.
4. Push the CD-ROM drive tray in (towards the system unit) until it closes.
5. Enter the following command to verify the name of the CD-ROM:

```
# mount
```

6. The program responds with a list of devices and file systems currently mounted. Locate the device which corresponds to the CD-ROM drive. Use that path for the installation of the *Solaris* patches.

```
      . . .
      . . .
      . . .
/cdrom/cms#1 on /vol/dev/dsk/.....
#
```

For example:

7. Start the upgrade procedure by entering:

```
# pkgadd -d /cdrom/cms#1
```

The system responds:

```
The following packages are available:
  1 cms          CentreVu(TM) Call Management System
                 (sparc) r3v4xxx
  2 spatches     CMS Supplied Solaris Patches
                 (sparc) 1.0

Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:
```

If the `spatches` package is displayed, you must install it.

8. Enter 2 to select *spatches*. The system responds:

```
Processing package instance <spatches> from </dev/rmt/0>

CMS Supplied Solaris Patches
(sparc) 1.0
AT&T

This appears to be an attempt to install the same architecture
and
version of a package which is already installed.  This
installation
will attempt to overwrite this package.

## Processing package information.
## Processing system information.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.

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

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

9. To continue with the installation of this package, enter y. The system responds:

```
Installing CMS Supplied Solaris Patches as <spatches>

XX Installing part 1 or 1.
Spooling 100982-02
Spooling 100992-03
Spooling 100999-51
Spooling 101014-05
Spooling 101018-07
   .
   .
   .

Patches successfully saved

Solaris patches were copied to /tmp/patches.
To install the solaris patches, run the following command:
   /tmp/patches/install-patches
```

The system responds:

```
The following packages are available:
  1 cms          CentreVu(TM) Call Management System
                 (sparc) r3v4xxx
  2 spatches     CMS Supplied Solaris Patches
                 (sparc) 1.0

Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:
```

10. Answer q to quit.
11. To install the *Solaris* patches, enter the following command:

```
# /tmp/patches/install_patches
```

Note Once the *Solaris* patches are installed, a reboot is necessary. Be sure to run the `/tmp/patches/install_patches` command before rebooting.

The system responds:

```
# /tmp/patches/install_patches
@(#) installpatch 3.5 93/04/28

generating list of files to be patched
Save old verisons of files to be patched
/var/sadm/patch/100982-02/save/kernel
/var/sadm/patch/100982-2/save/kernel/fs
/var/sadm/patch/100982-2/save/kernel/fs/fifofs
XXX blocks
Installing patch packages
Doing pkgadd of SUNWcsr package:
```

Response continues:

```
Patch installation finished
@(#) installation finished
generating list of files to be patched
Save old versions of files to be patched
/var/sadm/patch/100992-03/save/kernel
/var/sadm/patch/100992-03/save/kernel/drv
   .
   .
   .
Installing patch packages
Doing pkgadd of SUNWcsr package:

Installation of <SUNWcsr.7> was successful.
Patch installation finished
To complete the solaris patch installation, one should reboot
with the following command: shutdown -y -i6 -g0
#
```

12. To complete the *Solaris* patch installation, you must reboot your system using the following command:

```
# shutdown -y -i6 -g0
```

The installation of the new patches in now complete. The system prompt returns to your screen. You are now ready to install the new CMS base package software.

Installing New *CentreVu* CMS Software

Do these steps to install the new *CentreVu* CMS base package software:

Note The CD-ROM containing the new *CentreVu* CMS software load will be required in the CD-ROM drive

1. Remove the CMS CD-ROM from its case. If you have an external CD-ROM drive, follow the steps below. Otherwise, go to Step 2.
   a. Place the CMS CD-ROM in the CD-ROM caddy. When the CD-ROM is properly inserted in the caddy, the CD-ROM label is visible.
   b. Insert the CD-ROM caddy into the CD-ROM drive slot.
   c. Go to Step 5.
2. Open the CD-ROM drive tray by pressing the eject button on the CD-ROM drive unit.
3. Gently press the CD-ROM in place in the CD-ROM disk tray. When the CD-ROM is properly inserted in the disk tray, the CD-ROM label is visible.
4. Push the CD-ROM drive tray in (towards the system unit) until it closes.
5. Start the upgrade procedure by entering:

```
# pkgadd -d /cdrom/cms
```

The system responds:

```
The following packages are available:
  1 cms          CentreVu(TM) Call Management System
                 (sparc) r3v4xxx
  2 spatches     CMS Supplied Solaris Patches
                 (sparc) 1.0

Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:
```

6. Enter 1. The system responds:

```
Processing package instance <cms> from </dev/rmt/0>

CentreVu(TM) Call Management System
(sparc) r3v4xxx

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All Rights Reserved

Using </cms> as the package base directory.

Installing the CentreVu(TM) Call Management System (r3v4xxx).

This is an upgrade.

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

The following files are already installed on the system and
are being used by another package:
          /cms/install/logdir/admin.log
          /etc/init.d/sysetup
          /etc/system
          .
          .
          .

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

7. Answer y. The system responds:

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

The following files are being installed with setuid and/or
setgid permissions or are overwriting files which are
currently setuid/setgid:
         /cms/bin/mqpeek <setuid root>
         /cms/bin/spi <setuid root>
         /cms/toolsbin/cmsu <setuid root>
         /cms/toolsbin/initSimConf <setuid root>
         /cms/toolsbin/initSimConf <setuid root>
         /cms/toolsbin/psx <setuid root>
         /cms/toolsbin/psx <setuid root>
         /cms/toolsbin/shmdump <setgid sys>

Do you want to install these setuid/setgid files [y,n,q,?]
```

8. Answer y. The system responds:

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

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

9. Answer y.

The system responds:

```
Installing CentreVu(TM) Call Management System as <cms>

## Executing preinstall script.

## Installing part 1 or 1.
[ verifying class <data> ]
[ verifying class <op_fix> ]
   .
   .
   .
/etc/SUNWconn/x25/template/cms.spin1.wan
/etc/rc0.d/K92cms
/usr/bin/cms
/usr/bin/cmsadm
/usr/bin/cmssvc
/usr/informix/etc/termcap
/usr/lib/cms/trmaps
[ verifying class <ind> ]
## Executing postinstall script.

## Upgrading Customer CMS data . . .
............
Customer CMS data successfully upgraded.

*****WARNING:
          You must first run auth_set before turning on CMS
           after this upgrade is complete.

Setting Solaris 2.4 system tunable parameters for CMS.
No changes to tunable parameters were required.

Installation of <cms> was successful.
#
```

Warning

If you do not see this WARNING sign, you do not have to run auth_set.

Warning

If you made changes to your cms or cmssvc .profiles, the following message will appear:

```
A manual merge may be necessary to
restore custom entries. The original
content was saved in profile.save prior
to changes.
```

The machine will either reboot if needed or return to the system prompt.

Note

If you are instructed to run `shutdown`, use the displayed command. See the “Installing New *Solaris* Patches” section in this chapter for more information.

The installation of the new *CentreVu* CMS base package is now complete. The system prompt returns to your screen.

10. Enter:

```
# eject cdrom
```

11. Remove the *CentreVu* CMS CD-ROM from the CD-ROM drive.

Verifying *CentreVu* CMS Software Installation

Do the following to verify the installation of the new *CentreVu* CMS software:

1. Enter `pkgchk` command:

```
# pkgchk -n cms
```

If the software installation is successful, the system prompt returns to your screen.

If errors are detected, see the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for information on checking installed software packages.

Post Upgrade Procedures

Prerequisites: You must be logged in as *root* and *CentreVu* CMS must be turned OFF.

Upgrading CMS uses the following required procedures:

- Verify the installation via `pkgchk`.
- Run auth_set (only for an R3V2 to R3V4 upgrade or when you purchase additional features).
- Run swsetup (only if you have upgraded to a G3V4 switch)
- Restart *CentreVu* CMS.
- Back up upgraded *CentreVu* CMS software.

Verifying Field Update of New Software Installation

Do the following to verify that the installation of the field updates for the new base load software is complete:

1. Enter `pkgchk` command:

```
# pkgchk -n cms.*
```

The *CentreVu* CMS software is verified and upgraded.

If errors are detected, see the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for information on checking installed software packages.

Run auth_set

Note Only run `auth_set` for R3V2 to R3V4 upgrades or if you purchased additional features.

The TSC engineers need to set authorizations for *CentreVu* CMS features purchased by the customer before *CentreVu* CMS can be turned on.

To set authorizations, use the *auth_set* option in the *CentreVu* CMS Services (cmssvc) menu.

Do the following steps to run the *auth_set* option.

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 2 to select the *auth_set* option. The program responds:

```
Password:
```

3. Enter the appropriate password. The program responds:

```
Is this an upgrade? (y/n):
```

4. Enter y if it is an upgrade. The program responds:

Note

The following program response is for an R3V2-to-R3V4 upgrade. If you were doing an R3V4-to-R3V4 upgrade the program response would be:

```
Purchased version is CMS R3V4. Is this correct?
```

```
What version has the customer purchased?
    1) R3V1
    2) R3V2
    3) CentreVu(TM) CMS R3V4
Enter choice (1-3):
```

5. Enter 3. The program responds:

Note

The `default` for the following questions depends on what the customer purchased. If you want to use the `default`, press the **Return** key.

```
Authorize installation of forecasting package? (y/n):
                                                (default: x)
```

6. If the customer purchased Forecasting, enter y; otherwise, enter n.

   The program responds:

```
Authorize use of graphics feature? (y/n): (default: x)
```

7. If the customer purchased Graphics, enter y; otherwise, enter n.
   The program responds:

```
Authorize use of external call history feature? (y/n):
                                                 (default: x)
```

8. If the customer purchased the External Call History feature, enter y; otherwise, enter n. The system responds:

```
Authorize use of expert agent selection feature? (y/n):
                                                 (default: x)
```

9. If the customer purchased the Expert Agent Selection feature, enter y; otherwise, enter n. The system responds:

```
Authorize use of external application feature? (y/n):
                                                (default: x)
```

10. If the customer purchased the External Application feature, enter y; otherwise, enter n. The system responds:

```
Enter the number of Simultaneous Supervisor logins the customer
has purchased (0-250): (default:0)
```

11. Enter the number of simultaneous logins purchased. The system responds:

```
Has the customer purchased AT&T CentreVu(TM) Report Designer?
(y/n):(default:x)
```

12. Enter y if the customer purchased Report Designer; otherwise, enter n. The system responds:

```
Enter the maximum number of agents that can be administered
(xx-xxxx): (default: xxxx)
```

13. Enter the number of agents that can be administered. The system responds:

```
Enter the maximum number of ACDs that can be installed (1-4):
(default: 1)
```

14. Enter the number of ACDs that can be installed. The system prompt returns to your screen.

swsetup

From the `swsetup` option on the CMS Services menu, you can change the switch parameters.

Note
Do not confuse this option with the `setup` option which is for setting up CMS.

Note
When you change switch parameters, you should also check the parameters in the CMS System Setup: Data Storage Allocation window. In particular, if you enable vectoring, you will need to allocate space for VDNs and vectors. Changing the switch release may change the number of measured entities allowed and may also have an impact on the storage allocation for each entity.

1. Access the CMS Services menu by entering `cmssvc` at the system prompt. The CMS Services menu appears.
2. Enter `7` to select the `swsetup` option.
3. Answer the prompts that appear on the screen.

   You need the following information:

   - Switch name
   - Switch model (release)
   - Local port assigned to the switch
   - Remote port assigned to the switch
   - Link number.

   The link number represents the port that is connected to the switch.

Restarting *CentreVu* CMS

Do the following to restart the *CentreVu* CMS software:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
  1) Turn on CMS
  2) Turn off CMS
  Enter choice (1-2):
```

3. Enter 1 to turn on *CentreVu* CMS.

   The system responds:

```
Turning on X25, please wait

Starting the X.25 software — please wait
X.25 has found a valid license
The network has been brought up.

Please wait for initialization.


***CMS is now up***
```

The system prompt returns to your screen.

Backing Up Upgraded *CentreVu* CMS Software

Do a full *CentreVu* CMS maintenance backup as soon as possible.

In the Back Up Data window, select `y` (yes) for the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- All ACDs
- ACD-specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document.

Note

CentreVu CMS incremental maintenance backups will fail if a full backup is not done. See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for file system and `cmsadm` backup procedures.

Updating the *CentreVu* CMS Software

From a *Sun SPARCserver* Platform

Updating the *CentreVu* CMS software is a two-part process. First, the *CentreVu* CMS update files are downloaded from tape to hard disk. This allows the update files to be stored on the hard disk until a convenient time to do the update. *Solaris* patches (`spatches`) may also be installed on an update tape. Downloading the *CentreVu* CMS update files requires an on-site technician to insert the *CentreVu* CMS update tape into the tape drive.

The second part of the process is installing the update from the hard disk files. This part of the process can be done remotely. Since *CentreVu* CMS must be turned off to install the update from disk files, you should install the update when customer service can be interrupted.

Saving the *CentreVu* CMS Update to Disk Files

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2 or 3, and all file systems must be mounted.

To save the *CentreVu* CMS software update to disk files, do the following steps:

1. Insert the *CentreVu* CMS update cartridge tape into the tape drive.
2. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
 CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize CMS capabilities/capacities
  3) backup       Single-tape filesystem backup (in background)
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

3. Enter `10` to select the *upd_save* option. The system responds:

```
Select tape drive to use:
   1) /dev/rmt/0
   2) /dev/rmt/0c
   3) /dev/rmt/1
   4) /dev/rmt/1c
Enter choice (1-4):
```

Note

All systems are shipped with one or more tape drives (QIC-150, 5-GB, and/or a 14-GB). For systems with multiple tape drives, the QIC-150 is the first drive on the SCSI chain. For quicker backups (1 hour versus several hours), we recommend using the 5- or 14-GB tape drive.

`/dev/rmt/0` indicates the first tape drive in the SCSI chain.

`/dev/rmt/1` indicates the second tape drive in the SCSI chain.

`/dev/rmt/0c` indicates the first tape drive in the SCSI chain in compressed mode (only the 14-GB tape drive can support compressed mode).

`/dev/rmt/1c` indicates the second tape drive in the SCSI chain in compressed mode.

4. Select the tape drive to use (for example, `1, 2, 3, or 4`).

   Note

   If you have two tape drives and you choose `1, 2, or 4`, the system responds:

   ```
   Select the tape drive to use:
        1) /dev/rmt/0
        2) /dev/rmt/1
   Enter choice (1-2):
   ```

   If you have two tape drives and you choose 3 (14-GB), the system responds:

   ```
   Select the tape drive to use:
        1) /dev/rmt/0c
        2) /dev/rmt/1c
   Enter choice (1-2):
   ```

   If you have only one tape drive, the system begins calculating the approximate number of tapes required. You are not prompted.

The system responds:

```
Insert a tape into Tape drive.
Type [go] when ready,
  or [q] to quit: go
```

5. Enter `go`. The system responds:

```
Transferring <spatches> package instance.
    (Note: The previous message is displayed only if Solaris
     patches are installed as part of an update.)
Transferring <cms> package instance.
#
```

The program begins downloading the *CentreVu* CMS update files onto the hard disk as indicated by these messages:

```
Solaris Patch update contains the following patches: <patch #>
    (Note: The previous message is displayed only if Solaris
     patches are installed as part of an update.)
Update contains the following files in /cms:
.
./install
./install/auditmap
./install/autoconfig
./install/bin
./install/bin/ins_proc

Software saved in /cms/cms_updates/3rxxx for later
installation.
#
```

Note The number of file names on your screen may differ from above depending on the size of the update release.

The update files are downloaded from cartridge tape to hard disk.

The system prompt returns to your screen.

Removing the Currently Installed Update

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2 or 3, all file systems must be mounted, and *CentreVu* CMS must be turned OFF.

The *CentreVu* CMS software provides an option that removes the currently installed update (if present) and restores the *CentreVu* CMS software to the previous base load.

Do these steps to remove the *CentreVu* CMS update:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 9 to select the *upd_remove* option. The system responds:

```
The following package is currently installed:
    cms.2             Call Management System
                      (sparc) 3rxxx

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

3. Answer y. The system responds:

```
Removing installed package instance <cms.2>

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

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

4. Answer y.

The program responds with a list of files that will be changed due to the removal of the update:

```
## Removing installed package instance <cms.2>
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
## Removing pathnames in class <ind>
/cms/install/bin/upd_save <shared pathname not removed>
/cms/install/bin/turn_on_cms <shared pathname not removed>
/cms/install/bin/turn_off_cms <shared pathname not removed>
/cms/install/autoconfig <shared pathname not removed>
/cms/install/auditmap <shared pathname not removed>
## Removing pathnames in class <edit>
>> Leaving sun patches installed.
## Removing pathnames in class <data2>
>> Retaining customer files and directories.
## Removing pathnames in class <op_fix>
>> Leaving other package fix files installed.
## Removing pathnames in class <data>
>> Retaining customer files and directories.
## Executing postremove script.
```

If the removal is successful, this message displays:

```
Restoring old CMS software
/cms/install/auditmap
/cms/install/autoconfig
/cms/install/bin/turn_off_cms
/cms/install/bin/turn_on_cms

Removal of Call Management System (3rxxx) is complete
## Updating system information.

Removal of <cms.2> was successful.

    (Note: The following messages are displayed only if
     Solaris patches were installed as part of an update.)

The following package is currently installed:
   spatches.2      CMS Supplied Solaris Patches
                   (sparc) 1.1
Do you want to remove this package [y,n,?,q] y
```

5. If a patch was included in the update, enter y.

```
## Removing installed package instance <spatches.2>
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
Generating script to backout the following patches:
101601-01
## Removing pathnames in class <sun_fix>
## Executing postremove script.
WARNING:
A Solaris patch removal script has been spooled into
/tmp/patches
To remove the Solaris patches, run the following command:
     /tmp/patches/backout_patches
Once the Solaris patches are removed, a reboot is necessary.
The reboot command will be provided by the backout_patches
script.
## Updating system information.
Removal of <spatches.2> was successful.
Proceeding to run /tmp/patches/backout_patches
Backoutpatch Version 3.7 1/24/94
Removing patch package for SUNWcsr.13:
Removal of <SUNWcsr.13> was successful.
Restoring previous version of files...
/kernel
/kernel/drv
/kernel/drv/iwscn
16 blocks
Making the package database consistent with restored files:
Patch 101601-01 has been backed out.
To complete the Solaris patch backout, one should reboot
with the following command: shutdown -y -i6 -g0
Solaris patches were backed out.
You will need to reboot before proceeding.
Reboot with the following command:
shutdown -y -g0 -s6
#
```

Note If you are instructed to run `shutdown`, use the displayed command. If *Solaris* patches are removed, you **must** reboot.

The system prompt returns to your screen. The update is removed from the *CentreVu* CMS software.

Installing the *CentreVu* CMS Update from Disk Files

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2 or 3, all file systems must be mounted, and *CentreVu* CMS must be turned OFF.

You install the *CentreVu* CMS update from files stored on the hard disk. These files were created in the previous section. Installing an update from disk files can be done remotely.

Do these steps to install the *CentreVu* CMS software update from disk files:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

   The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
     1) Turn on CMS
     2) Turn off CMS
  Enter choice (1-2):
```

3. Enter 2 to turn *CentreVu* CMS off. The system responds:

```
*** Turning off CMS, Please wait ***
. . . .

***Turning off X25, Please wait***

 *** CMS is now off ***
```

The system prompt returns to your screen.

4. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

5. Enter 8 to select the *upd_install* option. The system responds:

```
Select update to install:
   1) 3rxxx.x
Enter choice (1-1):
```

6. Enter 1. If *Solaris* patches are installed as part of an update, the system responds:

```
This update contains Solaris patches.
Processing package instance <spatches> from
</cms/cms_updates/3raib.a/spatche
CMS Supplied Solaris Patches
(sparc) 1.1
AT&T
## Processing package information.
## Processing system information.
## Verifying package dependencies.
## Verifying disk space requirements.
Installing CMS Supplied Solaris Patches as <spatches.2>
## Installing part 1 of 1.
Spooling 101601-01
Patches successfully saved
[ verifying class <sun_fix> ]
## Executing postinstall script.
WARNING:
Solaris patches have been spooled into /tmp/patches. To install
the Solaris patches, run the following command:
     /tmp/patches/install_patches
Once the Solaris patches are installed, a reboot is necessary.
The reboot command will be provided by the install_patches
script.
Installation of <spatches.2> was successful.
Proceeding to run /tmp/patches/install_patches
Installpatch Version 3.8 1/24/94
Generating list of files to be patched...
Creating patch archive area...
Saving a copy of existing files to be patched...
        File compression being used
16 blocks
Installing patch packages...
Doing pkgadd of SUNWcsr package:
Installation of <SUNWcsr.13> was successful.
Patch packages installed:
        SUNWcsr
Patch installation completed.
See /var/sadm/patch/101601-01/log for more details.
To complete the Solaris patch installation, one should reboot
with the following command: shutdown -y -i6 -g0
Processing package instance <cms> from
</cms/cms_updates/3raib.a/cms>
```

The following is displayed with or without *Solaris* patches installed:

```
 Processing package instance <cms>
from</cms/cms_updates/r3v4xxx/cms>

CentreVu(TM) Call Management System
(sparc) r3v4xxx
AT&T
Using </cms> as the package base directory.

Installing the CentreVu(TM) Call Management System (r3v4xxx).

## Processing package information.
## Processing system information.
## Verifying package dependencies.
## Verifying disk space requirements.

The following files are already installed on the system and are
being used by another package:
         /cms/install/auditmap
         /cms/install/autoconfig
         /cms/install/bin/turn_off_cms
         /cms/install/bin/turn_on_cms
         /cms/install/bin/upd_save

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

7. If the previous message is displayed, answer y.

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

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

8. If the previous message is displayed, answer **y**.

The system responds:

```
Installing CentreVu(TM) Call Management System as <cms.2>
## Executing preinstall script.
Making backup copies of old files...
/cms/install/update/file_bkup/cms/install/auditmap
/cms/install/update/file_bkup/cms/install/autoconfig
/cms/install/update/file_bkup/cms/install/bin/turn_off_cms
/cms/install/update/file_bkup/cms/install/bin/turn_on_cms
/cms/install/update/file_bkup/cms/install/bin/upd_save
165 blocks

[ verifying class <sun_fix> ]

/cms/install/auditmap
/cms/install/autoconfig
/cms/install/bin/turn_off_cms
/cms/install/bin/turn_on_cms
/cms/install/bin/upd_save
[ verifying class <ind> ]
## Executing postinstall script.

## Upgrading Customer CMS data . . .

Customer CMS data successfully upgraded

Setting Solaris 2.4 system tunable parameters for CMS.
No changes to tunable parameters were required.

Installation of <cms.2> was successful.
Update installation completed successfully

Remove saved disk files in /cms/cms_updates/3rxxx? (y/n):
```

9. Enter y.

```
Solaris patches were installed.
You will need to reboot before proceeding.
Reboot with the following command:
  shutdown -y -g0 -s6
```

Note

If you are instructed to run `shutdown`, use the displayed command. If *Solaris* patches are installed as part of the update, you **must** reboot.

The system prompt returns to your screen.

10. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

11. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
  1) Turn on CMS
  2) Turn off CMS
  Enter choice (1-2):
```

12. Enter 1 to turn on *CentreVu* CMS. The system responds:

```
Turning on X25, please wait

Starting the X.25 software – please wait
X.25 has found a valid license
The network has been brought up.

Please wait for initialization.


***CMS is now up***
```

The system prompt returns to your screen, and the *CentreVu* CMS update is complete.

13. Remove the cartridge tape after it finishes rewinding (drive light is not lit).

Verifying *CentreVu* CMS Update from Disk Files

Do the following to verify that the *CentreVu* CMS update from the disk to the files is complete:

1. Enter `pkgchk` command*:*

```
# pkgchk -n cms.*
```

The *CentreVu* CMS software is verified and updated from the disk to the files.

Restarting *CentreVu* CMS

Do the following to restart the *CentreVu* CMS software:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter `4` to select the *run_cms* option. The system responds:

```
Select one of the following
1) Turn on CMS
2) Turn off CMS
Enter choice (1-2):
```

3. Enter `1` to turn on *CentreVu* CMS. The system responds:

```
Turning on X25, please wait

Starting the X.25 software – please wait
X.25 has found a valid license
The network has been brought up.

Please wait for initialization.


***CMS is now up***
```

The system prompt returns to your screen.

Backing Up Updated *CentreVu* CMS Software

Do a full *CentreVu* CMS maintenance backup as soon as possible.

In the Back Up Data window, select `y` (yes) for the `Verify volume can be read after backup` field. In addition, the following fields should contain an `X`:

- All ACDs
- ACD-specific data
- System administration data
- Full historical data.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for instructions on backing up data.

Note

CentreVu CMS incremental maintenance backups will fail if a full backup is not done.

From an *INTEL* Platform

Updating the *CentreVu* CMS software is a two-part process. First, the *CentreVu* CMS update files are downloaded from cartridge tape to hard disk. This allows the update files to be stored on the hard disk until a convenient time to do the update. Downloading the *CentreVu* CMS update files requires an on-site technician to insert the *CentreVu* CMS update tape into the tape drive.

The second part of the process is installing the update from the hard disk files. This part of the process can be done remotely. Since *CentreVu* CMS must be turned off to update from disk files, you should do the update when customer service is not interrupted.

Saving the *CentreVu* CMS Update to Disk Files

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2, and all file systems must be mounted.

To save the *CentreVu* CMS software update to disk files, do the following steps:

1. Insert the *CentreVu* CMS update cartridge tape into the tape drive.
2. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

3. Enter `10` to select the *upd_save* option. The system responds:

```
Insert cartridge tape, then press ENTER:
```

4. Insert the *CentreVu* CMS update tape into the tape drive, and press **Return**.

The program begins downloading the *CentreVu* CMS update files onto the hard disk as indicated by these messages:

```
looking for cms package ....
install.1
install.1/INSTALL
install.1/pkgname
install.1/i_data
install.1/UNINSTALL
install.1/SETtunes
install.1/adm_func
install.1/audit
install.1/auditmap
install.1/autoconfig
install.1/pkgauditmap
install.1/auditmap.1
install install/INSTALL
install/pkgname
install/i_data
install/UNINSTALL
install/SETtunes
install/adm_func
install/audit
install/auditmap
install/autoconfig
install/pkgauditmap
install/auditmap.1
578 blocks 200+0 records in
200+0 records out Software saved in /cms/cms_updates/31xxx
                                  for later installation.
```

Note

The number of blocks, records, and filenames on your screen may differ from above depending on the size of the update release.

The system prompt returns to your screen, and the update files are downloaded from cartridge tape to hard disk.

Installing the *CentreVu* CMS Update from Disk Files

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2, all file systems must be mounted, and CMS must be turned OFF.

You install the *CentreVu* CMS update from files stored on the hard disk. These files were created in the previous section. Installing an update from disk files can be done remotely.

Do these steps to install the *CentreVu* CMS software update from disk files:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

1. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
     1) Turn on CMS
     2) Turn off CMS
  Enter choice (1-2):
```

2. Enter 2 to turn *CentreVu* CMS off. The system responds:

```
*** Turning off CMS, Please wait ***
. . . .
 *** CMS is now off ***
```

The system prompt returns to your screen.

3. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

4. Enter 8 to select the *upd_install* option. The system responds:

```
Select update to install:
   1) 31xxx
Enter choice (1-1):
```

5. Enter 1. The system responds:

```
578 blocks

Installing the CentreVu(TM) Call Management System (r3v4xxx).

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CentreVu(TM) Call Management System (31xxx) verified.
Editing Package Version 2.1 verified.
KornShell Version 11/16/88d 386 Release 2.0 verified.
X25 Network Interface: Release 1.2.1 1.51.1.7 verified.
SCSI Support Package - Version 2.0 verified.
UNIX System V/386 Release 3.2 Version 2.3 Maintenance
                                          Disk #1 verified.

INFORMIX-SQL Version 2.10.03J   01/27/89 16:43 verified.
Remote Management Package (RMP) Version 1.0 verified.

Making backup copies of old files ...
/cms/install/update/file_bkup/cms/bin/gsearch
/cms/install/update/file_bkup/cms/db/scrdef/d_search
/cms/install/update/file_bkup/cms/install/auditmap
/cms/install/update/file_bkup/cms/install/autoconfig 342
blocks

## Installing files from /cms/cms_updates/31xxx
1820 blocks

## Installing AUDITMAP in
                     /usr/admin/menu/packagemgmt/auditmaps

## Auditing package installation
```

The audit requires several minutes to complete.

If the audit is successful, this message displays:

```
>> No errors detected during audit.

Setting UNIX system tunable parameters for CMS with
networking.
This will take approximately three minutes to complete.
No changes to tunable parameters were required.

The installation of the Call Management System (r3v4xxx)
                                                is complete.

Update installation completed successfully.

Remove saved disk files in /cms/cms_updates/r3v4xxx? (y/n):
```

6. Enter y.

   Note

   If the tunable parameters were changed, the program prompts you to reboot. In this case, execute the `shutdown -i6 -g0 -y` command.

   The system prompt returns to your screen.

7. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The system responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

8. Enter 4 to select the *run_cms* option. The system responds:

```
  Select one of the following
  1) Turn on CMS
  2) Turn off CMS
  Enter choice (1-2):
```

9. Enter 1 to turn on *CentreVu* CMS. Response:

```
  Please wait for initialization \&.

  *** CMS is now up ***
```

The system prompt returns to your screen, and the *CentreVu* CMS update is complete.

Removing the Currently Installed Update

Prerequisites: You must be logged in as *root*, the computer must be in run-level 2, all file systems must be mounted, and *CentreVu* CMS must be turned OFF.

The CMS software provides an option that removes the currently installed update and restores the *CentreVu* CMS software to the previous base load.

Do these steps to remove the *CentreVu* CMS update:

1. Access the *CentreVu* CMS Services menu by entering:

```
# cmssvc
```

The program responds:

```
AT&T CentreVu(TM) Call Management System Services Menu

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize capabilities/capacities
  3) backup       Filesystem backup
  4) run_cms      Turn CentreVu CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

2. Enter 9 to select the *upd_remove* option.

   The program responds with a list of files that will be changed due to the removal of the update.

```
. . . . . .
. . . . . .
. . . . . .
/cms/install/auditmap
/cms/install/autoconfig
```

The system prompt returns to your screen.

The update is removed from the *CentreVu* CMS software, and you can now turn on the *CentreVu* CMS software.

Removing a Software Package

This section describes the procedures involved in removing a software package from your system.

To remove a software package, do the following:

1. Enter:

```
# pkginfo
```

   The system responds with a list of packages installed on your system. For example:

```
application cms                Call Management System
application cms.2              Call Management System
.
.
.
```

2. Enter the `pkgrm` command to remove the application of choice. For example:

```
# pkgrm cms.2
```

   The system responds:

```
The following package is currently installed:

             cms.2             Call Management System
                                (sparc) 3rxxx

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

3. Enter y.
   The system responds with a list of files that will be changed due to the removal of the package.

```
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
## Removing pathname in class <ind>
.
.
.
```

If the removal is successful, this message displays:

```
Restoring old CMS Software
/cms/install/auditmap
/cms/install/autoconfig
/cms/install/bin/turn_off_cms
.
.
Updating installation software database.
.
.
.
```

The system prompt returns to your screen.

Performing Backups and Restores

A backup copies the data stored on the *CentreVu* CMS R3V4 hard disk to a removable tape (for example 5- or 14-GB). Regular backups provide a way to recover data that would otherwise be lost. *CentreVu* CMS provides the following two different types of backups:

- CMSADM File System Backup
- *CentreVu* CMS Maintenance Backup — Full and Incremental.

From backup tape(s) you can restore your system and data. For more information about backups and restores, see the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document.

Performing a CMSADM File System Backup

The CMSADM file system backup saves all the file systems on the machine onto a tape. This includes:

- *Solaris* 2.4 system files and programs
- *CentreVu* CMS programs and data
- Non-CMS customer data placed on the computer (in addition to the *CentreVu* CMS data).

The CMSADM file system backup should be done:

- At the factory

  This backup is shipped with a new system and can be used during installation, if necessary.

- After the *CentreVu* CMS is provisioned

  This backup contains the *Solaris* system files and programs and *CentreVu* CMS configuration data placed on the computer by TSC provisioning personnel.

  Note

  In addition, field technicians should perform a *CentreVu* CMS full maintenance backup before they turn a new system over to the customer. See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for information on backing up data.

- After the *CentreVu* CMS software is upgraded or updated
- Monthly.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for information on backup strategy.

The number of cartridge tapes required to complete a CMSADM file system backup depends on the amount of data on the system and the capacity of the backup tape. The program estimates the number of tapes required and informs the user.

Before starting the backup procedures in this section, log in as *root,* and execute this command:

```
# lp /etc/vfstab
```

The output from the printer is necessary when doing a system restore.

Note You should bundle the printout of the */etc/vfstab* file with the system backup tape(s) for future reference.

Do these steps to perform a CMSADM file system backup:

1. At the system console, log in as *root,* and verify that the computer is in a *Solaris* multi-user state (2 or 3).
2. To check if you are in the multi-user state, execute this command:

```
# who -r
```

Note The `who -r` command gives you one line of output that describes the state of the terminal.

A sample response for the `who -r` command for a machine in run-level 3:

```
who -r

. run-level 3 Feb 2 16:52 3 0 S
```

3. In multi-user state, execute the following command to access the *CentreVu* CMS Administration menu:

```
# cmsadm
```

The *CentreVu* CMS Administration menu displays:

```
AT&T CentreVu(TM) Call Management system Administration Menu
Select a command from the list below.
   1) acd_create  Define a new ACD
   2) acd_remove  Remove all administration and data for an ACD
   3) backup      Filesystem backup
   4) diskmap     Estimate disk requirements
   5) memory      Estimate memory requirements
   6) realtime    Estimate real-time report refresh rate
   7) pkg_install Install a feature package
   8) pkg_remove  Remove a feature package
   9) run_cms     Turn CentreVu CMS on or off
Enter choice (1-9) or q to quit:
```

4. Enter 3 to select the `backup` option.

The system responds:

```
Select tape drive to use:
   1) 150 MB cartridge tape
   2) 60 MB cartridge tape
   3) 14.0 Gybte 8mm tape
   4) 5.0 Gybte 8mm tape

Enter choice (1-4):
```

Note All systems are shipped with one or more tape drives (QIC-150, 5-GB, and/or a 14-GB). For systems with multiple tape drives, the QIC-150 is the first drive on the SCSI chain. For quicker backups (1 hour versus several hours), we recommend using the 5- or 14-GB tape drive.

`/dev/rmt/0` indicates the first tape drive in the SCSI chain.

`/dev/rmt/1` indicates the second tape drive in the SCSI chain.

`/dev/rmt/0c` indicates the first tape drive in the SCSI chain in compressed mode (only the 14-GB tape drive can support compressed mode).

`/dev/rmt/1c` indicates the second tape drive in the SCSI chain in compressed mode.

5. Select the tape drive to use (for example: 1, 2, 3, or 4).

Note If you have two tape drives and you choose 1, 2, or 4, the system responds:

```
Select the tape drive to use:
     1) /dev/rmt/0
     2) /dev/rmt/1
Enter choice (1-2):
```

If you have two tape drives and you choose 3 (14-GB), the system responds:

```
Select the tape drive to use:
     1) /dev/rmt/0c
     2) /dev/rmt/1c
Enter choice (1-2):
```

If you have only one tape drive, the system begins calculating the approximate number of tapes required. You are not prompted.

If the number of tapes required is one, the system responds:

```
The backup will need approximately 1 tape.

Please insert the first cartridge tape into </dev/rmt/1>.

Press ENTER when ready:
```

If the number of tapes required is more than one, the system responds:

```
The backup will need approximately <X> tapes.

You will be prompted for additional tapes.

Be sure to number the cartridge tapes consecutively in the
order they will be inserted.

Please insert the first cartridge tape into </dev/rmt/0>.

Press ENTER when ready:
```

6. To begin the backup, insert the cartridge tape(s) and press Return.

   If *CentreVu* CMS is turned on, the system responds:

```
The backup is about to begin, CMS is currently on. CMS will be
turned off automatically during that portion of the backup
which needs CMS off. Press ENTER to proceed or BREAK to quit.
```

7. To continue the backup, press Return.

   If you are using one tape, the system responds:

```
Backing up files...
.................
.................
XXXXXX Blocks

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

Note Dots continue to appear as the system is being backed up.

If you are using more than one tape, a message prompts you when to enter the next tape:

```
Backing up files ...
.................
.................
.................
Please remove the current tape, number it, insert tape number
X, and press ENTER.
```

8. If you are using more than one tape, press Return to continue.

```
.................
.................
.................
XXXXXX Blocks


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

> **Note**
> When you insert another tape, you must allow the tape to rewind and reposition before you press Return.

You are returned to the system prompt.

9. Label the CMSADM backup tape(s) with the date and *CentreVu* CMS version.

Restoring from a CMSADM File System Backup

If backups are available, the file systems on the *Sun SPARCserver* computer can be restored when an accidental loss of data occurs.

To restore the file systems from a CMSADM backup, do the following:

1. Obtain the cartridge tape(s) that contain the system backups.
2. Obtain the printout of the */etc/vfstab* file that was stored with the backup tapes.
3. See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for information on recovering from disk corruption or recovering from a disk crash.

Checking Contents of CMSADM Backup Cartridge Tape

To list the content of the cartridge tape used for a CMSADM backup, do the following:

1. Insert the first backup tape.

2. To list the files on the tape, enter the following command:

```
# cpio -ict -C 10240 -I <device name> -M "Please remove the
current tape, insert tape number %d, and press ENTER"
```

The system displays a list of files.

Performing a *CentreVu* CMS Maintenance Backup

CentreVu CMS maintenance backups save only *CentreVu* CMS data (administration and historical).

The *CentreVu* CMS data for each ACD should be backed up as follows:

- After the *CentreVu* CMS is provisioned
- After the *CentreVu* CMS software is upgraded or updated
- Weekly.

You run these backups from the `Maintenance: Back Up Data` window. See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for information on backing up data and information on backup strategy.

Performing a *CentreVu* CMS Maintenance Restore

The *CentreVu* CMS R3V4 software application allows you to restore *CentreVu* CMS data lost due to system failure, disk crashes, etc. You can restore all *CentreVu* CMS data that you previously backed up via a *CentreVu* CMS maintenance backup.

Note

You can execute a *CentreVu* CMS maintenance restore from the console terminal; however, the console terminal must be powered on and *CentreVu* CMS must be in the single-user mode. You can verify that you are in the single-user mode from the System Setup: CMS State window.

You run a restore from the Maintenance: Restore Data window. See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for information on restoring data.

After the CMSADM restore is completed or after you have the system to an operable state, restore the *CentreVu* CMS administration and historical data from available *CentreVu* CMS maintenance backups.

CentreVu CMS Maintenance Backups Available

This restore loads the *CentreVu* CMS data up to the time of the last *CentreVu* CMS maintenance backup. See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for information on restoring data.

Only Full Maintenance Backups Available

If only full *CentreVu* CMS maintenance backups are available, then do a *manual* restore of the following:

- System administration data
- ACD-specific administration data
- Non-CMS data.

Combination Full and Incremental Maintenance Backups Available

If a combination of full and incremental *CentreVu* CMS maintenance backups are available, the following steps are the fastest way to get the system running:

1. Load the *most recent* full backup tape.
2. Do a manual restore of the ACD-specific data, system data, and non-CMS data by entering `n` in the `Restore from last backup (y/n):` field. Once the historical data has been restored, you can change CMS to the multi-user state.
3. Restore the historical data from the remaining backups. This restore can be done by selecting all of the historical data files (agent, split, vdn, vector, trunk, tkgrp, forecast data f_*) via “Select Tables” to restore only historical data.

Note

When the *CentreVu* CMS restore is complete, turn the *CentreVu* CMS off and then back on so the *CentreVu* CMS runs with the newly restored administration data. See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for procedures on turning *CentreVu* CMS off and on.

Chapter 3
User Interface

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Overview

This chapter discusses the Release 3 Call Management System (R3 CMS) Migrate Data and the Release 2 (R2) CMS Migrate Data windows and their associated Acknowledge windows.

R3 Migrate Data Window

Use the following window (Figure 3-1) to migrate either Release 3.0 (R3.0) or Release 3 Version 2 (R3V2) CMS data on an *INTEL** machine to Automatic Call Distribution (ACDs) on the *CentreVu*™ CMS R3V4 *Sun*† *SPARCserver*‡ Platform. This window is located in the System Setup subsystem.

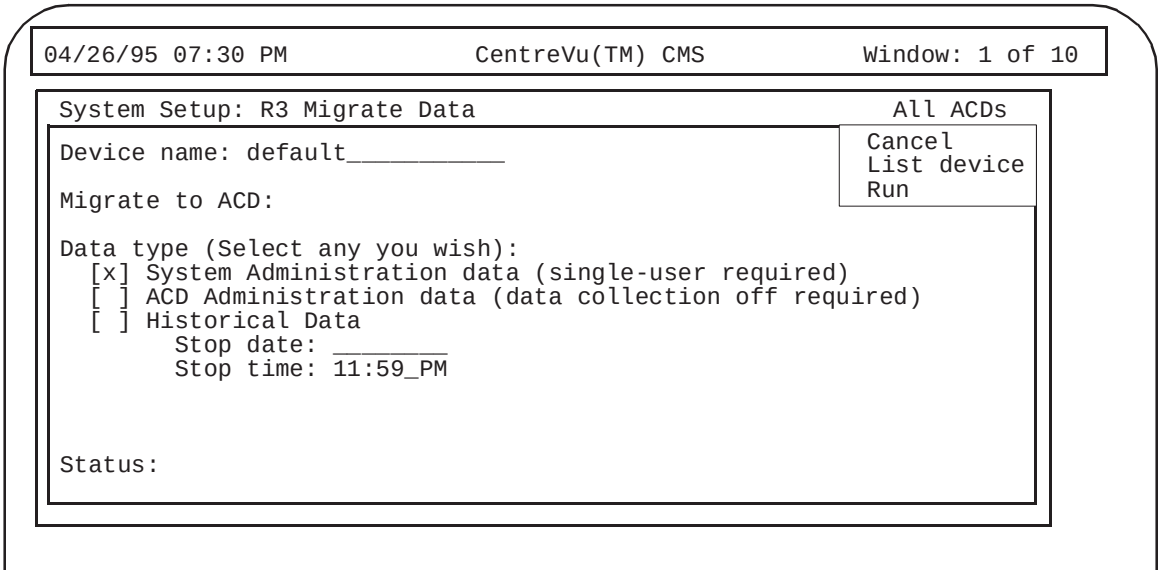

Figure 3-1: R3 Migrate Data Window

*INTEL is a registered trademark of Intel Corp.
†Sun is a registered trademark of Sun Microsystems, Inc.
‡SPARCserver is a registered trademark of SPARC International, Inc.

Field Descriptions

`Device name:`

Enter the device name from which the data being migrated will be read.

Valid input is the name of a device that has been defined in the Maintenance: Backup/Restore Devices window (normally `default`). This field is 20 characters long.

`Migrate to ACD:`

Enter the name or number of the ACD into which data will be migrated.

Valid input is a number 1 through 4 or the synonym corresponding to an existing “live” ACD on the *Sun SPARCserver* Platform. This field is 20 characters long.

`Data type:`

Choose the type of data you are migrating: system administration data, ACD administration data, or historical data. Appendix B, “Data Migration Tables,” lists the data items and their associated type. The CMS must be in the single-user mode to migrate system administration data. The CMS must have data collection turned off to migrate ACD administration data. The CMS may be in the single-user or multi-user mode to migrate historical data.

You can select one or more data type at a time.

`Stop date:`

Enter the date through which you wish to record data for migration to the CMS. The migration process does not migrate data collected after the stop date you specify.

Valid input is a date in mm/dd/yy or in relative format. This field is 8 characters long. If you leave the this field blank, the program migrates data up to the date written on the tape by the CMS Maintenance Backup procedure.

`Stop time:`

Enter the time through which you wish to record data for migration to the CMS. The migration process does not migrate data collected after the stop date and time you specify.

Valid input is a time in hh:mmXM or in HH:mm (24-hour) format. This field is 8 characters long.

Action List Entries

`Cancel`

Results in an acknowledgment window that asks if you want to cancel the migration. If you answer `y` to terminate the migration, the migration is stopped and “Canceled” is displayed on the status line.

`List device`

Brings up a secondary window listing the available device names defined in the Maintenance: Backup/Restore Devices window. The window lists the device names, paths, descriptions, and device types.

`Run`

Starts the migration.

If you elect to migrate system administration data, the `Run` entry verifies that CMS is in the single-user mode.

If you elect to migrate ACD administration data, the `Run` entry verifies that data collection is off.

If you elect to migrate historical data, the migration may proceed regardless of the CMS state, and data collection may be turned on.

The status field reports the progress.

Additional Requirements

- You cannot execute this window to migrate data for a nonsupported migration path.
- You cannot run this window on a timetable.

Operational Cases

The following cases may occur during the execution of the R3 Migrate Data window. Each case describes the input conditions, the application action, and what to do for each condition.

User Permission

Input Condition You do not have write permission to the System Setup subsystem.

Application Action The Run Action Item is not displayed.

What To Do If you cannot run this window, change permissions so that you have the appropriate write permission. See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document for permissions information.

Invalid Device

Input Condition You entered an invalid device name in the device field.

Application Action The device name is validated when the Run entry is selected and the following acknowledge window is displayed:

```
Invalid device name entered. Press Return to go back to the
previous window and specify the device name again.

Press return to continue:
```

What To Do Press Return to get back to the main window and enter a valid device, or administer the device in the Maintenance: Backup/Restore Devices window.

Invalid ACD

Input Condition You entered an invalid ACD number or name (synonym) in the ACD field.

Application Action The following message window is displayed:

```
Enter ACD name or number.
Numeric input must be between 1 and 4. Decimal points are not
allowed.
The ACD name must already exist in the Dictionary subsystem.
Multiple values are not allowed.
Enter the ACD you are migrating data to.
```

What To Do Enter a valid ACD name or number to clear the message window. Check spelling, and administer name in Dictionary.

Run Conditions — Single-User

Input Condition You selected System Administration data and CMS is in the multi-user mode.

Application Action The following acknowledge window is displayed:

```
ERROR: CMS must be in Single User state to
migrate System Administration data.

Press return to continue:
```

What To Do Press Return to clear the acknowledge window and use the System Setup: CMS State window to change CMS to the single-user state.

Run Conditions — Data Collection Off

Input Condition You selected ACD Administration data, and data collection for this target ACD is turned on.

Application Action The following Acknowledge window is displayed:

```
ERROR: Data Collection must be off for the ACD
to migrate ACD Administration data.

Press return to continue:
```

What To Do Press Return to clear the acknowledge window, and use the System Setup: Data Collection window to turn off data collection for the target ACD.

Tape Not Mounted

Input Condition Tape is not mounted in the designated tape drive.

Application Action The following acknowledge window is displayed:

```
ERROR: Cannot read the volume. Please check
the volume and/or the device drive.

Press return to continue:
```

What To Do Press Return to clear the acknowledge window. Another acknowledge window displays to prompt for the volume.

Volume Read Error

Input Condition There is an error with the volume read.

Application Action The following acknowledge window is displayed:

```
ERROR: Migration errors have occurred with the current volume.
Enter yes to skip this volume or no to cancel the migration.

Enter 'y' for yes or 'n' for no:
```

An error message indicating the read problem is written to the Services error log. The status line displays “Failed,” and the main window is locked.

What To Do If you enter n, the migration stops. “Canceled” is displayed on the status line, and the window is unlocked. The following error message is written to Customer and Services logs: `Migration canceled by the user`.

If you enter y, the status line is cleared, and the Volume Prompt (subsequent volume) window is displayed. In either case, if a table is involved, its migration is not completed, but the table’s migrated data is accessible.

Non-CMS Volume

Input Condition The mounted volume is not a CMS backup volume.

Application Action The following acknowledge window is displayed:

```
ERROR: Mounted volume is not a CMS backup volume.

Press return to continue:
```

What To Do Press Return to clear. Another acknowledge window displays to prompt for the correct volume.

Data Write Error

Input Condition There is an error with data write.

Application Action The following acknowledge window is displayed:

```
ERROR: Migration errors have occurred with table=ttttt.
Enter yes to skip the table or no to cancel the migration.
Enter 'y' for yes or 'n' for no:
```

An error message indicating that the reload problem is written to the Customer and Services error logs. The status line displays “Failed,” and the main window is locked.

What To Do If you enter y, the acknowledge window clears. The status line displays “Working,” and the migration continues with the next table on the volume.

If you enter n, the migration stops. The status line displays “Canceled,” and the window is unlocked. The following error message is written to Customer and Services logs: `Migration canceled by the user.`

In either case, depending on the error, the table may or may not be accessible. Manual correction may have to be performed.

If the customer encounters this message, they should call the TSC. See page 6 in the Preface.

Process Is Running

Input Condition Process is reloading data to disk.

Application Action The main window's status line displays “Working,” and then the status field reports the migration status.

What To Do You can exit the window and bring it up later without affecting the actual migration process running in the background. In addition to using the migration log file, you can use the window to display feedback from the migration process.

Volume Prompt — First Volume

Input Condition The migration is started, and the first volume is needed.

Application Action The following acknowledge window is displayed:

```
To start the migration, load the first CMS Maintenance Backup
volume into the device drive.
Enter yes when ready or no to cancel.

Enter 'y' for yes or 'n' for no:
```

The main window is locked.

What To Do If you load a backup volume and enter y, the acknowledge window clears. The migration checks for these conditions before starting the reload:

- CMS Maintenance Backup volume
- Database compatibility
- Volume order
- Supported migration path.

If you enter n, the migration stops. The status line displays “Canceled,” and the window is unlocked. The following error message is written to Customer and Services logs: `Migration canceled by the user.`

Volume Prompt — Subsequent Volume

Input Condition The backup spans multiple tapes, and the current tape is not the last one.

Application Action The following acknowledge window is displayed:

```
To continue the migration, load volume xxxxxxxxx into the
device drive.
Enter yes when ready or no to cancel the migration.

Enter 'y' for yes or 'n' for no:
```

The main window is locked. The volume label should be the next volume in sequence.

What To Do Unload the current volume, and load the requested volume. If you load the volume and enter y, the acknowledge window clears, and the migration checks to make sure that it has the right volume before starting the reload.

If you enter n, the migration stops. The status line displays “Canceled,” and the window is unlocked. The following error message is written to Customer and Services logs: `Migration canceled by the user.`

Volume Order

Input Condition The mounted volume is not the volume in sequence for reload.

Application Action The following acknowledge window is displayed:

```
ERROR: Mounted volume is not the requested volume.

Press return to continue:
```

What To Do Press Return to clear. Unload current volume and load requested volume.

Partial Migration and Restart

Input Condition The migration has been running, is stopped or aborted, and then restarted.

Application Action The following acknowledge window displays:

```
Migration has been run before, but did not complete.
Enter yes to continue the migration where it left
or no to rerun the migration from the beginning.
Enter y for yes or n for no:__
```

What To Do

If you enter y, the migration starts from where it stopped. That is, the program skips over the data that already has been migrated.

Entering y saves time, especially if you are migrating historical data. (If you are migrating administration data, entering y prevents an excessive amount of messages from being entered into the migration log.)

If you enter n, the program starts the migration from the beginning of the data. If you restart the administration migration, numerous `already exists` messages will appear in the migration log due to the data already migrated.

Note Only enter n for special instances. For example, you would want to start the migration from the beginning if you cleaned up the database.

Completed Migration and Restart

Input Condition You have completed the migration and then restarted it using the same tape.

Application Action The following acknowledge window displays:

```
Migration has been run before.
Do you want to run it again?
Enter y for yes or n for no:__
```

What To Do If you enter n, the program returns you to the action list in the R3 Migrate Data window.

If you enter y, the program starts the migration from the beginning of the data. (If you are migrating administration data, numerous "`already exists`" messages will appear in the migration log due to the data already migrated.)

Note Only enter y for special instances. For example, you would want to start the migration from the beginning if you cleaned up the database.

Tape Changed

Input Condition You run a migration, change the tape, then restart the migration. The migration can be either incomplete or complete.

Application Action The following acknowledge window displays:

```
Migration has been run before, but the tape containing
the migration data was not the same as the one currently
in the tape drive. Do you want to run the migration
using the tape in the drive?
Enter y for yes or n for no:__
```

What To Do

If you enter y, the program starts the migration from the beginning of the data.

Note

Only enter y for special instances. For example, you would want to start the migration from the beginning if you cleaned up the database.

If you enter n, the program returns you to the action list in the R3 Migrate Data window.

R2 Migrate Data Window

Use the following screen (Figure 3-2) to migrate R2 CMS data residing on a 3B2 computer to ACDs on the *CentreVu* CMS R3V4 *Sun SPARCserver* Platform.

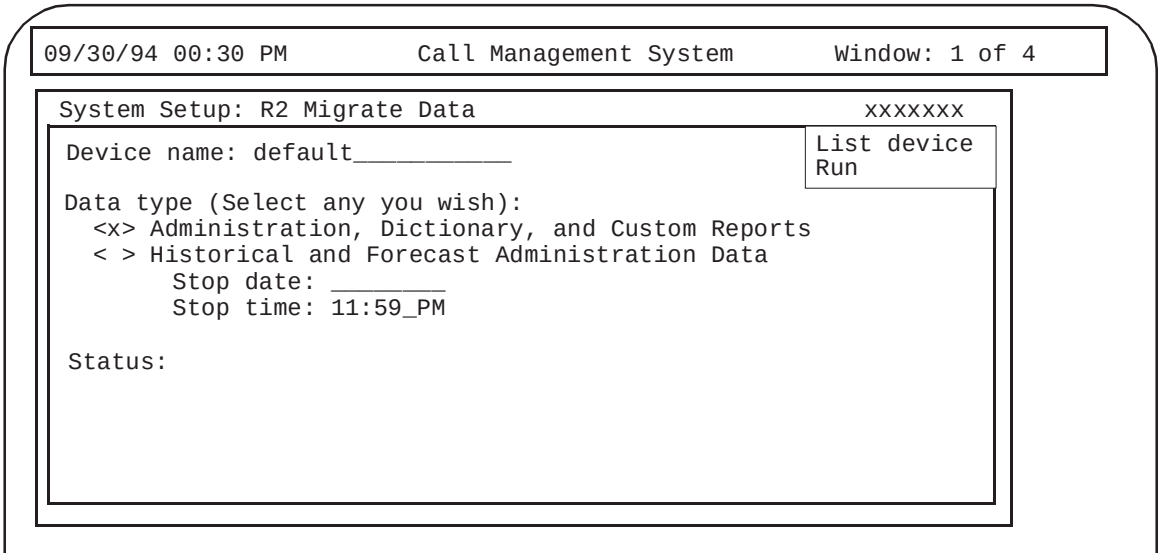

Figure 3-2: R2 Migrate Data Window

Field Descriptions

`Device name:`

Enter the device name from which the data being migrated will be read. Valid input is the name of a device that has been defined in the Maintenance: Backup/Restore Devices window (normally `default`). This field is 20 characters long.

`Data type:`

Choose the type of data you are migrating: system administration, dictionary, and custom report; or historical data.

`Stop date:`

Enter the date through which you wish to have data migrated to the CMS. The migration process will not migrate data collected after the stop date you specify.

Valid input is a date in mm/dd/yy or in relative format. This field is 8 characters long. If you leave the this field blank, the program migrates data up to the date written on the tape by the CMS Maintenance Backup procedure.

`Stop time:`

Enter the time through which you wish to have data migrated to the CMS. The migration process will not migrate data collected after the stop date and time you specify.

Valid input is a time in hh:mmXM or in HH:mm (24-hour) format. This field is 8 characters long.

Action List Entries

`List device`

Brings up a secondary window listing the available device names defined in the “Backup/Restore Devices” window. The window lists the device names, paths, descriptions, and device types.

`Run`

Starts the migration.

When the migration completes successfully, the status line displays this message: `Processing completed, see /cms/migrate/migrate.log. This file may contain a list of instructions for manually completing the migration`.

If the migration cannot complete successfully, the status line displays this message: `Failed to migrate: Examine the file, /cms/migrate/migrate.log, for problems`.

If the migration cannot complete successfully, the status line displays this message: `The target ACD(x) has not been installed. Restart the migration after installing the ACD.`

Operational Cases

The following cases may occur during the execution of the R2 Migrate Data window. Each case describes the input conditions, the application action, and what you should do.

Partial Migration and Restart

Input Condition The migration has been running, is stopped or aborted, and then restarted.

Application Action The following acknowledge window displays:

```
Migration has been run before, but did not complete.
Enter yes to continue the migration where it left off
or no to rerun the migration from the beginning.
Enter y for yes or n for no:__
```

What To Do

If you enter y, the migration starts from where it stopped. That is, the program skips over the data that already has been migrated.

Entering y saves time, especially if you are migrating historical data. (If you are migrating administration data, entering y prevents an excessive amount of messages from being entered into the migration log.)

If you enter n, the program starts the migration from the beginning of the data. If you restart the administration migration, numerous `already exists` messages will appear in the migration log due to the data already migrated.

Completed Migration and Restart

Input Condition You have completed the migration and then restarted it using the same tape.

Application Action The following acknowledge window displays:

```
Migration has been run before.
Do you want to run it again?
Enter y for yes or n for no:__
```

What To Do If you enter n, the program returns you to the action list in the R2 Migrate Data window.

If you enter y, the program starts the migration from the beginning of the data. (If you are migrating administration data, numerous `already exists` messages will appear in the migration log due to the data already migrated.)

Tape Changed

Input Condition You run a migration, change the tape, then restart the migration. The migration can be either incomplete or complete.

Application Action The following acknowledge window displays:

```
Migration has been run before, but the tape containing
the migration data was not the same as the one currently
in the tape drive. Do you want to run the migration
using the tape in the drive?
Enter y for yes or n for no:__
```

What To Do If you enter y, the program starts the migration from the beginning of the data.

If you enter n, the program returns you to the action list in the R2 Migrate Data window.

Stop Date/Stop Time Validation

Input Condition You selected to migrate historical data, and you enter `Run`.

Application Action The following window appears:

```
The stop date and time are critical to the migration.
          <date and time>
Are you sure they are correct (y or n)?
Enter y for yes or n for no:__
```

What To Do Enter `y` if you are sure that the stop date and stop time are correct. `Working` appears in the lower left-hand corner of the R2 Migrate Data window. The `Status` field displays various messages that tell you what is being processed.

Enter `n` if you wish to enter a new stop date and stop time. The program returns you to the `Stop date` field of the R2 Migrate Data window. Enter a new stop date and stop time, and select `Run`.

End of Current Volume

Input Condition The historical data migration spans multiple tapes, and the current tape is not the last one.

Application Action The following window is displayed:

```
***** END OF CURRENT TAPE *****
Insert proper tape; wait for retension pass to complete
then press <return> to continue.
```

What To Do Replace the current tape with the next tape, wait for the retension to complete (about 3 minutes), and then press **Return**.

Print Migration Log

Input Condition Either the migration completed successfully or failed.

Application Action The following window is displayed:

```
Do you want to print the migration log?
Enter y for yes or n for no:__
```

What To Do Enter y to print the log or n to not print the log. The program returns you to the R2 Migrate Data window.

Chapter 4
INTEL-to-*Sun* Migration — R3V1, R3V2 › R3V4

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Overview

This chapter describes how to migrate data from an R3V1 and R3V2 Call Management System (CMS) on an *INTEL*[*] platform to an Release 3 Version 4 (R3V4) *CentreVu*™ CMS on a *Sun*[†] *SPARCserver*[‡] platform. This section applies to single or multi-ACD (Automatic Call Distribution) systems.

New or First ACD (ACD1): When you create a new ACD or migrate the first ACD (ACD1) to the newly installed *Sun SPARCserver* platform, you must perform Steps 1-4, Steps 5-6, and Steps 9-21 in Table 4-1 on page 2 of this chapter.

ACD 2, 3, and 4: When you are migrating ACDs 2, 3, or 4 to the newly installed *Sun SPARCserver* platform, you must perform Steps 1-4, Steps 7-8, and Steps 9-21 in Table 4-1 on page 2 of this chapter. These steps must be followed for each ACD you migrate.

> Moving multiple ACDs to the *Sun SPARCserver* platform can cause collisions in the System Administration data. See the “Migrations” section in Chapter 1, “Introduction,” for information on potential collisions and their solutions.

*INTEL is a registered trademark of Intel Corp.
†Sun is a registered trademark of Sun Microsystems, Inc.
‡SPARCserver is a trademark of SPARC International, Inc.

Table 4-1 provides the steps that must be followed when migrating data to a newly installed platform.

Table 4-1: *INTEL*-to-*Sun* Migration — R3V1, R3V2 → R3V4 Procedures

Step	Action	Responsible Party
	Steps for both single and multiple ACD systems	
1	Install external *X-TAPE** drive	AT&T field technician
2	Do a "cmsadm" backup from the *INTEL* platform	customer
3	Do a full maintenance backup from the *INTEL* platform	customer
4	Back up customer *UNIX* system files	customer
	Steps for a new ACD or first ACD (ACD1)	
5	Install the *Sun SPARCserver* Platform	AT&T field technician
6	Administer printers for the *Sun SPARCserver* Platform	customer
	Steps for ACDs 2, 3, or 4	
7	Record information about existing ACD	Technical Service Center (TSC)
8	Create an ACD on the *Sun SPARCserver* platform	TSC
	Steps for both single and multiple ACD systems	
9	Migrate system administration data (Do this step once if subsequent ACDs are from the same *INTEL* box.)	TSC
10	Investigate the migration log	TSC
11	Migrate ACD administration data	TSC
12	Restore customer *UNIX* system files	customer
13	Busy out link	AT&T field technician
14	Move link	AT&T field technician
15	Start *Sun SPARCserver* Platform data collection	TSC
16	Do an incremental backup from the *INTEL* platform	customer
17	Migrate full historical data	customer
18	Migrate incremental historical data	customer
19	Do a "cmsadm" backup from the *Sun SPARCserver* Platform	customer
20	Do a full maintenance backup from the *Sun SPARCserver* Platform	customer
21	Remove external *X-TAPE* drive	AT&T field technician

*X-TAPE is a registered trademark of DBM Associates.

Note: The customer may contract AT&T to complete Steps 16 through 20 on a time-and-materials basis.

Procedure

Perform the following steps to do an *INTEL*-to-*Sun* migration.

1. Install External *X-TAPE* Drive

Task Performed By: AT&T field technician

When migrating from the *INTEL* platform to the *Sun SPARCserver* Platform, AT&T field technicians must install an external 5-Gbyte *X-TAPE* drive on the existing *INTEL* machine. The *X-TAPE* drive installation should take place about one week prior to the migration. The *X-TAPE* installation allows the *INTEL* computer to:

- back up data faster than with the internal ¼ inch cartridge tape drive
- use less tapes during the backup.

AT&T field technicians will then use the 5-Gbyte tape drive on the *Sun SPARCserver* Platform to do the migration.

How to Order the *X-TAPE* Drive

To order an *X-TAPE* kit, call the Call Center Helpline at the TSC:

1. Dial the AT&T Call Center Helpline at 1-800-344-9670.
2. Press 1 from a touch-tone phone. (If you are dialing from a rotary phone, you will have to wait for an agent.)
3. Press the number that prompts “if you are responding to a call back request and have the five-digit extension.”
4. Dial the extension 84699.

Required Parts

The *X-TAPE* kit should contain the following parts:

- *X-TAPE* drive (Model 5000)
- power cord
- *X-TAPE* software diskette (386 version)
- two SCSI (Small Computer System Interface) extension cables (2 feet and 6 feet)
- three *EXATAPE** data-certified 8-mm cartridge tapes
- several short (2 feet) SCSI cables
- SCSI terminator.

Distance Limitations

The SCSI standard supports a maximum length of 19.7 feet (6 meters) for the SCSI bus. To ensure that the SCSI bus does not exceed this limit, you need to complete the table below.

Note Be sure to include the external *X-TAPE* drive and cables in your calculations.

Step	Action	Distance
1	Start with the value of 4 feet for the internal SCSI cabling in the host computer.	4 feet
2	Add together the lengths of all external SCSI cables, and enter this value in the distance column at right.	
3	Multiply the number of external drives by 1 foot, and enter this value in the distance column (for example, three external drives equals 3 feet).	
4	Add together the distances from Steps 1, 2, and 3, and enter this value in the distance column. This is an approximation of the total SCSI bus length.	

If the total in Step 4 is 18 feet or less, proceed with the *X-TAPE* installation as normal. If the total is more than 18 feet, call the AT&T Call Center Helpline on 1-800-344-9670 to determine how to proceed.

*EXATAPE is a trademark of EXABYTE Corporation.

Procedure

From the *INTEL* platform, complete the following steps to install the *X-TAPE* drive:

1. Insert the **DBM Associates *X-TAPE* Module (386 version)** diskette into the flexible disk drive.
2. Log in as *root* at the console terminal.
3. Enter the following command to determine SCSI ID availability:

```
# /etc/scsi/scsiconf
```

A screen similar to the following displays:

```
                SCSI CONFIGURATION

       Bus ID          Target          Logical Unit
SCSI (S.E.) Bus ID7   SD01 ID0     1049 MB Hard Disk ID0
                      SD01 ID1     1049 MB Hard Disk ID0
                      ST01 ID3     Cartridge Tape   ID0
```

In the above screen, the `Target` column lists the SCSI IDs being used by the system (in this example, ID0, ID1, and ID3). SCSI ID7 (the Bus ID) is reserved for the SCSI host adapter board and is not available for use by other devices.

4. Select a SCSI ID not being used by the system to assign to the *X-TAPE* drive.

Note If no SCSI IDs are available, you will have to disconnect the host adapter cable from the internal ¼-inch cartridge tape drive and use SCSI ID3 for the *X-TAPE*.

5. Set the SCSI ID for the *X-TAPE* drive to the ID selected in Step 4. The SCSI ID switches are located on the rear panel of the unit and are numbered 1 through 8. Switches 4 through 8 are not used. See the table below to set the switches.

SCSI ID	SW1-1	SW1-2	SW1-3
0	off	off	off
1	on	off	off

SCSI ID	SW1-1	SW1-2	SW1-3
2	off	on	off
3	on	on	off
4	off	off	on
5	on	off	on
6	off	on	on
7	on	on	on

Note On = switch pushed toward numbers on switch housing.

6. Enter the `installpkg` command to install the *X-TAPE* software. Respond to the screen prompts as you proceed through the program. In particular, perform these actions when prompted:
   a. Enter `y` (yes) to the prompt about replacement of support for AT&T 320/525-MB SCSI Tape Drive.
   b. Press **Return** in response to the automatic shutdown message.
   c. Remove the diskette from the flexible disk drive.
7. When you see the `Reboot the system now` message, power down the system.
8. Power down all external drives, if equipped.

9. Depending on the configuration, perform the appropriate step below:

   a. If external drives are present, disconnect the SCSI cable originating from the host adapter board from the first external drive. You will install the *X-TAPE* drive as the first external drive on the SCSI bus.

   b. If no external drives are present, and a terminating resistor is installed on the host adapter board, remove it. This should be the case for 6386 and *StarServer* computers.

      The host adapter board on the Model 3332 does not require a terminating resistor because termination is software controlled.

      Figure 4-1 through Figure 4-4 show the location of the host adapter board.

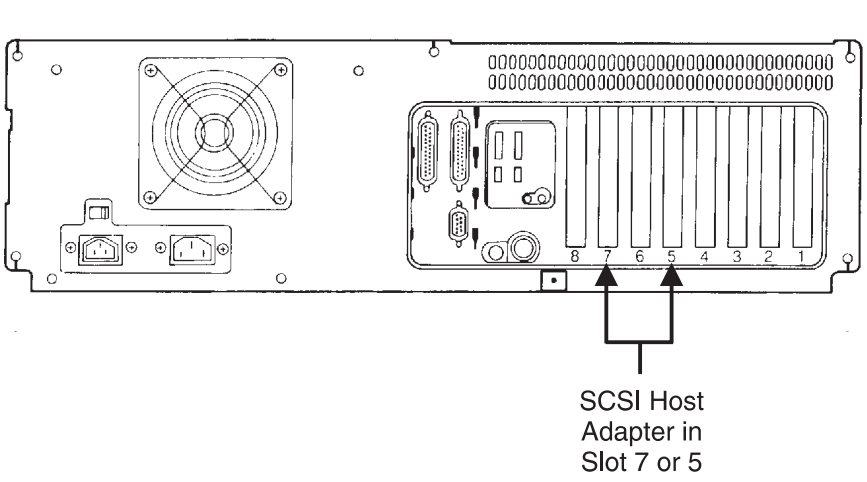


Figure 4-1: 6386/25 WGS Host Adapter Board Locations

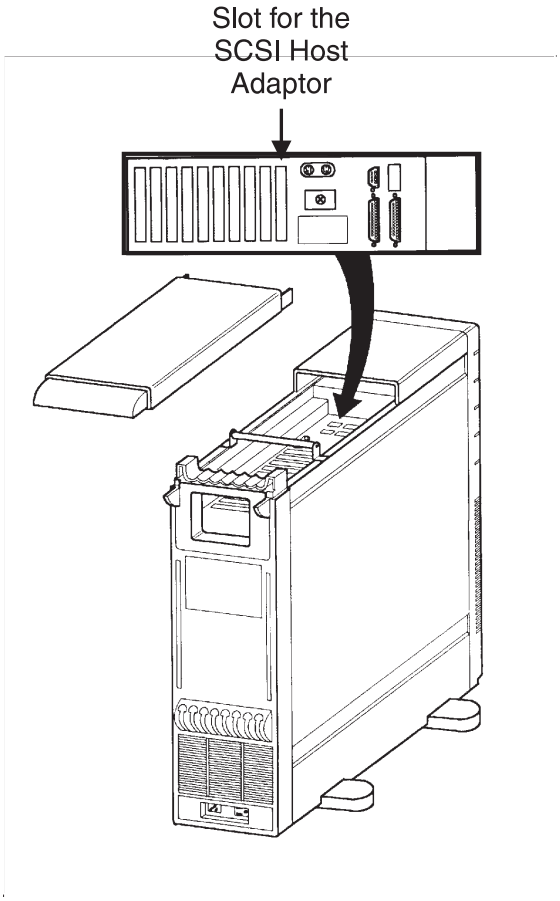


Figure 4-2: 6386/33 WGS Host Adapter Board Location

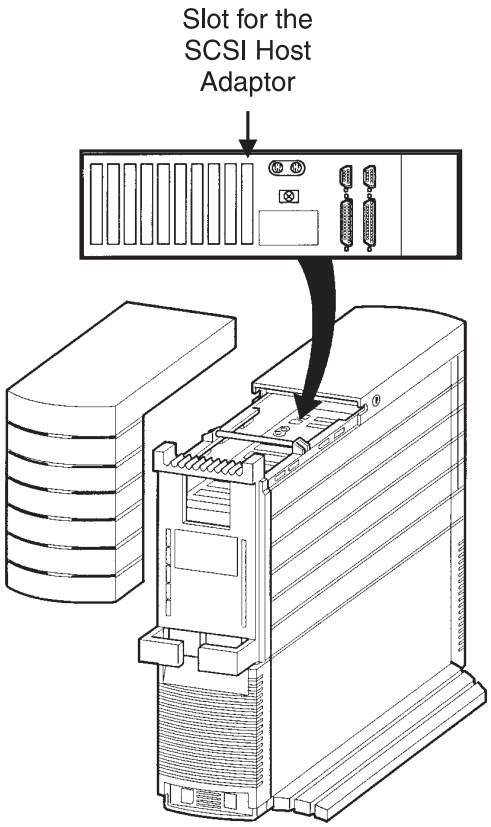


Figure 4-3: *StarServer* Computer Host Adapter Board Location

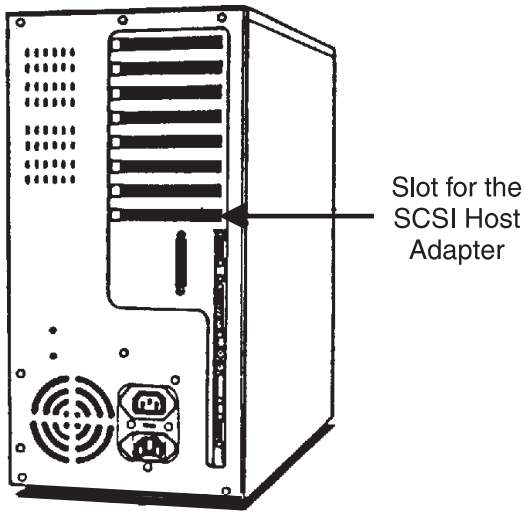


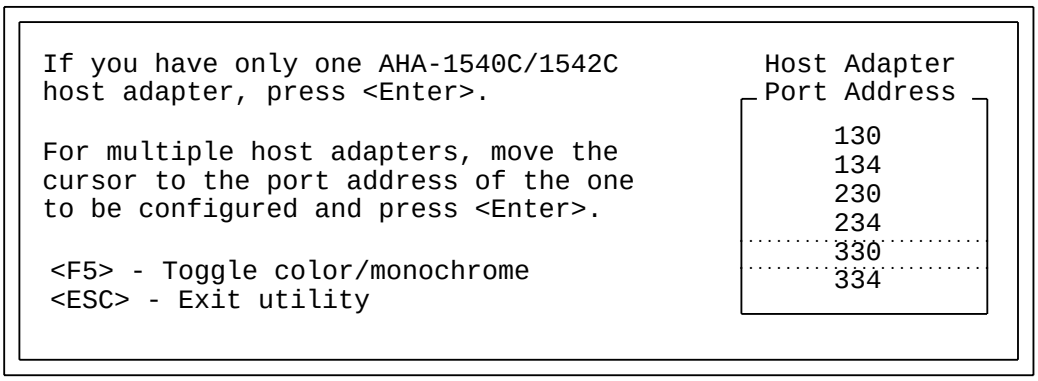
Figure 4-4: Model 3332 Host Adapter Board Location

10. Make sure that the power switch on the *X-TAPE* drive is set to OFF.
11. Make the necessary power connections to the *X-TAPE* drive.
12. Connect a SCSI extension cable from the host adapter board to the top connector on the rear panel of the *X-TAPE* drive.
13. If external drives are present, connect a SCSI extension cable from the former first drive to the bottom connector on the rear panel of the *X-TAPE* drive. Otherwise, install a SCSI terminator on the bottom connector of the *X-TAPE* drive.
14. Power up the external drives, the *X-TAPE* drive, and then the computer.
15. If the host computer is a Model 3332, complete Steps a through g below; otherwise, go to Step 1.16.

    a. Press Ctrl A when you see this message:

```
<<< Press <Ctrl> <A> for SCSI Utility >>>
```

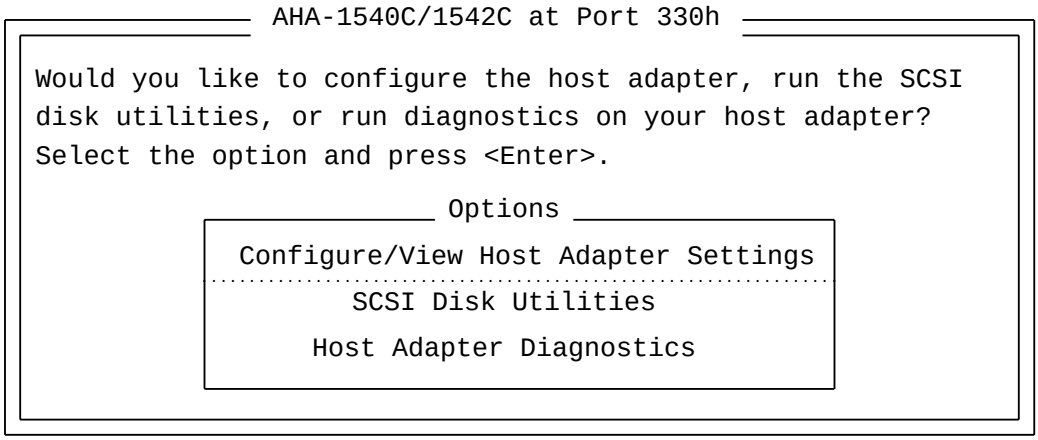
    The program responds:



    If you take too long pressing Ctrl A, press Reset and start again.

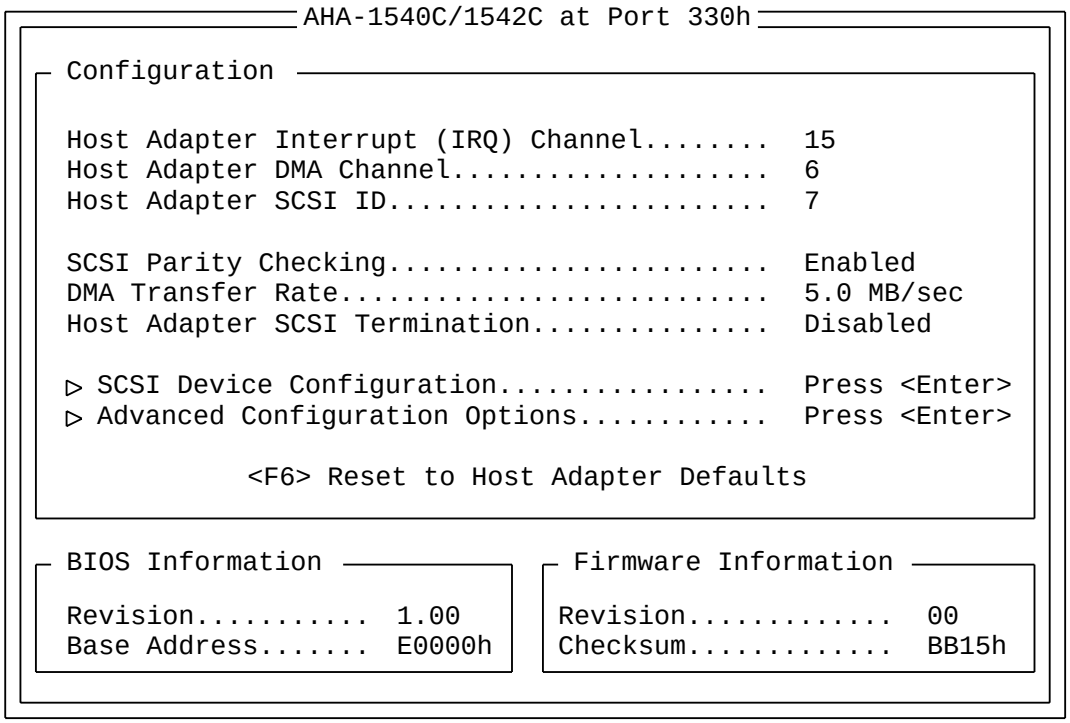
    b. Since the computer has only one host adapter installed, press Return.

The program responds:



c. Choose the `Configure/View Host Adapter Settings` option, and press Return.

d. Verify that the host adapter SCSI termination is disabled. Tab down and change the value if necessary. The screen should look like this:



e. Press Esc to save the changes.

f. Enter `Yes` to the `Save Changes Made?` message.

g. Exit out of the SCSI Utilities via the Esc key. Reboot the system when prompted.

16. Log in as *cmssvc*.
17. Enter the appropriate password at the `Password:` prompt.
18. Superuse to *root* by entering this command:

```
$ su root
```

19. Enter the appropriate password at the `Password:` prompt.
20. Enter the `scsiconf` command again to verify that the host adapter sees all SCSI devices, including the *X-TAPE* drive, and that these devices have the correct SCSI IDs.

```
# /etc/scsi/scsiconf
```

21. Insert a blank 8-mm cartridge tape into the *X-TAPE* drive.

    Wait for the tape to reposition [lower green Light-emitting Diode (LED) on black front panel of *X-TAPE* lit steady] after inserting it into the tape drive.

22. Turn off compression for the *X-TAPE* drive by entering:

```
# /usr/bin/xtapecntl -l /dev/scsi/xtape1n
```

23. Log out of *root* by entering:

```
# exit
```

24. Access the CMS Main Menu.
25. Access the Maintenance: Backup/Restore Devices window, and perform the following steps:

    a. In the `Device name:` field, type `xtape`.

b. In the `Path:` field, type `/dev/scsi/xtape1.`

c. In the `Device type` field, select the highest capacity displayed:

d. Press Return to access the Action List.

e. Select `Add` and press Return.

The *X-TAPE* drive is now installed and administered.

2. Do a "cmsadm" Backup from the *INTEL* Platform

Task Performed By: Customer

The customer does a "cmsadm" backup from the *INTEL* platform. The "cmsadm" backup provides a complete backup of all file systems on the *INTEL* machine in case of failure.

See the "Maintenance" chapter in the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document for "cmsadm" backup instructions.

3. Do a Full Maintenance Backup from the *INTEL* Platform

Task Performed By: Customer

The customer does a full CMS maintenance backup from the *INTEL* platform using the external *X-TAPE* drive. This backup provides the data for the migration.

Use a blank 8-mm cartridge tape for this step. Make sure that the tape is not write protected, and wait for the tape to reposition (lower green LED on black front panel of *X-TAPE* lit steady) after inserting it into the tape drive.

R3.0 CMS Backup

In the Back Up Data window, select `xtape` in the `Device name` field and `y` (yes) in the `Verify backup` field. In addition, the following fields should contain an `x`:

- ACD specific data
  - — Full
  - — Current ACD.
- System data.

See the *CMS R3.0 Administration* (AT&T 585-215-511) document, Chapter 12, “Maintenance — Back Up Data.”

R3V2 CMS Backup

In the Back Up Data window, select `xtape` in the `Device name` field and `y` (yes) in the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- Current ACD

  Note

  Since the migration program allows you to migrate only one ACD at a time, you need to select current ACD; not all ACDs.

  Make sure that the ACD you want to back up is the current ACD. Do this for each ACD that you want to migrate.

- ACD specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, “Maintenance — Back Up Data.”

4. Back Up Customer *UNIX* System Files

Task Performed By: Customer

If CMS users on the *INTEL* platform created *UNIX* system files (for example, *UNIX* system commands, shell scripts, etc.), the CMS administrator backs up these files.

Use a blank 8-mm cartridge tape for this step, and make sure that the tape is not write protected.

From the *INTEL* platform:

1. Insert the blank 8-mm cartridge tape into the *X-TAPE* drive.

   Wait for the tape to reposition (lower green LED on black front panel of *X-TAPE* lit steady) after inserting it into the tape drive.

2. Log in as *root*.

3. Enter the following commands:

```
# cd /usr
# ls -l | grep cms | cut -c 55-80 >/tmp/sun
# find `cat /tmp/sun` -print | cpio -ocv >/dev/scsi/xtape1
```

(a list of files copied to tape displays)

4. Remove the tape and label it.

5. Install the *Sun SPARCserver* Platform

Task Performed By: AT&T field technician

Involved Parties: TSC and customer

Perform this step only for a new ACD or ACD1 of a multi-ACD system. AT&T field technicians install the *Sun SPARCserver* Platform. The TSC provisions the system by setting authorizations, setting up data storage parameters, and setting up the *CentreVu* CMS R3V4 application. The customer can turn on the *CentreVu* CMS R3V4 and install the additional feature packages, if applicable.

See the following chapters in the *CentreVu CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document:

- Chapter 3, "Installing the *Sun SPARCserver* Computer"
- Chapter 5, "Connecting the *Sun SPARCserver* Computer to the Switch"
- Chapter 6, "Setting Up *CentreVu* CMS and Installing Feature Packages."

6. Administer Printers for the *Sun SPARCserver* Platform

Task Performed By: Customer

Perform this step only for a new ACD or ACD1 of a multi-ACD system. The customer administers the printers for the *Sun SPARCserver* Platform since the migration process does **not** migrate the printer administration data.

See these chapters in the following documents:

- Chapter 3, "Getting Started and Using CMS Daily — Printers Worksheet," in the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document.
- Chapter 4, "Installing Terminals, Printers, and Modems — Administering Printers," in the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document.

7. Record Information About Existing ACD

Task Performed By: TSC

Perform this step only for migrating ACD 2-4. From the source machine, the TSC accesses the “cmsadm” menu and executes the `swinfo` command. The TSC writes down this information since it is needed to create an ACD in the next step. In addition, the TSC accesses the Data Storage Allocation window and records that information.

See the following:

- *CMS R3.0 Installation and Maintenance WGS* (AT&T 585-215-112) document, Chapter 4, “Displaying Switch Parameters.”

  Note
  If your R3.0 CMS software load is 3.2F or later, you need to access the “cmssvc” menu to execute the `swinfo` command.

  CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance (AT&T 585-215-807) document, Chapter 2, “CMSADM and CMSSVC Menus.”

- *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 11, “System Setup — Data Storage Allocation.”

8. Create an ACD on the *Sun SPARCserver* Platform

Task Performed By: TSC

Perform this step only for migrating ADC 2-4. The TSC creates an ACD on the *Sun SPARCserver* Platform using the information obtained in the previous step.

See the *CentreVu CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 2, “CMSADM and CMSSVC Menus — acd_create.”

9. Migrate System Administration Data

Task Performed By: TSC

Involved Parties: Customer or AT&T field technician

The TSC migrates the system administration data from the *INTEL* platform to the *Sun SPARCserver* Platform. The customer or an AT&T field technician needs to be on site to insert the backup tape into the tape drive.

Prerequisite Administration

From the *Sun SPARCserver* Platform:

- A device name needs to be defined in the Backup/Restore Devices window (normally `default`). This is the device from which the data being migrated is read.
- CMS must be in single-user mode.

See the following sections in the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document:

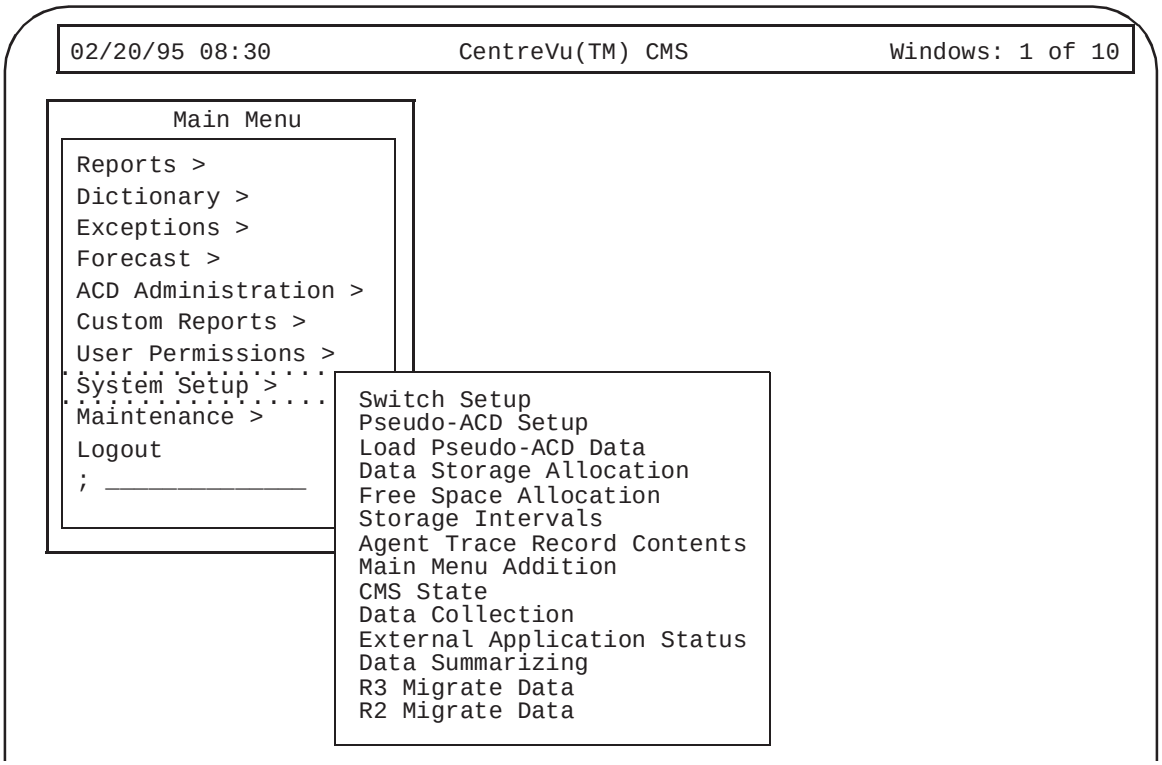
- Chapter 12, “Maintenance — Back Up/Restore Devices”
- Chapter 11, “System Setup — CMS State.”

Procedure

From the *Sun SPARCserver* Platform:

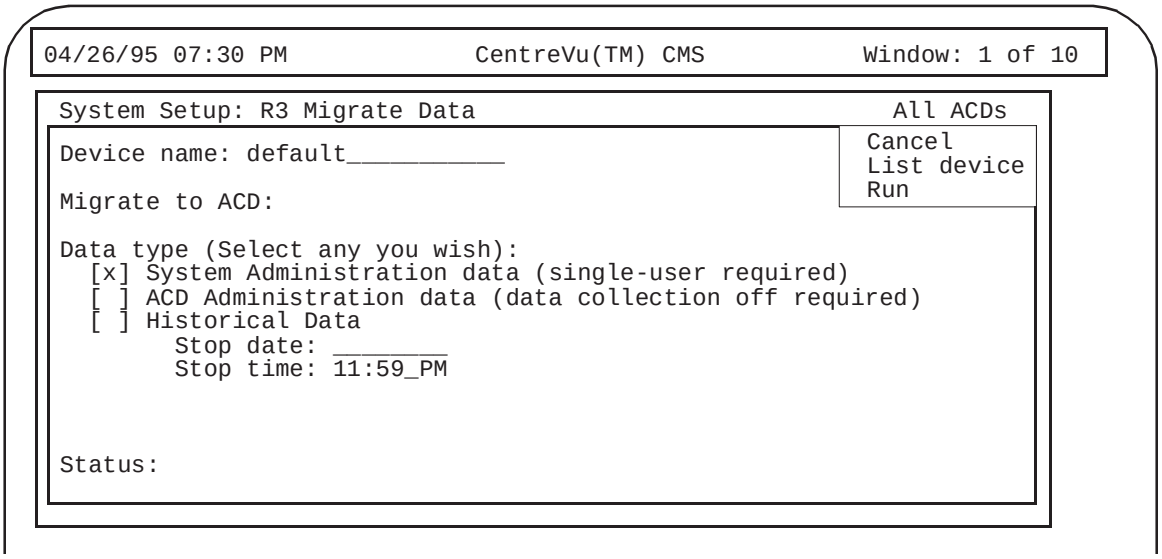
1. Insert the CMS full backup tape (from Step 3) into the 5-Gbyte tape drive.
2. Log in as *cms,* and access the CMS Main Menu.
3. Select the `System Setup` subsystem.

The System Setup menu displays:



4. Select `R3 Migrate Data`.

   The R3 Migrate Data window displays:



5. Enter the device name from which the data being migrated will be read (normally `default`).

6. Enter `1` or the name (synonym) corresponding to ACD1 in the `Migrate to ACD:` field.
7. Select `System Administration data` (the default) in the `Data type` field.

   Note Do not enter data in the `Stop date:` and `Stop time:` fields.

8. Press Return to access the Action List.
9. Select `Run` and press Return.

   `Working` appears in the lower left-hand corner of the window. The `Status:` field displays various messages that tell you what is being processed.

   The migration of system administration data can take from several minutes to several hours depending on the size of the system.

   If the migration completes successfully, the `Status:` line displays a “successful” message similar to the following:

   ```
   Last migration completed (Tue Jul 13 09:49:27
   1993)
   ```

   If the migration fails, the `Status:` line displays a “failed” message and an error is logged to the customer and services logs.

10.Investigate the Migration Log

Task Performed By: TSC

Involved Parties: Customer

The TSC investigates the customer migration log and takes any necessary corrective action. This log includes the status and progress of all migrations and any problems that arose during the migration.

The customer migration log is located in */cms/migrate/r3mig.log*.

The customer may print this log by entering:

```
$ lp /cms/migrate/r3mig.log
```

See Chapter 8, “Migration Log Messages” to look up the message and determine what action you need to take.

Note A migration log also exists for services. The services migration log is located in */cms/maint/r3mig/mig.log.* Some information in this log may be too cryptic for the customer to read.

11. Migrate ACD Administration Data

Task Performed By: TSC

Involved Parties: Customer or AT&T field technician

After migrating the system administration data, the TSC migrates the ACD administration data, for each ACD, from the *INTEL* platform to the *Sun SPARCserver* Platform. The customer or an AT&T field technician needs to be on site to insert the backup tape into the tape drive.

Prerequisite Administration

From the *Sun SPARCserver* Platform:

- A device name needs to be defined in the Backup/Restore Devices window. This is the device from which the data being migrated is read.
- CMS must have data collection turned off for the target ACD.

See the following sections in the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document:

- Chapter 12, “Maintenance — Back Up/Restore Devices”
- Chapter 11, “System Setup — Data Collection.”

Procedure

Use the procedure outlined in Step 9, “Migrate System Administration Data,” except select `ACD Administration data` in the `Data type` field (Step 9.7).

Investigate the migration log (see Step 10: Investigate the Migration Log).

12. Restore Customer *UNIX* System Files

Task Performed By: Customer

The CMS administrator restores any *UNIX* system files created by the CMS users to the *Sun SPARCserver* Platform.

From the *Sun SPARCserver* Platform:

1. Insert the 8-mm cartridge tape that contains the backup of customer *UNIX* system files into the 5-Gbyte tape drive.
2. Log in as *root*.
3. Enter these commands:

```
# cd /export/home
# cpio -icvdm </dev/rmt/1
```

(a list of files retrieved from tape displays)

Note When executing `cpio` on the *Sun SPARCserver* Platform, the `-M` option must be specified if the data spans more than one tape.

Note All systems are shipped with one or more tape drives (QIC-150, 5-GB, and/or a 14-GB). For systems with multiple tape drives, the QIC-150 is the first drive on the SCSI chain. For quicker backups (1 hour versus several hours), we recommend using the 5- or 14-GB tape drive.

- `/dev/rmt/0` indicates the first tape drive in the SCSI chain.
- `/dev/rmt/1` indicates the second tape drive in the SCSI chain.
- `/dev/rmt/0c` indicates the first tape drive in the SCSI chain in compressed mode (only the 14-GB tape drive can support compressed mode).
- `/dev/rmt/1c` indicates the second tape drive in the SCSI chain in compressed mode.

4. If you see messages such as `cpio: Existing “file” same age or newer`, the file already exists on the *Sun SPARCserver* Platform and will not be restored. You should check with the file's

owner to determine which version of the file he or she wants to keep. If this message occurs at all, it probably will be with the *cms* and *cmssvc* login IDs.

5. You must restore ownership of the files to their proper login IDs. To do this, enter these commands for *each* user login ID:

```
# cd /export/home
# find login -print | xargs chown login
# find login -print | xargs chgrp cms
```

6. The restored files may contain *UNIX* system shell scripts or executable programs. Since the *Sun SPARCserver* Platform hardware and operating system are different from the *INTEL*-based machine, executable files need to be recompiled on the *Sun SPARCserver* Platform, and shell scripts may need to be modified to work with the *Sun* operating system.

13. Busy Out Link

Task Performed By: AT&T field technician

From the switch, an AT&T field technician busies out the link between the *INTEL* platform and the switch.

14. Move Link

Task Performed By: AT&T field technician

AT&T field technicians take down the link between the *INTEL* platform and the switch and bring up the *Sun SPARCserver* Platform link. A switch technician needs to make sure that the switch is administered for R3V4 *CentreVu* CMS.

See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 5, “Connecting the *Sun SPARCserver* Computer to the Switch.”

15. Start *Sun SPARCserver* Platform Data Collection

Task Performed By: TSC

Once any migration problems are resolved, the TSC restores the *CentreVu* CMS R3V4 on the *Sun SPARCserver* Platform to multi-user mode, starts data collection, and verifies the link is up.

See the following sections in the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document:

- Chapter 11, “System Setup — CMS State”
- Chapter 11, “System Setup — Data Collection”
- Chapter 12, “Maintenance — Connection Status.”

At this point, the TSC hands the migration back to the customer.

Note
The customer may contract with AT&T to complete the migration on a time-and-materials basis.

16. Do an Incremental Backup from the *INTEL* Platform

Task Performed By: Customer

From the *INTEL* platform, the customer does a CMS incremental maintenance backup for historical data only. This incremental backup provides historical data from the time the customer completed the full maintenance backup until the time the technicians busied out the *INTEL* platform link.

Use a blank 8-mm cartridge tape for this step. Make sure that the tape is not write protected, and wait for the tape to reposition (lower green LED on black front panel of *X-TAPE* lit steadily) after inserting it into the tape drive.

Note
You can do this step in parallel with Step 15.

Note
The haglog table, which contains historical agent login and logout data, is not backed up during an incremental backup. The table will contain data up until the time the full maintenance backup was done (Step 3).

R3.0 CMS Backup

In the Back Up Data window, select `xtape` in the `Device name` field and `y` (yes) in the `Verify backup` field. In addition, the following fields should contain an `x`:

- ACD specific data
  - — Incremental
  - — Current ACD.
- System data.

See the *CMS R3.0 Administration* (AT&T 585-215-511) document, Chapter 12, “Maintenance — Back Up Data.”

R3V2 CMS Backup

In the Back Up Data window, select `xtape` in the `Device name` field and `y` (yes) in the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- Current ACD

  Note

  Since the migration program allows you to migrate only one ACD at a time, you need to select current ACD; not all ACDs.

  Make sure that the ACD you want to back up is the current ACD.

- ACD specific data
- System administration data
- Historical data
  - — Incremental.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, “Maintenance — Back Up Data.”

17. Migrate Full Historical Data

Task Performed By: Customer

Now that the *Sun SPARCserver* Platform is collecting data, the customer can migrate the CMS historical data, for each ACD, from the *INTEL* platform.

Prerequisite Administration

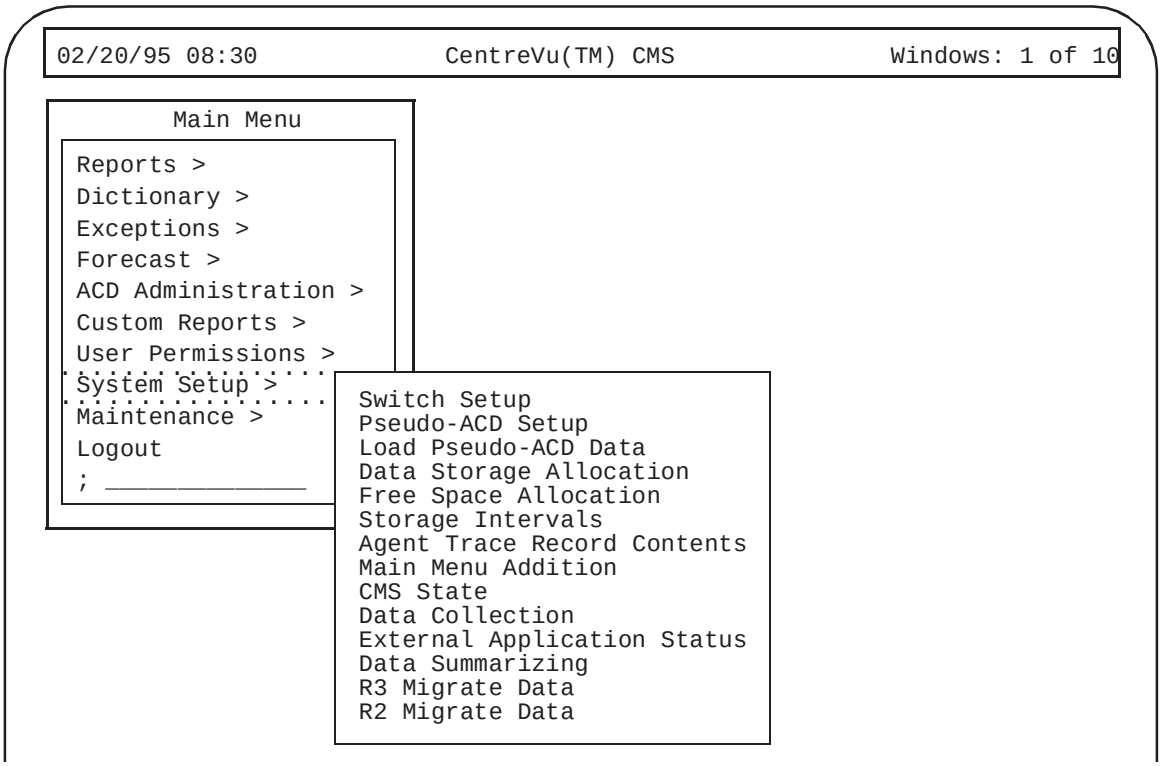
The *CentreVu* CMS R3V4 on the *Sun SPARCserver* Platform may be in single-user or multi-user mode to migrate historical data.

Procedure

From the *Sun SPARCserver* Platform:

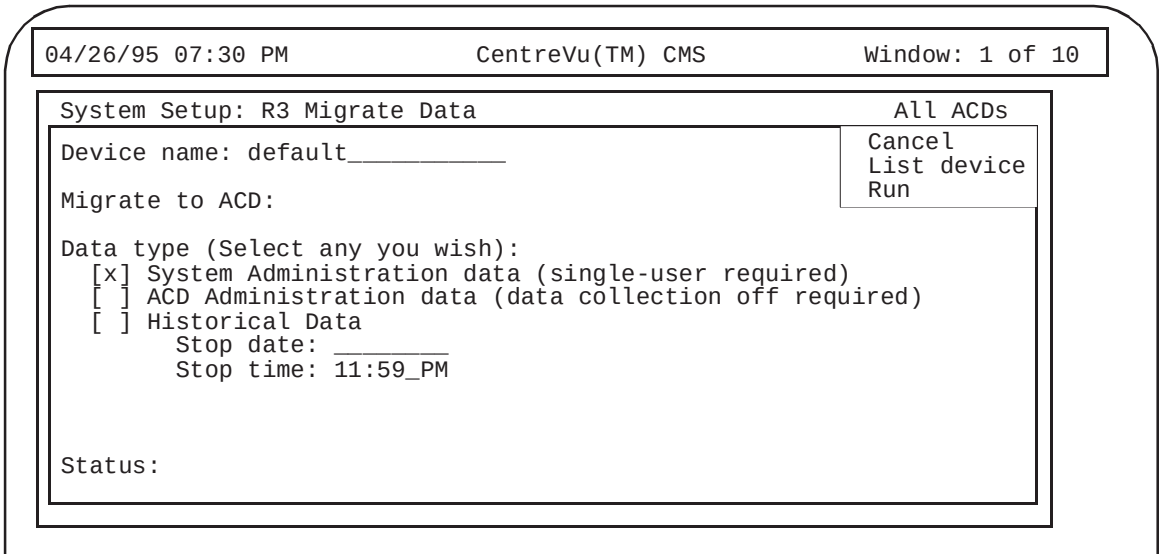
1. Insert the CMS full backup tape (from Step 3) into the appropriate tape drive.
2. Log in as *cms* and access the *CentreVu* CMS Main Menu.
3. Select the `System Setup` subsystem.

   The System Setup menu displays:



4. Select `R3 Migrate Data`.

The R3 Migrate Data window displays:



5. Select the device name from which the data being migrated will be read (normally `default`).
6. Select `1` or the name (synonym) corresponding to ACD 1 in the `Migrate to ACD:` field.
7. Select `Historical Data` in the `Data type` field.

   Note
   To migrate all historical data on the tape, use the defaults in the `Stop date:` field (blank) and the `Stop time:` field (11:59 PM).

8. Press **Return** to access the Action List.
9. Select `Run`, and press **Return**.

   `Working` appears in the lower left-hand corner of the window. The `Status:` field displays various messages that tell you what the program is processing.

   Note
   Since the migration runs in the background, you can exit the migration window and perform other tasks. Occasionally, you should access the migration window to check the progress.

   The migration of full historical data may take several hours.

   If the migration completes successfully, the `Status:` line displays a "successful" message similar to the following:

   ```
   Last migration completed (Tue Jul 13 09:49:27
   1993)
   ```

If the migration fails, the `Status:` line displays a “failed” message, and an error is logged to the customer and services logs.

Investigate the migration log (see Step 10: Investigate the Migration Log).

18. Migrate Incremental Historical Data

Task Performed By: Customer

To complete the data migration to the *Sun SPARCserver* Platform, the customer needs to migrate the incremental historical data.

Prerequisite Administration

The *CentreVu* CMS R3V4 on the *Sun SPARCserver* Platform may be in single-user or multi-user mode to migrate incremental historical data.

Procedure

Use the procedure outlined in Step 17, “Migrate Full Historical Data,” except use the **incremental backup tape** instead of the full backup tape.

An Acknowledgment will ask you to verify whether to proceed with the incremental migration. Enter `y` and press **Return**.

Note

To migrate the incremental data on the tape, use the defaults in the `Stop date:` field (blank) and the `Stop time:` field (11:59 PM).

Note

The haglog table, which contains historical agent login and logout data, was not backed up during the incremental backup. This table will contain data up until the time the full maintenance backup was done (Step 3).

19. Do a "cmsadm" Backup from the *Sun SPARCserver* Platform

Task Performed By: Customer

The customer does a "cmsadm" backup from the *Sun SPARCserver* Platform. The "cmsadm" backup provides a complete backup of all file systems on the *Sun SPARCserver* Platform in case of failure.

See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 8, "Maintenance — Performing Backups and Restores."

20. Do a Full Maintenance Backup from the *Sun SPARCserver* Platform

Task Performed By: Customer

The customer does a full CMS maintenance backup from the *Sun SPARCserver* Platform. This backup protects you from losing the migrated CMS data plus the *CentreVu* CMS R3V4 data initially collected.

In the Back Up Data window, select `y` (yes) for the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- All ACDs
- ACD specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, "Maintenance — Back Up Data" for more information.

21. Remove External *X-TAPE* Drive

Task Performed By: AT&T field technician

Once the migration is complete, AT&T field technicians remove the external 5-Gbyte *X-TAPE* drive and its associated software from the *INTEL* computer.

Where to Return the *X-TAPE* Drive

The customer needs to ship the entire contents of the *X-TAPE* kit back to the TSC at this address:

AT&T Technical Service Center
Attn. Tom Curran
8300 East Maplewood Avenue
Englewood, CO 80111

Procedure

From the *INTEL* platform, complete the following steps to remove the *X-TAPE* drive:

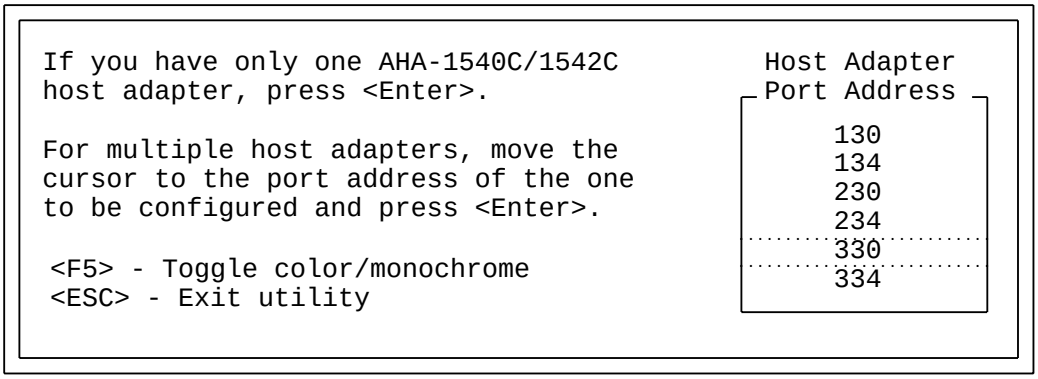
1. Make sure that an 8-mm cartridge tape is **not** inserted into the *X-TAPE* drive.
1. Insert the **DBM Associates *X-TAPE* Module (386 version)** diskette into the flexible disk drive.
2. At the console terminal, log in as *root*.
3. Enter the `removepkg` command to remove the *X-TAPE* software.
4. Enter the option that corresponds to the `DBM x-Tape (tm) Support Package`.
5. Respond to the screen prompts as you proceed through the program. The following events occur as the package is being removed:
   - The program displays a list of files that are being removed.
   - A message displays indicating that the *UNIX* Operating System will be rebuilt.
   - A long list of files displays indicating that they are being removed and restored.
   - A message displays indicating that a shutdown is being initiated automatically.
6. Press Return to initiate the automatic shutdown.
7. When you see the `Reboot the system now` message, power down the system.

8. Remove the **DBM Associates *X-TAPE* Module (386 version)** diskette from the flexible disk drive.
9. Power down all external drives, including the *X-TAPE* drive.
10. Disconnect the power connections to the *X-TAPE* drive.
11. Disconnect the SCSI extension cable from the top connector on the rear panel of the *X-TAPE* drive.
12. Depending on the configuration, perform the appropriate step below:
    a. If external drives are present, disconnect the SCSI cable from the bottom connector on the rear panel of the *X-TAPE* drive and from the second external drive. Then, reconnect the cable from the host adapter board to the second external drive, thus making it the first external drive.
    b. If no external drives are present, remove the SCSI cable from the host adapter board. Then, remove the terminating resistor from the bottom connector of the *X-TAPE* drive. If a 6386 or *STAR SERVER* computer is present, you need to reinstall the terminating resistor on the host adapter board.

       The host adapter board on the Model 3332 does not require a terminating resistor as termination is software controlled.
13. If the host computer is a Model 3332 and **no** external drives are present, complete Steps a through h below; otherwise, go to Step 21.14.
    a. Power up the system.
    b. Press Ctrl A when you see this message:

```
<<< Press <Ctrl> <A> for SCSI Utility >>>
```

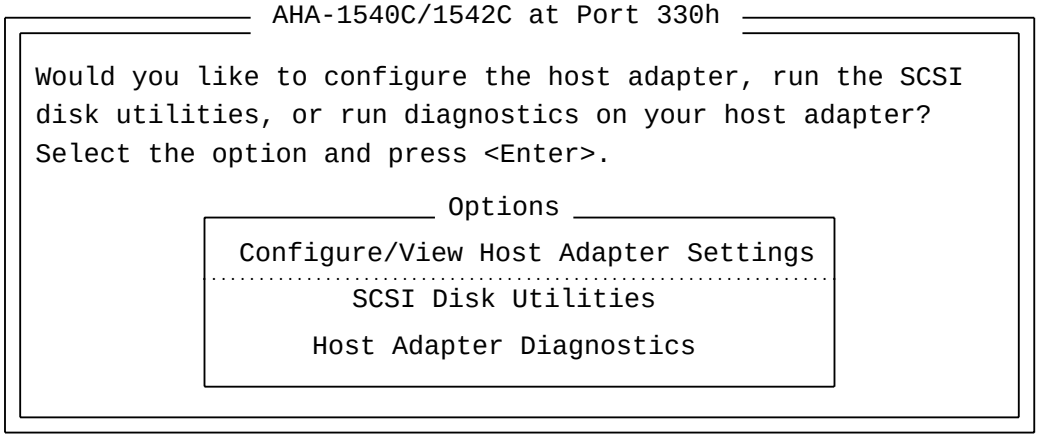
       The program responds:



If you take too long pressing Ctrl A, press Reset and start again.

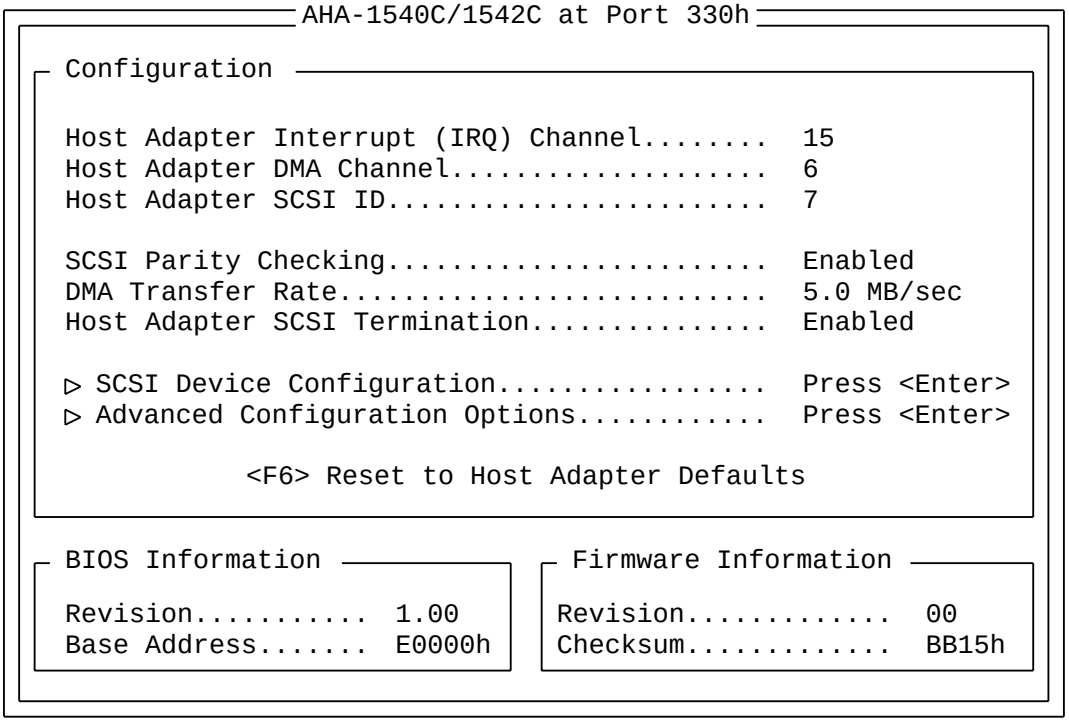
c. Since the computer has only one host adapter installed, press Return.

The program responds:



d. Choose the `Configure/View Host Adapter Settings` option and press Return.

e. Tab down and change the host adapter SCSI termination to enabled. After the change, the screen looks like this:



f. Press Esc to save the changes.

g. Enter `Yes` to the `Save Changes Made?` message.

h. Exit out of the SCSI Utilities via the Esc key. Reboot the system when prompted, or power down the system.

14. As soon as possible, repack the entire contents of the *X-TAPE* kit and return the kit to the TSC at the address listed at the front of this procedure.

Chapter 5
INTEL-to-*INTEL* Migration — R3V1 › R3V4

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Overview

This chapter **only** describes how to migrate a Release 3 version 1(R3V1) CMS to *CentreVu*™ CMS R3V4 on the existing *INTEL** platform. The following steps only apply to the first ACD (ACD1) that resides on the customer's existing CMS host computer.

Step	Action	Responsible Party
1	Do a “cmsadm'' backup of R3 CMS	customer
2	Do a full maintenance backup of R3 CMS	customer
3	Busy out CMS link	customer
4	Do an incremental maintenance backup of R3 CMS	customer
5	Record information about existing ACD	Technical Service Center (TSC)
6	Turn off R3 CMS	TSC
7	Remove R3 CMS	
8	Remove *INFORMIX**	TSC
9	Install *INFORMIX* Version 5.04	TSC
10	Install *CentreVu* CMS R3V4 application	TSC
11	Set authorizations	TSC
12	Change switch parameters, if necessary	TSC
13	Administer printers	TSC
14	Migrate system administration data	TSC
15	Investigate migration log	TSC
16	Migrate ACD-administration data	TSC
17	Start CentreVu CMS R3V4 data collection and verify link	TSC
18	Migrate full historical data	customer
19	Migrate incremental historical data	customer
20	Do a “cmsadm'' backup of *CentreVu* CMS R3V4	customer
21	Do a full maintenance back up of *CentreVu* CMS R3V4	customer

*INTEL is a registered trademark of Intel Corp.

*INFORMIX is a registered trademark of Informix Software, Inc.

Note

The customer may contract AT&T to complete Steps 13 through 17 on a time-and-materials basis.

Procedure

Perform the following procedures to do an *INTEL*-to-*INTEL* migration.

1. Do a "cmsadm" Backup of R3 CMS

Task Performed By: Customer

The customer does a "cmsadm" backup of the R3 CMS. The "cmsadm" backup provides a complete backup of all file systems on the R3 machine in case of failure.

See the *R3 CMS Installation and Maintenance* (585-215-112) document, Chapter 6, "Backing Up the File Systems From the *UNIX** System Environment."

2. Do a Full Maintenance Backup of R3 CMS

Task Performed By: Customer

The customer does a full CMS maintenance backup of the R3 CMS. This backup provides the data for the migration.

In the Back Up Data window, select `y` (yes) for the `Verify backup` field. In addition, the following fields should contain an `x`:

- ACD specific data
  - — Full
  - — Current ACD.
- System data.

See the *R3 CMS Administration* (585-215-511) document, Chapter 12, "Back Up Data."

3. Busy Out CMS Link

Task Performed By: Customer or AT&T Field Technician

This step terminates data collection on the source CMS. The customer or an AT&T Field Technician busies out the CMS link via the switch. You can use the **busy mis** command for the Generic 3 switch or **PROC 028** for the Generic 2 switch.

This step terminates data collection on the R3 CMS. Any further data collection will be done on the *CentreVu* CMS R3V4.

*UNIX is a registered trademark of Novell, Inc.

4. Do an Incremental Maintenance Backup of R3 CMS

Task Performed By: Customer

The customer does an R3 CMS incremental maintenance backup for historical data only. This incremental backup provides historical data from the time the customer completed the full maintenance backup until the CMS link was busied out.

In the Back Up Data window, select `y` (yes) for the `Verify backup` field. In addition, the following fields should contain an `x`:

- ACD specific data
  - — Incremental
  - — Current ACD.
- System data.

See the *R3 CMS Administration* (585-215-511) document, Chapter 12, “Back Up Data.”

5. Record Information about Existing ACD

Task Performed By: TSC

The TSC prints out the following information for later use:

- features installed
- switch information
- data storage allocation
- free space allocation
- printer administration information.

6. Turn Off R3 CMS

Task Performed By: TSC

The TSC turns off CMS to upgrade the *INFORMIX* and CMS applications. The customer calls the TSC to coordinate this step and Steps 6 through 12.

See the *CMS Installation and Maintenance* (585-215-122) document, Chapter 2, “run_cms.”

7. Remove R3 CMS

Task Performed By: TSC

The TSC removes the R3 CMS from the system.

8. Remove *INFORMIX*

Task Performed By: TSC

The TSC removes the existing *INFORMIX* software used by the R3 CMS.

9. Install *INFORMIX* Version 5.04

Task Performed By: TSC

Involved Parties: Customer or AT&T Field Technician

The TSC installs the *INFORMIX* 5.04 software used by the *CentreVu* CMS R3V4 . The customer or an AT&T Field Technician needs to be on site to insert the *INFORMIX* CD-ROM into the flexible disk drive.

See the *CentreVu™ CMS R3V4 Change Description* (AT&T 585-215-803) document for information on installing the *INFORMIX* 5.04 software.

Note

Remember to set up the environment before you install the *INFORMIX* software package.

10. Install *CentreVu* CMS R3V4 Application

Task Performed By: TSC

Involved Parties: Customer or AT&T Field Technician

The TSC installs *CentreVu* CMS R3V4.

See the “Software Upgrades and Updates” section in this document.

11. Set Authorizations

Task Performed By: TSC

The TSC sets authorizations for the R3V4 *CentreVu* CMS.

See the *CMS Installation and Maintenance* (585-215-122) document, Chapter 6, “Setting Authorizations.''

12. Change Switch Parameters (If Necessary)

Task Performed By: TSC

The TSC changes the switch parameters if the customer upgraded to a new switch release.

See the *CMS Installation and Maintenance* (585-215-122) document, Chapter 2, “swsetup."

13. Administer Printers

Task Performed By: TSC

The TSC administers printers based on the information recorded in Step 5.

See the *CMS Installation and Maintenance* (585-215-122) document, Chapter 4, “Installing Terminals and Printers.”

14. Migrate System Administration Data

Task Performed By: TSC

Involved Parties: Customer or AT&T Field Technician

The TSC migrates the R3 system administration data to the *CentreVu* CMS R3V4 using the R3 Migrate Data window. The customer or an AT&T Field Technician needs to be on site to insert the backup tape into the tape drive.

Prerequisite Administration

From the *CentreVu* CMS R3V4 :

- A device name needs to be defined in the Backup/Restore Devices window (normally “default”). This is the device from which the data being migrated is read.
- CMS must be in single-user mode.

See the following sections in the *CMS R3V4 Administration* (585-215-800) document:

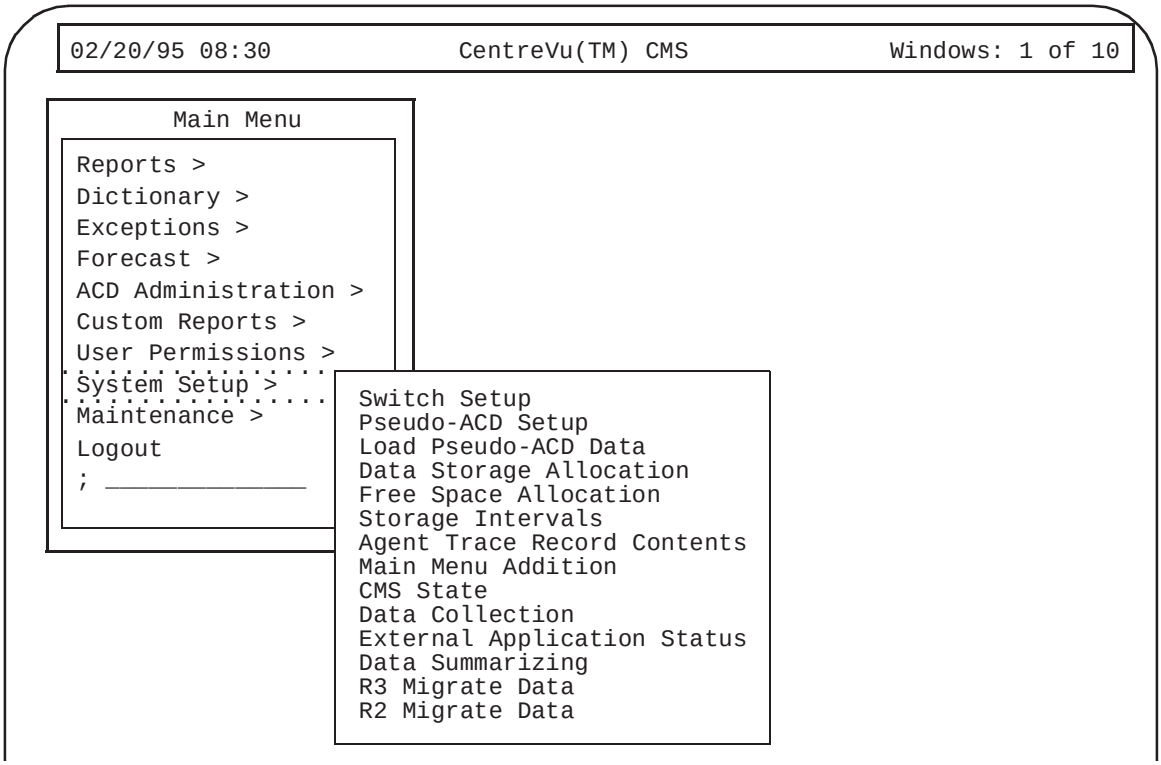
- Chapter 12 “Back Up/Restore Devices”
- Chapter 11 “CMS State.”

Procedure

Do these steps to migrate the system administration data:

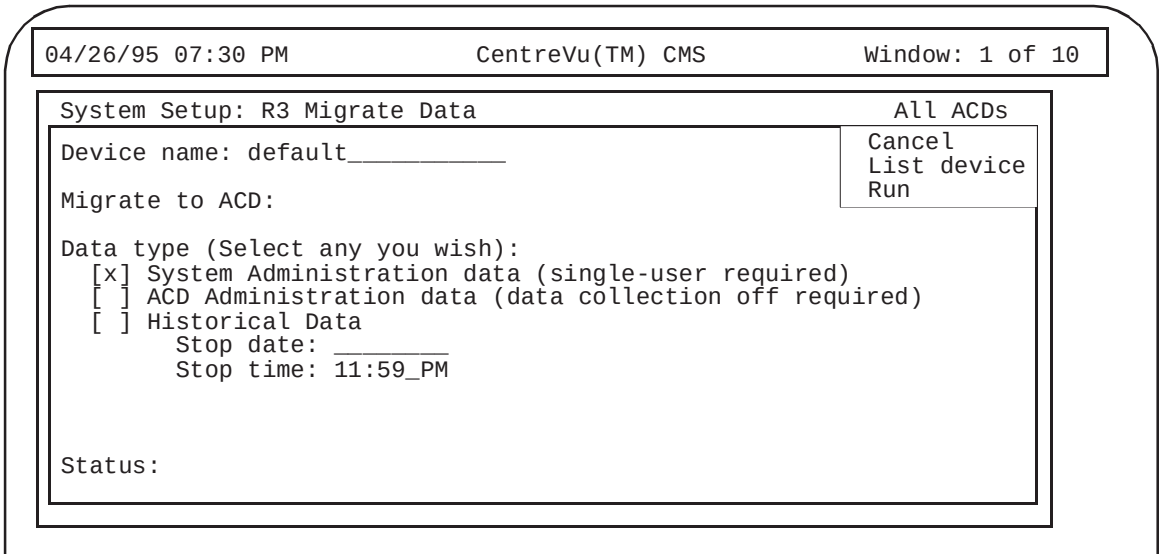
1. Insert the R3 full maintenance backup tape (from Step 2) into the tape drive.
2. Log in as *cms* and access the CMS Main Menu.
3. Select the `System Setup` subsystem.

   The System Setup menu displays:



4. Select the R3 Migrate Data window.

The R3 Migrate Data window displays:



5. Enter the device name from which the data being migrated will be read (normally `default`).
6. Enter `1` or the synonym corresponding to ACD1 in the `Migrate to ACD:` field.
7. Select `System Administration data` (the default) in the `Data type` field.

Note

Do not enter data in the `Stop date:` and `Stop time:` fields.

8. Enter `y` in the `Does the data being migrated already exist on this machine (y/n):` field.
9. Press **Return** to access the Action List.
10. Select `Run` and press **Return**.

    `Working` appears in the lower left-hand corner of the window. The `Status:` field displays various messages that tell you what is being processed.

    The migration of system administration data takes approximately 1 hour.

    If the migration completes successfully, the `Status:` line displays a “successful" message similar to the following:

    `Last migration completed (Tue Jul 13 09:49:27 1993)`

If the migration fails, the `Status:` line displays a “failed” message, and an error is logged to the customer and services logs.

15. Investigate Migration Log

Task Performed By: TSC

Involved Parties: Customer

The TSC investigates the customer migration log and takes any necessary corrective action. This log includes the status and progress of all migrations and any problems that arose during the migration.

The customer migration log is located in `/cms/migrate/r3mig.log`.

The customer may print this log by entering the following command:

```
$ lp /cms/migrate/r3mig.log
```

See Chapter 8, “Migration Log Messages” to look up the message and determine what action you need to take.

Note

A migration log also exists for services. The services migration log is located in */cms/maint/r3mig/mig.log*. This log may contain information inappropriate for the customer.

16. Migrate ACD - Administration Data

Task Performed By: TSC

Involved Parties: Customer or AT&T field technician

After migrating the system administration data, the TSC migrates the ACD administration data from the existing *INTEL* platform to the new *INTEL* Platform. The customer or an AT&T field technician needs to be on site to insert the backup tape into the tape drive.

17. Start *CentreVu* CMS R3V4 Data Collection and Verify Link

Once any migration problems are resolved, the TSC restores the CMS R3V4 to multi-user mode, starts data collection, and verifies that the link is up.

See the following sections in the *CentreVu CMS R3V4 Administration* (585-215-800) document:

- Chapter 11 “CMS State”
- Chapter 11 “Data Collection”
- Chapter 12 “Connection Status.''

At this point, the TSC hands the migration back to the customer.

Note

The customer may contract AT&T to have the TSC complete the migration on a time-and-materials basis.

18. Migrate Full Historical Data

Task Performed By: Customer

Now that the R3V4 machine is collecting data, the customer can migrate the R3 historical data.

Prerequisite Administration

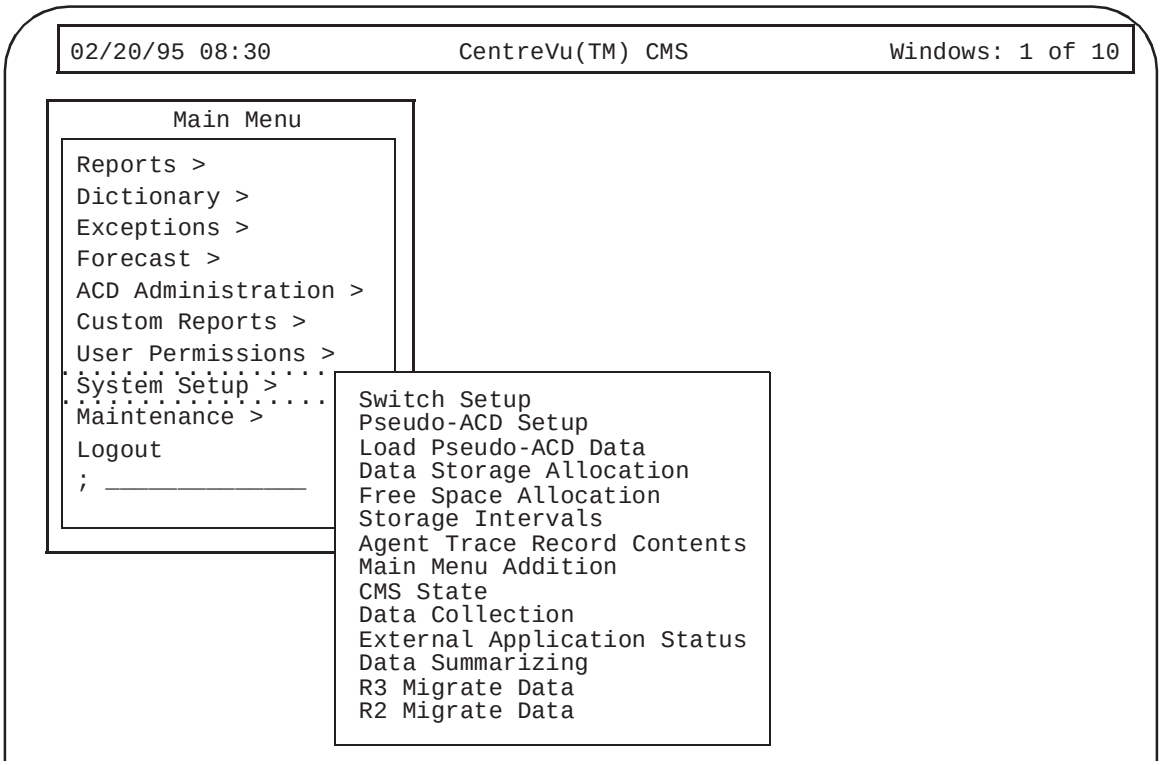
The *CentreVu* CMS R3V4 may be in single- or multi-user mode to migrate historical data.

Procedure

Do these steps to migrate R3 historical data:

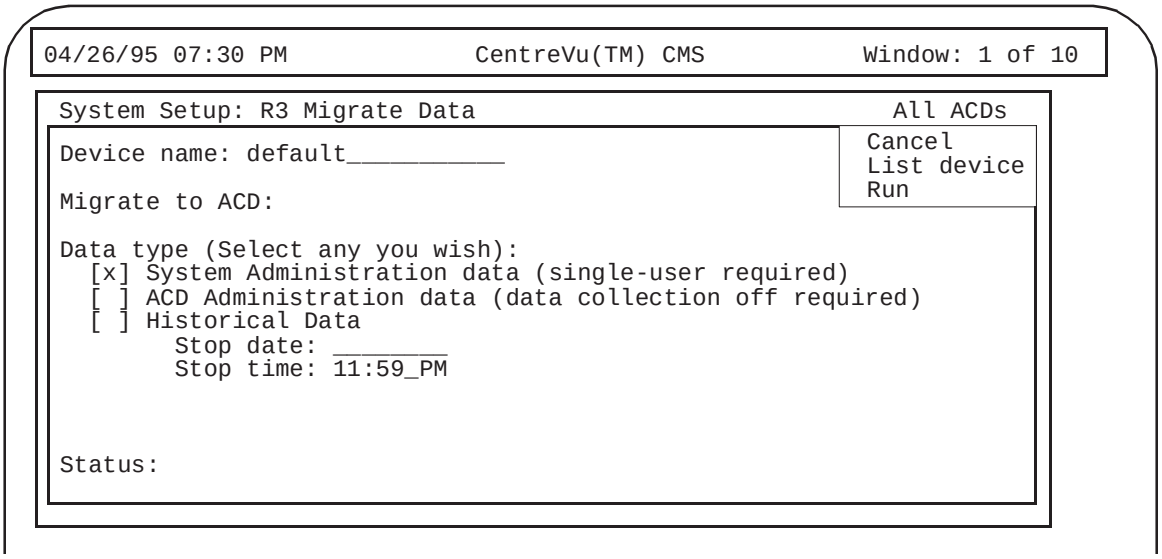
1. Insert R3 full backup tape (from Step 2) into the tape drive.
2. Log in as *cms* and access the CMS Main Menu.
3. Select the `System Setup` subsystem.

The System Setup menu displays:



4. Select the R3 Migrate Data window.

   The R3 Migrate Data window displays:



5. Enter the device name from which the data being migrated will be read (normally `default`).

6. Enter 1 or the synonym corresponding to ACD 1 in the Migrate to ACD: field.
7. Select Historical Data in the Data type field.

   Note
   To migrate all historical data on the tape, use the defaults in the Stop date: field (blank) and the Stop time: field (11:59 PM).

8. Enter y in the Does the data being migrated already exist on this machine (y/n): field.

   Note
   The value you enter in this field does not affect the historical data migration.

9. Press Return to access the Action List.
10. Select Run and press Return.

    Working appears in the lower left-hand corner of the window. The Status: field displays various messages that tell you what the program is processing.

    Note
    Since the migration runs in the background, you can exit the migration window and perform other tasks. Occasionally, you should access the migration window to check the progress.

    The full migration of historical data may take several hours.

    If the migration completes successfully, the Status: line displays a “successful" message similar to the following:

    Last migration completed (Tue Jul 13 09:49:27 1993)

    If the migration fails, the Status: line displays a “failed” message and an error is logged to the customer and services logs.

19. Migrate Incremental Historical Data

Task Performed By: Customer

To complete the data migration, the customer needs to migrate the incremental historical data.

Prerequisite Administration

The *CentreVu* CMS R3V4 may be in single- or multi-user mode to migrate incremental historical data.

Procedure

Use the procedure outlined in Step 18 “Migrate Full Historical Data” except use the **R3 incremental backup tape** instead of the R3 full backup tape.

An Acknowledgment will ask you to verify whether to proceed with the incremental migration. Type y and press Return.

Note

To migrate the incremental data on the tape, use the defaults in the `Stop date:` field (blank) and the `Stop time:` field (11:59 PM).

20. Do a "cmsadm" Backup of *CentreVu* CMS R3V4

Task Performed By: Customer

The customer does a "cmsadm" backup of the R3V4 *CentreVu* CMS. The "cmsadm" backup provides a complete backup of all file systems on the R3V4 machine in case of failure.

See the *CentreVu™ CMS R3V4 Change Description* (585-215-803) document for details.

21. Do a Full Maintenance Backup of *CentreVu* CMS R3V4

Task Performed By: Customer

The customer does a full CMS maintenance backup of the R3V4 *CentreVu* CMS data. This backup protects you from losing the R3 migrated data plus the R3V4 data initially collected.

In the Back Up Data window, enter y (yes) in the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- All ACDs
- ACD specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ CMS Administration* (585-215-800) document, Chapter 12, "Back Up Data."

Chapter 6
3B2-to-*Sun* Migration — R2 › R3V4

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Overview

This chapter describes how to migrate data from a Call Management System (CMS) Release 2 (R2) on a 3B2 computer to a *CentreVu*™ CMS Release 3 Version 4 (R3V4) on a *Sun** *SPARCserver*† computer. Since the R2 CMS and the CMS R3V4 support multi-ACDs, you can use the following steps to migrate one or more R2 ACDs to the *Sun SPARCserver* computer.

Step	Action	Responsible Party
1	Perform premigration tasks	customer
2	Install the migration program on R2 CMS	customer
3	Install the *Sun SPARCserver* computer	AT&T field technician
4	Administer printers for the *Sun SPARCserver* computer	customer
5	Transfer R2 administration data to tape	customer
6	Migrate R2 administration data	customer
7	Perform post administration migration tasks	customer
8	Move link	AT&T field technician
9	Transfer R2 historical data to tape	customer
10	Migrate R2 historical data	customer
11	Perform post historical migration tasks	customer
12	Do a “cmsadm” backup from the *Sun SPARCserver* computer	customer
13	Do a full maintenance backup from the *Sun SPARCserver* computer	customer

Note

The customer is responsible for performing the 3B2-to-*Sun SPARCserver* computer migration steps (except Steps 3 and 8). The customer can, however, contract AT&T to do the migration on a time-and-materials basis.

Note

Steps 1 through 7 allow you to complete the administration of the CMS R3V4 before it goes into service. You should consider starting these steps 2 to 3 days before the cutover to the *Sun SPARCserver* computer.

*Sun is a registered trademark of Sun Microsystems, Inc.
†SPARCserver is a trademark of SPARC International, Inc.

Multiple ACD Migration

Moving multiple R2 Automatic Call Distributors (ACDs) to the *Sun SPARCserver* computer can cause collisions in the System Administration data. See the “Migrations” section in Chapter 1, “Introduction,” for information on potential collisions and their solutions.

Options for Multiple ACD Migration

When you migrate data from multiple R2 ACDs to a *Sun SPARCserver* computer, you can use one or a combination of the following scenarios:

- First, migrate the R2 administration data for all the ACDs to the *Sun SPARCserver* computer. This allows you to clean up the administration data (user IDs, dictionary, etc.) for all of the ACDs at once. After the administration data is cleaned up, you can start CMS R3V4 data collection and then migrate the R2 historical data for each ACD.
- Migrate the R2 administration data and historical data for one ACD at a time to the *Sun SPARCserver* computer. This allows you to migrate the administration data for an ACD, clean up the administration data, start CMS R3V4 data collection for that ACD, and then migrate the ACD's R2 historical data. You would repeat this process for the next ACD, until all the ACDs are migrated.

Procedure

Perform the following steps to do a 3B-to-*Sun* Migration.

1. Perform Premigration Tasks

Perform the following tasks from the R2 CMS.

1. Change R2 archive parameters for any files that will be set up for R3V4 to store the amount of data you want to migrate to R3V4. This should be done 2 or 3 days before performing the R2 to R3V4 historical migration.

   Note

   For Steps 1.2 and 1.3, there is no need to print out scheduler screens or exceptions administration if you can access a terminal on *both* the 3B2 R2 CMS and the *Sun SPARCserver* computer CMS R3V4. You can view the R2 screens and then enter the appropriate information into the CMS R3V4 windows.

2. Print out the scheduler screens, and write down what each program does. For example, what reports print on what printers, etc.

   R2 scheduled programs do not migrate to the *Sun SPARCserver* computer. You will need to re-create these programs on the *Sun SPARCserver* computer machine. The printout and the written information will aid you in re-creating the programs.

3. Print out the exceptions administration for each split, vector, and trunk group.

   R2 exceptions administration does not migrate to the *Sun SPARCserver* computer. You will need to readminister these exceptions on the *Sun SPARCserver* computer. The printout will aid you in readministering the exceptions.

4. Clean up the dictionary:

   a. Print out each area in the Dictionary subsystem except “Login Identifications” and “Database Items.”

   b. Remove synonyms, constants, and calculations.

   c. In calculations, you *must* replace all references to standard CMS database items in lower case with upper-case versions.

   d. Modify names (synonyms), constants, and calculations so that all of them start with a letter.

e. Replace any occurrences of * \ - “ ‘ | ? ; ~ in names (synonyms) with legal characters. R3V4 does not consider these to be legal characters. All other typewriter characters are legal. If you choose not to replace these characters, the migration program will replace them as follows:

   * to blank
   \ to blank
   - to _
   “ to '
   ‘ to blank
   | to blank
   ? to blank
   ; to :
   ~ to blank.

   If the program's replacement is acceptable, skip this step.

   Note These symbols will not be replaced for calculations.

f. Create agent groups for all extension groups. Then delete the extension groups.

g. Change all constants greater than six characters to six characters or fewer. A character space must be designated for a decimal point. For example, the value “100.00” is a six character constant.

5. Look carefully at custom reports:

   a. Decide whether all custom report designs from R2 will be needed in R3V4. You may find that some R2 custom reports are covered by new, standard R3V4 reports.

   b. Remove any unneeded custom reports. Fix or remove any R2 reports that have not been compiled. Reports that have not been successfully compiled in R2 will not be migrated to R3V4.

      Note If you used the *UNIX* system to move any custom report source files to new directories, those custom reports will not be migrated.

6. Remove Quads 2, 3, and 4 from any reports with multiple quads. Only the first quadrant will be migrated.

7. Clean up CMS user IDs, removing any that are no longer needed. Remember that CMS user IDs must be all lower case.

2. Install the Migration Program on R2 CMS

To install the migration program, do these steps at the R2 CMS console terminal:

1. Access the *UNIX* system from the CMS Main Menu and log in as *root*.
2. Insert the **CMS R2 Migration Backup 3.2Q** diskette into the diskette drive, and close the drive door.
3. Enter the following command to start the installation process:

```
# sysadm installpkg
```

The program responds:

```
Running subcommand 'installpkg' from menu 'softwaremgmt',
SOFTWARE MANAGEMENT


Insert the removable medium for the package you want to install
into the diskette1 drive.
Press <RETURN> when ready. Type q to quit.
```

4. Press **Return**. The program responds:

```
Starting to install the R2 CMS Migration program ...

Finished installation.

You may now remove the medium from the diskette1 drive.


Insert the removable medium for the package you want to install
into the diskette1 drive.
Press <RETURN> when ready. Type q to quit.
```

5. Enter q.
6. Remove the diskette from the drive.

3. Install the *Sun SPARCserver* Computer

Task Performed By: AT&T field technician

Involved Parties: TSC and customer

AT&T field technicians install the *Sun SPARCserver* computer. The TSC provisions the system by setting authorizations, setting up data storage parameters, and setting up the CMS R3V4 application. The customer can turn on the CMS R3V4 and install the additional feature packages, if applicable.

See the following chapters in the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document:

- Chapter 3, “Installing the *Sun SPARCserver* Computer”
- Chapter 5, “Connecting the *Sun SPARCserver* Computer to the Switch”
- Chapter 6, “Setting Up *CentreVu* CMS and Installing Feature Packages.”

4. Administer Printers for the *Sun SPARCserver* Computer

Task Performed By: Customer

The customer administers the printers for the *Sun SPARCserver* computer since the migration process does **not** migrate the printer administration data.

See these chapters in the following documents:

- Chapter 3, “Getting Started and Using CMS Daily — Printers Worksheet,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.
- Chapter 4, “Installing Terminals, Printers, and Modems — Administering Printers,” in the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computer Installation and Maintenance* (AT&T 585-215-807) document.

5. Transfer R2 Administration Data to Tape

To transfer the R2 CMS administration data, which also includes dictionary and custom report data, do these steps on the 3B2 computer:

1. Insert the tape into the tape drive.

   Note Make sure the tape is not write protected (black arrow in the upper left-hand corner of the cartridge points away from "safe").

   Note If your 3B2 is equipped with a Small Computer System Interface (SCSI) tape system, use the tapes provided with the *Sun SPARCserver* computer if possible. These tapes provide a better read when the data is being restored to the new platform.

   If your 3B2 is equipped with a Cartridge Tape Controller (CTC) tape system, use standard R2 backup tapes. The Technical Service Center (TSC) then transfers the data to a medium that is compatible with the *Sun SPARCserver* computer. Tapes used with a CTC tape system must be formatted.

2. At a terminal logged into R2 CMS, access the *UNIX* system through the CMS Main Menu.

   Note Make sure that you access the *UNIX* system through the R2 CMS Main Menu; otherwise, you will get this error message: `CMS system error, setup getenv failed for ACDHOME.`

3. Enter the following command to start the migration program:

```
$ /usr/bin/migrate
```

   The program responds:

4. Enter the appropriate R2 ACD number. For example, enter `1` for ACD1, `2` for ACD2, etc. Response:

5. Enter the R3V4 ACD number to which this R2 ACD will be mapped.

```
                R2 CMS to R3 CMS Data Migration

Please answer a few questions before continuing ...

You will need to map the R2 ACD to an R3 ACD.
To complete this mapping process, you will be asked to
enter the following:
    -> The number of the existing R2 ACD
    -> The number of the corresponding R3 ACD.

For example, the R2 ACD 2 will be mapped to the R3 ACD 1.
The mapping is as follows:
       R2 acd2 --> R3 acd1
When prompted for the number of the existing R2 ACD, enter “2”.
When prompted for the number of the corresponding R3 ACD, enter “1”.

Enter the number of the existing R2 ACD:
```

```
Enter the number of the corresponding R3 ACD number:
```

After the program has established the ACD mapping, it responds with:

```
Select one: <a> for administration and dictionary
            <h> for historical data
            <b> for both options:
```

6. Enter a to migrate the administration, dictionary, and custom reports information. The program responds:

```
Collecting the set of R2 CMS files to migrate ...

Only one tape is required for the administration, dictionary,
and custom reports migration
```

The program continues:

```
Continuing with the migration ...
Retensioning the tape. This can take up to 3 minutes ...
Migrating synonym ...
Migrating constant ...
Migrating calculation ...
     ....
     ....
Migrating users ...
```

The program continues to display the files and records being migrated to the tape.

When the migration program is finished, the following displays:

```
Migration succeeded.
$
```

The `Migration succeeded` message indicates that the program has finished migrating the information to tape and has returned you to the *UNIX* system prompt.

You can return to the R2 CMS Main Menu by entering:

```
$ exit
```

Transfer Tape Media — CTC to SCSI

If your 3B2 computer is equipped with a CTC tape system, the Technical Service Center (TSC) needs to transfer the data on the CTC tape to a medium that is compatible with the *Sun SPARCserver* computer. Call the CMS Provisioning Group at the TSC to have the data transferred:

1. Dial the AT&T Call Center Helpline: **1-800-344-9670**.
2. Press 1 from a touch-tone phone. (If you are dialing from a rotary phone, you will have to wait for an agent.)
3. Press the number that prompts you for “CMS.”
4. Press the number that prompts you for “Release 3 (R3) CMS.”
5. Press the number that prompts you “to request assistance or to report a new problem.”

Once the TSC returns the tapes to you, you can proceed with Step 6.

6. Migrate R2 Administration Data

You migrate the R2 CMS administration, dictionary, and custom report data to the *Sun SPARCserver* computer using the R2 Migrate Data window.

Prerequisite Administration

From the *Sun SPARCserver* computer:

- A device name needs to be defined in the CMS R3V4 Maintenance: Backup/Restore Devices window (normally `default`). This is the device from which the data being migrated is read.
- You need **write** permission for the CMS System Setup subsystem to migrate the data.

See the following sections in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document:

- Chapter 12, “Maintenance — Back Up/Restore Devices”
- Chapter 11, “System Setup — Feature Access.”

Procedure

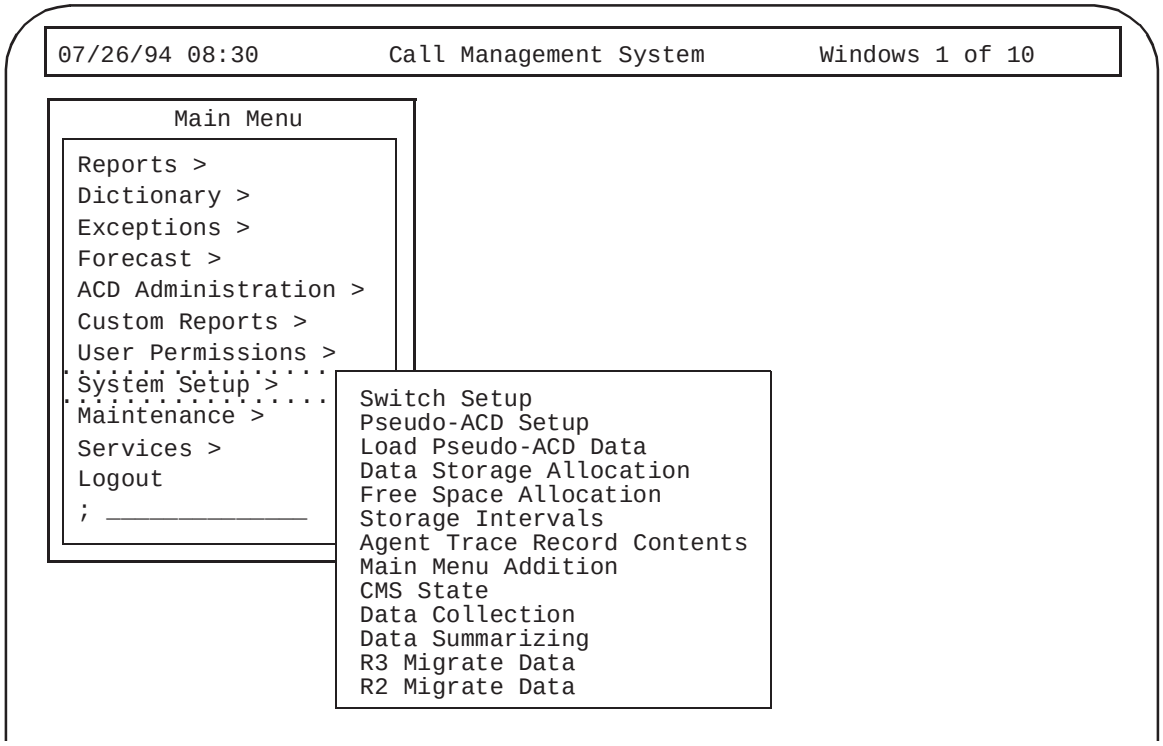
From the *Sun SPARCserver* computer:

1. Insert the tape that contains the R2 administration data, dictionary items, and custom reports into the tape drive.
2. At a terminal logged into CMS R3V4, access the CMS Main Menu.

   Note
   If your personal login ID is to be migrated, you must log in as *cms* to do the migration.

3. Select the `System Setup` subsystem.

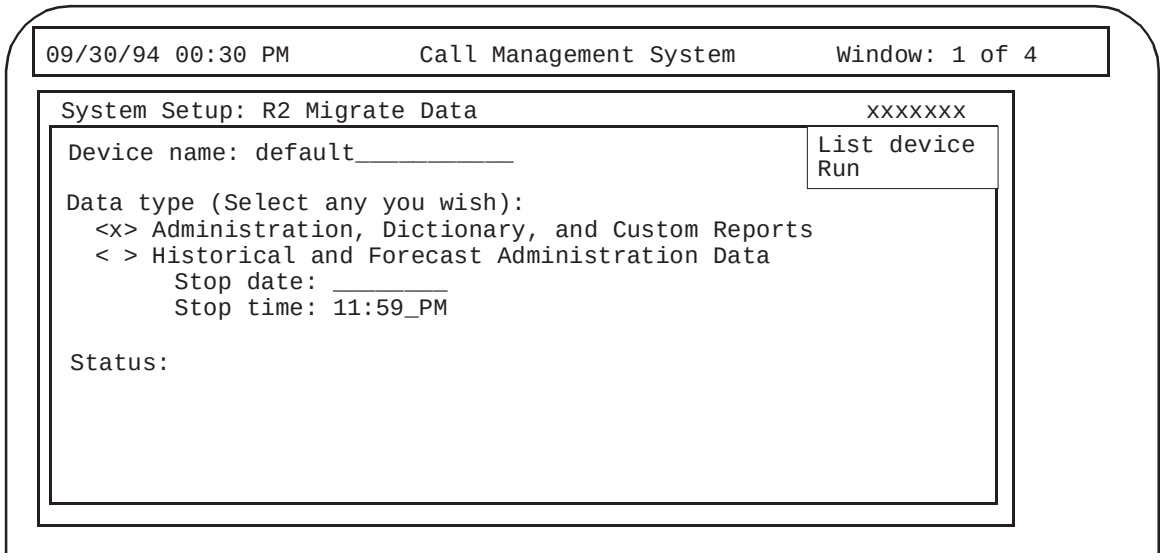
The System Setup menu displays:



4. Select `R2 Migrate Data`.

Caution Do **not** exit this window during the migration. If you exit this window or turn the terminal off, the migration will stop. If the migration stops in the middle, you must restart it.

The R2 Migrate Data window displays:



5. Select the device name from which the data being migrated will be read (normally `default`).
6. Select `Administration, Dictionary, and Custom Reports` (the default) in the `Data type` field.

   Note Do not enter data in the `Stop date:` and `Stop time:` fields. You use these fields only when migrating historical data.

7. Press **Return** to access the Action List.
8. Select `Run` and press **Return**.

   `Working` appears in the lower left-hand corner of the window. The `Status:` field displays various messages that inform you what the program is processing.

   The migration of administration data, dictionary, and custom reports takes approximately 1 hour.

   If the migration completes successfully, the `Status:` line displays this message:

```
Status: Processing completed, see /cms/migrate/migrate.log.
        This file may contain a list of instructions for
        manually completing the migration.
```

   If the migration fails, the `Status:` line displays the following:

```
Status: Failed to migrate: Examine the file, /cms/migrate/migrate.log
        for problems.
```

   In addition, a print window displays:

```
Do you want to print the migration log?
Enter y for yes or n for no:__
```

9. Enter `y` to print the log. You will need a copy of the log for Step 7, Perform Post Administration Migration Tasks.

7. Perform Post Administration Migration Tasks

Perform the following tasks after you have migrated the R2 administration data to the *Sun SPARCserver* computer. You may want a copy of the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document on hand as you complete these tasks.

1. Use the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document to:
   a. Reference Chapter 3, “Getting Started and Using CMS Daily.” If your switch supports the EAS (Expert Agent Selection) feature, see Appendix E, “CMS and Expert Agent Selection.”
   b. Complete the appropriate worksheets in Chapter 3.
   c. Make sure that all the tasks in the “Getting Started Checklist” (in Chapter 3) have been completed.
2. Print a copy of the migration log.

   Note
   If you have not already printed the migration log, enter the following command at the *UNIX* system prompt to print it:
   `lp /cms/migrate/migrate.log.`
3. Fix all problems recorded in the migration log up to but **not** including custom reports. Use the log and Chapter 8, “Migration Log Messages” to determine what action you need to take.
4. Fix user IDs. See Chapter 10, “User Permissions” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.
   a. Decide whether any users need to have administrator status. If so, change their type from `normal user` to `administrator`.
   b. Check the number of windows allowed and the refresh rate for each user. Change them if the defaults are not appropriate.
   c. Check the feature permissions for each user. The default permission for the System Setup subsystem is set to `n` for both read and write. Change this for any users who will need access.
   d. If you have vectoring, set up VDN permissions for all users. (These are set to `n` by default.)
   e. Verify the permissions to splits/skills, trunk groups, VDN (Vector Directory Number), and vectors for each user.
   f. All CMS user IDs must be lower case.

5. Set up and enable exceptions administration. See Chapter 8, “Exceptions,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.
6. Verify that the split call profile parameters migrated. Change the values if desired. See Chapter 9, “ACD Administration,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.
7. If you have vectoring, set up VDN call profile parameters. See Chapter 9, “ACD Administration,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.
8. Identify critical reports (standard and custom) that you will need to run immediately following the migration.

   If any critical reports are migrated R2 custom reports, go to Step 7.8a; otherwise, go to Step 7.9.

   a. Determine if an R3V4 standard report can be used instead of the migrated R2 custom report. The R3V4 report may require modification through the Custom Report subsystem.

      Note

      It is strongly recommended that you find an R3V4 standard report to use instead of the migrated R2 custom report. Migrated custom reports do not fully migrate, take time to fix, and run 60 percent slower than their R3V4 counterparts.

   b. If you found an R3V4 standard report to use instead of the R2 custom report, go to Step 7.8c; otherwise, go to Step 7.8d.

   c. If you need to modify the R3V4 standard report, edit the report via the Custom Reports Screen Painter and make the necessary changes. Test the design and, if necessary, make corrections until no errors are found.

      When you are satisfied with the R3V4 report design, delete the migrated custom report it replaces.

      If there are more migrated custom reports, repeat the applicable Steps 7.8a through 7.8d; otherwise, go to Step 7.9.

   d. Go to Appendix A and follow the steps to make your migrated R2 custom report run on the *Sun SPARCserver* computer.

      Check the migration log to see if the report has specific error messages from the migration. If so, go to Chapter 8, “Migration Log Messages,” and look up the messages. Perform the indicated actions to resolve the problem. From Custom

Reports, run test design and, if necessary, make corrections until no errors are found.

If there are more migrated custom reports, repeat the applicable Steps 7.8a through 7.8d; otherwise, go to Step 7.9.

9. Set up timetables. See Chapter 6, “Timetable and Shortcut,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.

   a. Set up timetables to schedule the reports you identified in Step 7.8 and any other reports you want to schedule.

   Note
   Do not schedule any migrated custom reports until you have adjusted the reports to run on the *Sun SPARCserver* computer, fixed any migration problems, and tested the reports to make sure they will run.

   b. Set up timetables to do administration tasks such as nightly backup.

   c. Add any additional timetables for new reports that were not available in the R2 system, but are needed in R3V4. For example, if you did not have vectoring on the R2 system but have it on the *Sun SPARCserver* computer, you may want to schedule some vectoring reports.

10. On an as-needed basis, fix the remaining migrated custom reports by repeating the applicable Steps 7.8a through 7.8d for each report.

8. Move Link

The AT&T technicians take down the R2 CMS link to the switch.

Note
It is important that you write down the exact date and time the R2 CMS link was brought down. This information will be needed when migrating the historical data.

The technicians bring up the link between the *Sun SPARCserver* computer and the switch. A switch technician needs to make sure that the switch is administered for CMS R3V4. At this point, data collection begins on the CMS R3V4. There will be a period of time, while the historical data migration takes place, that full historical reporting capabilities are not available.

9. Transfer R2 Historical Data to Tape

To transfer the R2 CMS historical data, do the following steps from the 3B2 computer:

1. Insert the tape into the tape drive.

   Note
   Make sure the tape is not write protected (black arrow in the upper left-hand corner of the cartridge points away from “safe”).

   Note
   If your 3B2 is equipped with a SCSI tape system, use the tapes that came with the *Sun SPARCserver* computer if possible. These tapes provide a better read when the data is being restored to the new platform.

   If your 3B2 is equipped with a CTC tape system, use standard R2 backup tapes. The TSC then transfers the data to a media that is compatible with the *Sun SPARCserver* computer. Tapes used with a CTC tape system must be formatted.

2. At a terminal logged into R2 CMS, access the *UNIX* system through the CMS Main Menu.

   Note
   Make sure that you access the *UNIX* system through the R2 CMS Main Menu; otherwise, you will get this error message: `CMS system error, setup getenv failed for ACDHOME`.

3. Enter the following command to start the migration program:

```
$ /usr/bin/migrate
```

The program responds:

```
                R2 CMS to R3 CMS Data Migration

Please answer a few questions before continuing ...

You will need to map the R2 ACD to an R3 ACD.
To complete this mapping process, you will be asked to
enter the following:
    -> The number of the existing R2 ACD
    -> The number of the corresponding R3 ACD.

For example, the R2 ACD 2 will be mapped to the R3 ACD 1.
The mapping is as follows:
       R2 acd2 --> R3 acd1
When prompted for the number of the existing R2 ACD, enter “2”.
When prompted for the number of the corresponding R3 ACD, enter “1”.

Enter the number of the existing R2 ACD:
```

4. Enter the appropriate R2 ACD number. For example, enter `1` for ACD1, `2` for ACD2, etc. Response:

```
Enter the number of the corresponding R3 ACD number:
```

5. Enter the R3V4 ACD number to which this R2 ACD will be mapped.

   After the program has established the ACD mapping, it responds with:

```
Select one: <a> for administration and dictionary
            <h> for historical data
            <b> for both options:
```

6. Enter h to migrate the historical data. Response:

```
Collecting the set of R2 CMS files to migrate ...

Calculating the number of tapes needed for the historical
 data migration ...

The number of cartridge tapes needed to
migrate the CMS data is X (X.XX)

Do you have enough tapes to continue the R2 CMS
historical data migration (y, n)?
```

If you enter n, the following message displays:

```
Signing off.
$
```

The migrate data program has been interrupted and exited. You are currently in the *UNIX* system. Once you have the necessary number of tapes, you can begin the migrate program again from Step 9.1.

If you enter y, the program responds:

```
Continuing with the migration ...
Retensioning the tape. This can take up to 3 minutes ...
```

The migration of historical data can take up to 2 to 3 hours to download data to a single tape. Therefore, if your database requires multiple tapes, this process could take several hours.

The program continues:

```
Migrating hagent....
Migrating dagent....
     ....
     ,,,,
```

If the data is being migrated to more than one tape, the following message appears when it is time to change tapes:

```
***** END OF CURRENT TAPE *****
Insert proper tape; wait for retension pass to complete
then press <return> to continue.
```

7. Replace the current tape with a blank tape, wait for the retension to complete (about 3 minutes), and then press **Return**.

   Note Make sure the tape is not write protected (black arrow in the upper left-hand corner of the cartridge points away from "safe").

   The program responds:

```
Continuing with the operation ...
```

When the migration is finished, the following message displays:

```
Migration succeeded.
$
```

The `Migration succeeded` message indicates that the program has finished migrating the information to the tape and has returned you to the *UNIX* system prompt.

You can return to the R2 CMS Main Menu by entering:

```
$ exit
```

Transfer Tape Media — CTC to SCSI

If your 3B2 computer is equipped with a CTC tape system, the TSC needs to transfer the data on the CTC tape(s) to media that is compatible with the *Sun SPARCserver* computer. Call the CMS Provisioning Group at the TSC to have the data transferred:

1. Dial the AT&T Call Center Helpline: 1-800-344-9670.
2. Press 1 from a touch-tone phone. (If you are dialing from a rotary phone, you will have to wait for an agent.)
3. Press the number that prompts you for “CMS.”
4. Press the number that prompts you for “Release 3 (R3) CMS.”
5. Press the number that prompts you “to request assistance or to report a new problem.”

Once you receive the tapes back from the TSC, you can proceed with Step 10.

10. Migrate R2 Historical Data

You migrate the R2 CMS historical and forecast administration data to the *Sun SPARCserver* computer using the R2 Migrate Data window. This migration is almost identical to the administration migration except that you enter a stop date and stop time.

Prerequisite Administration

- A device name needs to be defined in the CMS R3V4 Maintenance: Backup/Restore Devices window (normally `default`). This is the device from which the data being migrated is read.
- You need **write** permission for the CMS R3V4 System Setup subsystem to migrate the data.
- You need to set the CMS R3V4 interval size to 30 minutes for the migration of R2 CMS historical data. R2 CMS has an interval size of 30 minutes, but CMS R3V4 can have interval sizes of 15, 30, or 60 minutes. If you wish a different R3V4 interval size, you can change it after the migration.

See the following sections in the *CentreVu™ Management System R3V4 Administration* (AT&T 585-215-800) document:

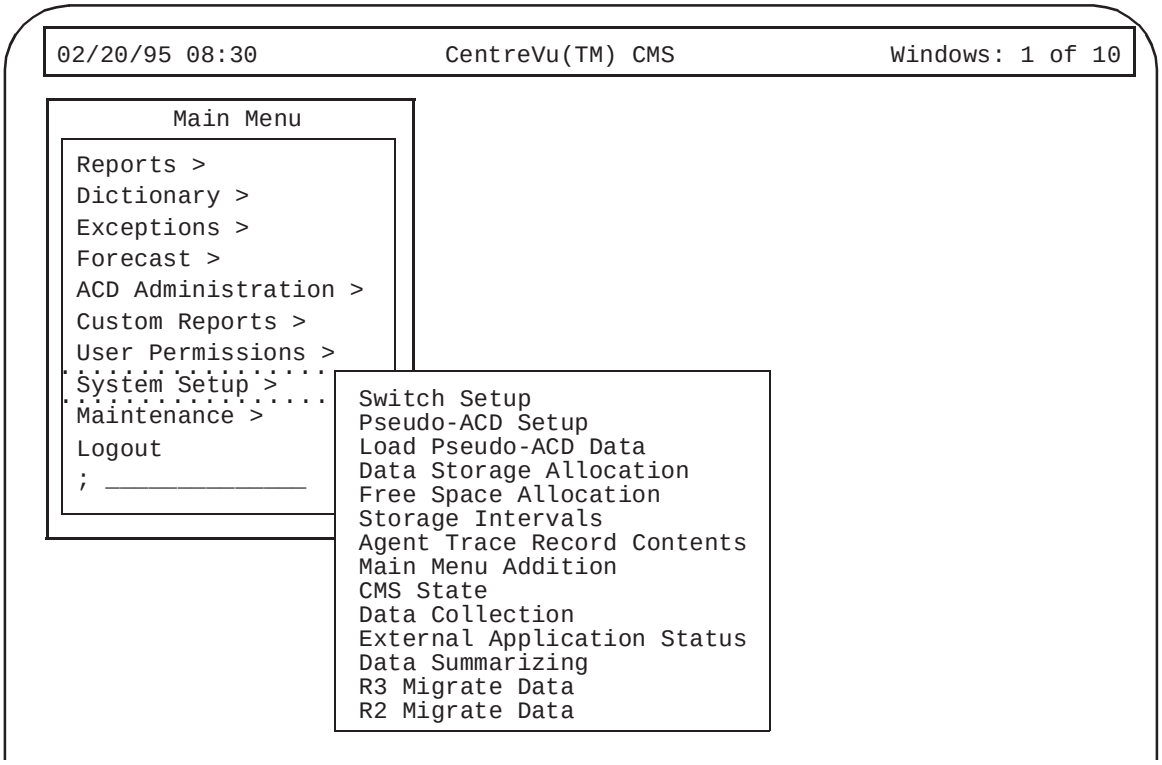
- Chapter 12, “Maintenance — Back Up/Restore Devices”
- Chapter 11, “System Setup — Feature Access”
- Chapter 11, “System Setup — Storage Intervals.”

Procedure

Do the following steps from the *Sun SPARCserver* computer:

1. Insert the tape that contains the R2 historical data and forecast administration data into the tape drive.
2. At a terminal logged into CMS R3V4, access the CMS Main Menu.
3. Select the `System Setup` subsystem.

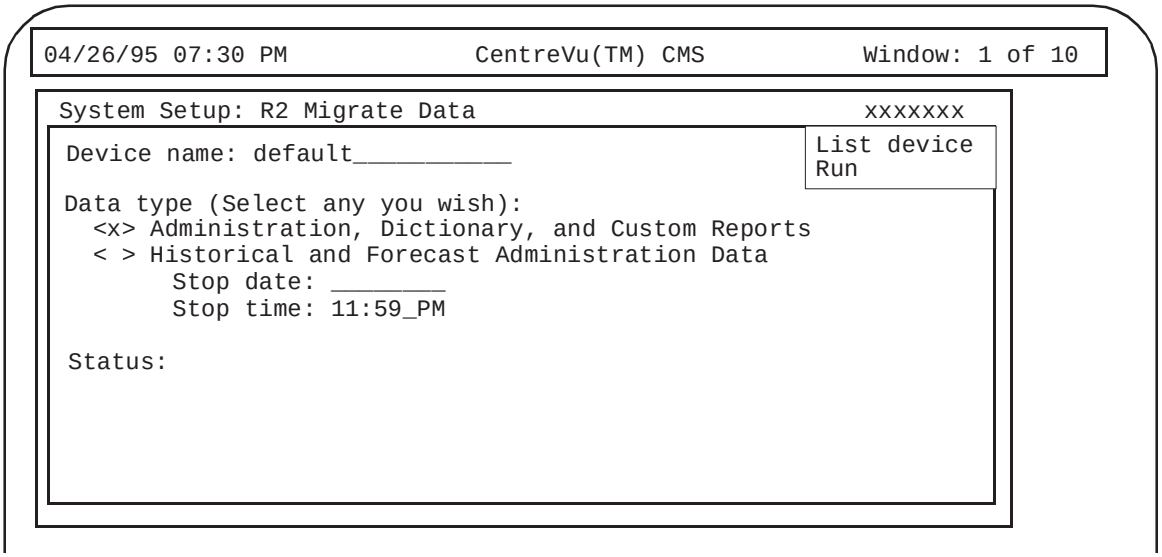
The System Setup menu displays:



4. Select `R2 Migrate Data`.

Caution Do **not** exit this window during the migration. If you exit this window or turn the terminal off, the migration will stop and then must be restarted.

The R2 Migrate Data window displays:



5. Select the device name from which the data being migrated will be read (normally `default`).
6. Select `Historical and Forecast Administration Data` in the `Data type` field.
7. In the `Stop date` field, type the date you recorded when the technicians brought down the R2 link. The stop date can be typed in the month/day/year format (09/08/93) or in the relative date format (-1).

   Caution If you enter a date and time more recent than when the R2 link was brought down, you will delete any R3V4 data collected up to the date/time you enter.

8. In the `Stop time` field, type the time you recorded when the technicians brought down the R2 link. The stop time is entered in the `hh:mm AM/PM` format. The default for this field is `11:59 PM`.
9. Press **Return** to access the Action List.
10. Select `Run`, and press **Return**.

    After entering `Run`, the following window displays:

```
The stop date and time are critical to the migration.
          <date and time>
Are you sure they are correct (y or n)?
Enter y for yes or n for no:__
```

11. If you are sure that the stop date and stop time are correct, enter `y`. `Working` appears in the lower left-hand corner of the R2 Migrate window. The `Status:` field displays various messages that inform you what is being processed.

    If you wish to enter a new stop date and stop time, enter `n`. The program returns you to the `Stop date` field of the R2 Migrate window. Enter a new stop date and stop time and select `Run`.

    The migration of historical data and forecast administration data may take several hours.

If more than one tape of historical data is being migrated, this window appears when it is time to change tapes:

```
***** END OF CURRENT TAPE *****
Insert proper tape; wait for retension pass to complete
then press <return> to continue.
```

12. Replace the current tape with the next tape, wait for the retension to complete (about 3 minutes), and then press **Return**.

    If the migration completes successfully, the `Status:` line displays this message:

```
Status: Processing completed, see /cms/migrate/migrate.log.
        This file may contain a list of instructions for
        manually completing the migration.
```

    If the migration fails, the `Status:` line displays the following:

```
Status: Failed to migrate: Examine the file, /cms/migrate/migrat
        for problems.
```

    In addition, a print window displays:

```
Do you want to print the migration log?
Enter y for yes or n for no:__
```

13. Enter `y` to print the log. You will need a copy of the log for Step 11, Perform Post Historical Migration Tasks.

11. Perform Post Historical Migration Tasks

Perform the following tasks after you have restored the R2 historical data to the *Sun SPARCserver* computer. You may want a copy of the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document on hand as you complete the tasks in this section.

1. If you have not already printed the migration log, enter the following command at the *UNIX* system prompt to print the log: `lp /cms/migrate/migrate.log`.

   The `migrate.log` file provides a record of what happened during the migration. Use this log and Chapter 8, “Migration Log Messages,” to determine what actions you need to take.

2. If forecasting is installed, fix any errors related to the forecast administration.

3. If forecasting is installed, run the forecast manager to recollect data for the forecasting tables from the migrated historical data. Then schedule the forecast manager in a timetable if you are planning to use forecasting. See Chapter 14, “Forecasting,” and Chapter 6, “Timetable and Shortcuts,” in the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document.

12. Do a “cmsadm” Backup from the *Sun SPARCserver* Computer

Task Performed By: Customer

The customer does a “cmsadm” backup from the *Sun SPARCserver* computer. The “cmsadm” backup provides a complete backup of all file systems on the *Sun SPARCserver* computer in case of failure.

See the *CentreVu™ Call Management System R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 8, “Maintenance — Performing Backups and Restores.”

13. Do a Full Maintenance Backup from the *Sun SPARCserver* Computer

Task Performed By: Customer

The customer does a full CMS maintenance backup from the *Sun SPARCserver* computer. This backup protects you from losing the migrated CMS data plus the CMS R3V4 data initially collected.

In the Back Up Data window, select `y` (yes) for the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- All ACDs
- ACD specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ Call Management System R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, “Maintenance — Back Up Data,” for more information.

This completes the R2-to-CMS R3V4 migration steps.

Chapter 7
R3V4 Non-EAS-to-R3V4 EAS Migration — Generic 2.2

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Overview

This chapter describes how to migrate data from the *Sun*[*] *SPARCserver*[†] platform running on a Generic 2.2 (G2.2) switch without Expert Agent Selection (EAS) to the *same Sun SPARCserver* patform running on a G2.2 switch with EAS. This migration converts the *CentreVu*™ Call Management System (CMS) Release 3 Version 4 (R3V4) data to the G2.2 EAS format (splits are multiplied by 10 during the migration).

In the following steps, CMS refers to the *CentreVu* CMS R3V4 on the *Sun SPARCserver* platform for which you are doing the in-place migration.

Step	Action	Responsible Party
1	Do a “cmsadm” backup of CMS without G2.2 EAS	customer
2	Do a full maintenance backup of CMS without G2.2 EAS	customer
3	Turn Off CMS	Technical Service Center (TSC)
4	Execute the “swsetup” command	TSC
5	Activate EAS on the switch	AT&T field technician
6	Change data storage allocation for CMS with EAS	TSC
7	Start CMS data collection	TSC
8	Migrate full historical data	customer
9	Do a “cmsadm” backup of CMS with G2.2 EAS	customer
10	Do a full maintenance backup of CMS with G2.2 EAS	customer

Note The customer may contract AT&T to complete Steps 8 through 10 on a time-and-materials basis.

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†SPARCserver is a trademark of SPARC International, Inc.

Split/Skill Numbers

After the G2.2 without EAS to G2.2 with EAS migration, splits are multiplied by 10 to convert them to the G2.2 EAS format. For example, split 1 becomes split 10, split 2 becomes split 20, and so on. In the Dictionary subsystem, however, split names (synonyms) still reference the G2.2 non-EAS split number (split 1, split 2, etc.).

After the migration, you need to access the Split/Skills window in the Dictionary subsystem, and change the Split/Skill numbers from 1 to 10, 2 to 20, etc.

Procedure

Perform the following steps to do an R3V4 Non-EAS-to-R3V4 EAS migration.

1. Do a "cmsadm" Backup of *CentreVu* CMS without G2.2 EAS

Task Performed By: Customer

The customer does a "cmsadm" backup of the *CentreVu* CMS R3V4 without G2.2 EAS. The "cmsadm" backup provides a complete backup of all file systems on the *Sun SPARCserver* computer in case of failure.

See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 8, "Maintenance — Performing a CMSADM Backup."

2. Do a Full Maintenance Backup of *CentreVu* CMS without G2.2 EAS

Task Performed By: Customer

The customer does a full CMS maintenance backup of the *CentreVu* CMS R3V4 without G2.2 EAS. This backup provides the data for the migration.

In the Back Up Data window, enter `y` (yes) for the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- Current ACD (this is the non-EAS ACD)

  Note

  Since the migration program allows you to migrate only one ACD at a time, you need to select current ACD; **not** all ACDs.

  Make sure that the ACD you want to back up is the current ACD.

- Historical data

  — Full.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, "Maintenance — Back Up Data."

3. Turn Off *CentreVu* CMS

Task Performed By: TSC

The TSC turns off *CentreVu* CMS so it can execute the `swsetup` command in the next step.

See the *CentreVu™ CMS Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 2, "CMSADM and CMSSVC Menus — run_cms."

4. Execute the "swsetup" Command

Task Performed By: TSC

From the *CentreVu* CMS R3V4 , the TSC accesses the "cmssvc" menu and executes the `swsetup` command, which allows *CentreVu* CMS to run the EAS feature.

See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 2, "CMSADM and CMSSVC Menus — swsetup."

5. Activate EAS on the Switch

Task Performed By: AT&T field technician

This step terminates data collection on the *CentreVu* CMS R3V4. An AT&T field technician busies out the *CentreVu* CMS R3V4 link via the switch. Use **PROC 028** for the Generic 2 switch.

The switch technician activates the EAS feature on the switch. After the EAS feature is activated, the AT&T field technician releases busy out.

6. Change Data Storage Allocation for *CentreVu* CMS with EAS

Task Performed By: TSC

The TSC changes data storage allocation to add skills.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 11, "System Setup — Data Storage Allocation."

7. Start *CentreVu* CMS Data Collection

Task Performed By: TSC

The TSC restores the *CentreVu* CMS R3V4 on the *Sun SPARCserver* Platform to multi-user mode, starts data collection, and verifies that the link is up.

See the following sections in the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document:

- Chapter 11, “System Setup — CMS State”
- Chapter 11, “System Setup — Data Collection”
- Chapter 12, “Maintenance — Connection Status.”

At this point, the TSC hands the migration back to the customer.

Note
The customer may contract with AT&T to have the TSC complete the migration on a time and materials basis.

8. Migrate Full Historical Data

Task Performed By: Customer

Now that the EAS *CentreVu* CMS is collecting data, the customer can migrate the non-EAS *CentreVu* CMS historical data.

Prerequisite Administration

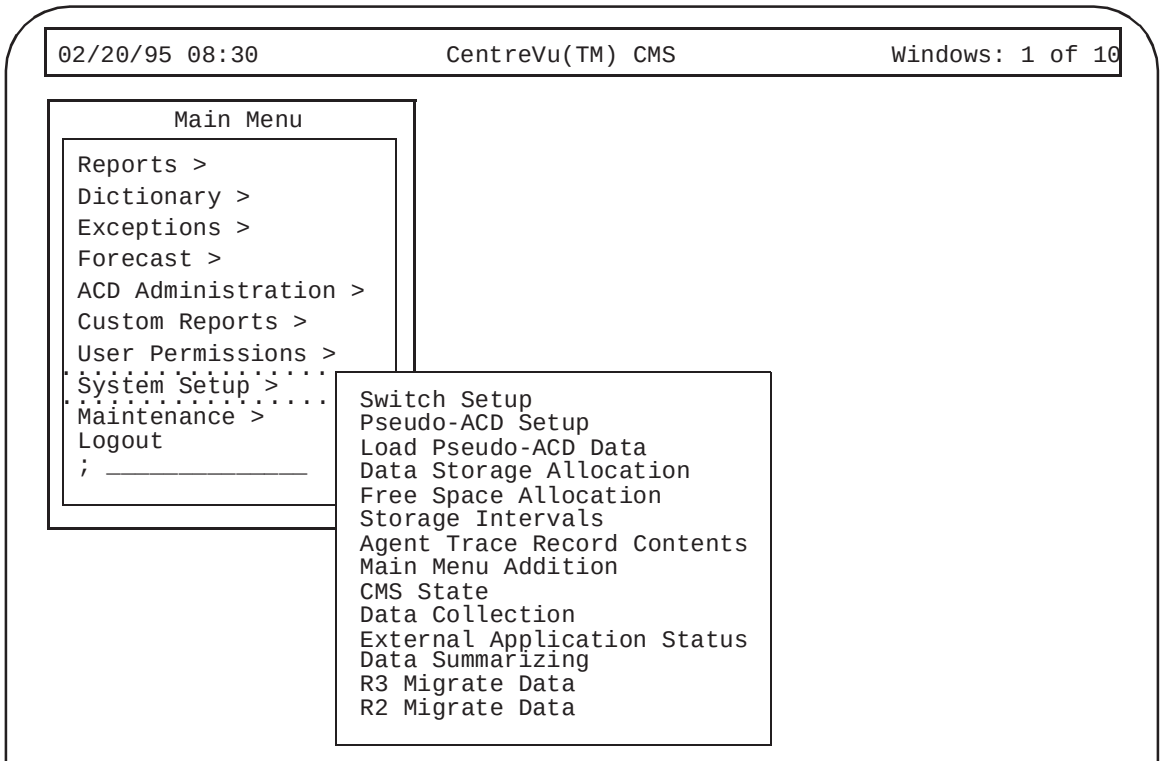
The *CentreVu* CMS on the *Sun SPARCserver* Platform may be in single-user or multi-user mode to migrate historical data.

Procedure

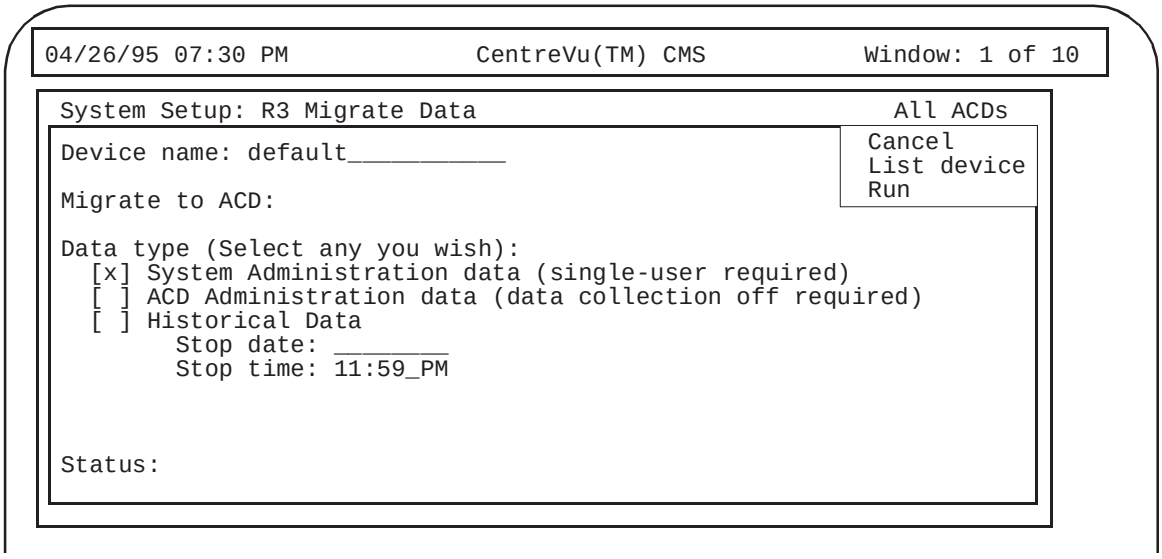
From the *Sun SPARCserver* Platform:

1. Insert the *CentreVu* CMS R3V4 full backup tape (from Step 2) into the appropriate tape drive.
2. Log in as *cms,* and access the *CentreVu* CMS Main Menu.
3. Select the `System Setup` subsystem.

The System Setup menu displays:



4. Select `R3 Migrate Data`. The R3 Migrate Data window displays:



5. Select the device name from which the data being migrated will be read (normally `default`).

6. In the `Migrate to ACD:` field, type the number (`1` for ACD1, `2` for ACD2, `3` for ACD3, or `4` for ACD4) or the synonym to which the migrating ACD will be mapped on the *Sun SPARCserver* Platform.
7. Select `Historical Data` in the `Data type` field.

   Note To migrate all historical data on the tape, use the defaults in the `Stop date:` field (blank) and the `Stop time:` field (11:59 PM).

8. Press Return to access the Action List.
9. Select `Run` and press Return.

   `Working` appears in the lower left-hand corner of the window. The `Status:` field displays various messages that tell you what the program is processing.

   Note Since the migration runs in the background, you can exit the migration window and perform other tasks. You should access the migration window occasionally to check the progress.

   The migration of full historical data may take several hours.

   If the migration completes successfully, the `Status:` line displays a “successful” message similar to the following:

   ```
   Last migration completed (Tue Jul 13 09:49:27
   1993)
   ```

   If the migration fails, the `Status:` line displays a “failed” message, and an error is logged to the customer and services logs.

9. Do a "cmsadm" Backup of the *CentreVu* CMS with G2.2 EAS

Task Performed By: Customer

The customer does a "cmsadm" backup of the *CentreVu* CMS R3V4 with G2.2 EAS. The "cmsadm" backup provides a complete backup of all file systems on the *Sun SPARCserver* Platform in case of failure.

See the *CentreVu™ CMS R3V4 Sun® SPARCserver™ Computers Installation and Maintenance* (AT&T 585-215-807) document, Chapter 8, "Maintenance — Performing a CMSADM Backup."

10. Do a Full Maintenance Backup of the *CentreVu* CMS with G2.2 EAS

Task Performed By: Customer

The customer does a full CMS maintenance backup of the *CentreVu* CMS R3V4 data. This backup protects you from losing the migrated data plus the R3V4 data collected since the migration.

In the Back Up Data window, enter `y` (yes) in the `Verify volume can be read after backup` field. In addition, the following fields should contain an `x`:

- All ACDs
- ACD specific data
- System administration data
- Historical data
  - — Full.

See the *CentreVu™ CMS R3V4 Administration* (AT&T 585-215-800) document, Chapter 12, "Maintenance — Back Up Data."

Chapter 8
Migration Log Messages

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Migration Log Messages

The migration program writes messages to different log files depending on what type of migration occurred. This chapter addresses the migration logs for Release 2 (R2) and Release 3 (R3) Call Management System (CMS) migrations to *CentreVu™* CMS Release 3 Version 4 (R3V4).

If you are performing an R3-to-R3V4 migration, you need to view the */cms/migrate/r3mig.log* file.

Note

The *CentreVu* CMS R3V4 application also contains a migration log for services. The services migration log is located in */cms/maint/r3mig/mig.log*. This log may contain information inappropriate for the customer.

If you are performing an R2-to-R3V4 migration, you need to view the */cms/migrate/migrate.log* file.

Turn to one of the following sections:

- R3-to-R3V4 Migration Log Messages
- R2-to-R3V4 Migration Log Messages.

Look up the migration log message and decide what action you need to take.

R3-to-R3V4 Migration Log Messages

This section describes the messages that may result in an R3-to-R3V4 migration. These messages are located in the *cms/migrate/r3mig.log* and the */cms/maint/r3mig/mig.log* files.

Standard Messages

The following messages are a sample of the migration comments that should always appear in the log. The messages are offset in a constant width font. Variables in a message are italicized. For example, in the message

```
The stop date/time for all tables is: date
```

the variable *date* would appear as “Tue Mar 3 13:23:10 1992.” Each message is presented with an explanation for that message (seeTable 8-1, Table 8-2, Table 8-3, and Table 8-4).

System Administration Data Migration Messages

Table 8-1: R3-to-R3V4 — System Administration Data Migration Messages

Message:	`Migrating db/gem/h_custom...`
Explanation:	Migration of R3 custom reports source files - historical to R3V4.
Message:	`Migrating db/journal/timetable...`
Explanation:	Migration of R3 timetable source files to R3V4.
Message:	`Migrating dbitems`
Explanation:	Migration of R3 Dictionary database items, constants, and calculations to R3V4.
Message:	`Migrating dbtbls...`
Explanation:	Migration of R3 Dictionary database items to R3V4.
Message:	`Migrating users...`
Explanation:	Migration of R3 user data to R3V4.
Message:	`Migrating features...`
Explanation:	Migration of R3 feature permissions to R3V4.
Message:	`Migrating main_menu...`
Explanation:	Migration of R3 main menu addition data to R3V4.
Message:	`Migrating h_custom...`
Explanation:	Migration of R3 custom reports information - historical to R3V4.
Message:	`Migrating r_custom...`
Explanation:	Migration of R3 custom reports information - real-time to R3V4.
Message:	`Migrating ttsched...`
Explanation:	Migration of R3 timetable information to R3V4.

ACD Administration Data Migration Messages

Table 8-2: R3-to-R3V4 — ACD Administration Data Migration Messages

Message:	`Migrating aar_agents...`
Explanation:	Migration of R3 agent trace active agents to R3V4.
Message:	`Migrating acds...`
Explanation:	Migration of R3 ACD permissions to R3V4.
Message:	`Migrating agroups...`
Explanation:	Migration of R3 Dictionary agent groups to R3V4.
Message:	`Migrating dbstatus...`
Explanation:	Migration of R3 historical database archiving status to R3V4.
Message:	`Migrating mctex...`
Explanation:	Migration of R3 malicious call trace exception data to R3V4.
Message:	`Migrating split_pro...`
Explanation:	Migration of R3 split call profile administration to R3V4.
Message:	`Migrating tg_ex_adm...`
Explanation:	Migration of R3 trunk group exception administration to R3V4.
Message:	`Migrating vdn_pro...`
Explanation:	Migration of R3 VDN call profile administration to R3V4.
Message:	`Migrating vdns...`
Explanation:	Migration of R3 VDN permissions to R3V4.
Message:	`Migrating vectors...`
Explanation:	Migration of R3 vector permissions to R3V4.

Historical Data Migration Messages

Table 8-3: R3-to-R3V4 — Historical Data Migration Messages

Message:	`Migrating d_secs...`
Explanation:	Migration of R3 seconds data collected in day to R3V4.
Message:	`Migrating dagent...`
Explanation:	Migration of R3 daily historical agent data to R3V4.
Message:	`Migrating dtkgrp...`
Explanation:	Migration of R3 daily historical trunk group data to R3V4.
Message:	`Migrating dvector...`
Explanation:	Migration of R3 daily historical vector data to R3V4.
Message:	`Migrating f_dsplit...`
Explanation:	Migration of R3 forecast daily split data to R3V4.
Message:	`Migrating f_itkgrp...`
Explanation:	Migration of R3 forecast interval trunk group data to R3V4.
Message:	`Migrating hcwc...`
Explanation:	Migration of R3 hourly historical call work code data to R3V4.
Message:	`Migrating htrunk...`
Explanation:	Migration of R3 hourly historical trunk data to R3V4.
Message:	`Migrating m_secs...`
Explanation:	Migration of R3 seconds data collected in month to R3V4.
Message:	`Migrating msplit...`
Explanation:	Migration of R3 monthly historical split data to R3V4.
Message:	`Migrating mvdn...`
Explanation:	Migration of R3 monthly historical VDN data to R3V4.
Message:	`Migrating wagent...`
Explanation:	Migration of R3 weekly historical agent data to R3V4.
Message:	`Migrating wtkgrp...`
Explanation:	Migration of R3 weekly historical trunk group data to R3V4.
Message:	`Migrating wvector...`
Explanation:	Migration of R3 weekly historical vector data to R3V4.

Error Messages

Error messages appear in the migration log when the migration program detects a problem during migration. The following Error messages are samples of messages that might appear in the log. They are presented alphabetically. Variables in a message are italicized. Each message is presented with its cause and a resolution (see Table 8-4).

Table 8-4: R3-to-R3V4 — Error Messages

Message:	`Collision in user login: `*`username`*`. All ownerships are transferred to user 'cms'.`
Cause:	There is already a login ID established with this user name for CMS. The user name being migrated is causing the conflict. The CMS administrator (`cms`) becomes the owner of custom reports, timetables, shortcuts, etc., that were previously owned by the migrated user name.
Resolution:	If the migrating user is a different one than the user that is already established for CMS, the system administrator should create a different user name for this user and transfer the ownerships to this user after the migration. If the migrating user and the existing one are the same, the administrator should consult with the user about the disposition of ownerships.
Message:	`Dictionary collision: name='`*`custom_name`*`' item_type='cust_def'`
Cause:	There is already the same custom table with the same item name already defined in the Dictionary subsystem.
Resolution:	Verify that the migrating table is the same as the existing one. If they are different, one table has to be renamed and database items must be reentered for the renamed table.
Message:	`Dictionary collision: name='`*`custom_name`*`' item_type='const' formula='`*`A CONSTANT`*`'`
Cause:	There is already a constant with the name but a different value.
Resolution:	You need to enter the constant again and rename it.

Table 8-4: R3-to-R3V4 — Error Messages (Contd)

Message:	`Dictionary collision: name='custom_name' item_type='calc' formula='CALCULATION FORMULA'`
Cause:	There is already a calculation with '*custom_name*' as the name but with different contents.
Resolution:	You need to enter the formula again and rename it.
Message:	`Dictionary collision: name='custom column name' table= 'custom table name'`
Cause:	There is already a Dictionary item for this column in the same table.
Resolution:	Verify that the migrating table is the same as the existing one. If they are different, one table has to be renamed and database items must be reentered for the renamed table.
Message:	`Due to name collision, historical report 'report name' (username) has been changed to tempx`
Cause:	The name of the migrated historical report, which belongs to the user specified in parentheses, collided with a historical report already present in R3V4.
Resolution:	Rename the report to something more meaningful than the automatically assigned name.
Message:	`Due to name collision, real-time report 'report name' (username) has been changed to tempx`
Cause	The name of the migrated real-time report, which belongs to the user specified in parentheses, collided with a real-time report already present in R3V4.
Resolution:	Rename the report to something more meaningful than the automatically assigned name.
Message:	`Due to name collision, timetable 'timetable name' (username) has been changed to tempx`
Cause	The name of the migrated timetable, which belongs to the user specified in the parentheses, collided with a timetable already present in R3V4.

Table 8-4: R3-to-R3V4 — Error Messages (Contd)

Resolution:	Rename the timetable to something more meaningful than the automatically assigned name. If the timetable is no longer needed, delete it.
Message:	`Due to name collision, short cut 'short cut name' (username) has been changed to tempx`
Cause	The name of the short cut being migrated collided with a short cut already present in R3V4.
Resolution:	Rename the short cut to something more meaningful than the automatically assigned name. If the short cut is no longer needed, delete it.
Message:	`Error in creating UNIX login for user 'username'. The user may have already had UNIX log...`
Cause:	The user already has a *UNIX*® system login in *CentreVu* CMS R3V4.
Resolution:	If the user *username* already has a *UNIX* system login, ignore this message. Otherwise, verify that this user can log on and report any problems to Services.
Message:	`Menu addition: Name collision: custom menu name (/bin/date).`
Cause:	There is already a menu item with the same name as the one being migrated.
Resolution:	If the menu item refers to a different application, you need to reenter the menu name with a new name. Otherwise, ignore this message.
Message:	`WARNING: custom report 'report name' (username) contains obsolete column 'column name'`
Cause:	One of the columns used directly in this custom report (owned by *username*) is no longer valid in R3V4.

Table 8-4: R3-to-R3V4 — Error Messages (Contd)

Resolution:	You must delete/change the obsolete column from the report in order to use it. NOTE: The only obsolete column that is likely to be used by the customer is I_AUXTIME for 'agent' tables because it was one of the columns made available to the customer. Its R3V4 equivalent is TI_AUXTIME. CAUTION: Migration program will not be able to detect the use of I_AUXTIME indirectly through table-independent formulas because I_AUXTIME is no longer valid with 'agent' tables but still valid with other historical tables.
Message:	`WARNING: Dictionary: calculation 'calculation name' contains obsolete column: COLUMN NAME`
Cause:	The *COLUMN NAME* is no longer valid with CMS R3V4.
Resolution:	You need to modify the formula to use a different column, or stop using the formula altogether. The following columns are no longer valid: ABNRINGTIME ADJROUTETIME BH_OBUSYCALLS BH_ODISCCALLS HOLDABNTIME INTERFLOWTIME LOOKFLOWTIME O_ABNQUECALLS O_ABNRINGCALLS O_ABNVECCALLS O_BACKUPCALLS O_BUSYCALLS O_CONNECTCALLS O_DISCCALLS O_TRANSFERRED

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R2-to-R3V4 Migration Log Messages

This section describes the messages that result from an R2-to-R3V4 migration. These messages are located in the `/cms/migrate/migrate.log` file.

Standard Messages

The following messages should always appear in the log. The messages are offset in a constant width font. Variables in a message are italicized. For example, in the message

`The stop date/time for all tables is: date`

the variable *`date`* would appear as “Tue Mar 3 13:23:10 1992." Each message is presented with an explanation for that message (see Table 8-5).

Table 8-5: R2-to-R3V4 — Migration Log - Standard Messages

Message:	`Getting user input...`
Explanation:	R2 CMS migration processing message.
Message:	`Initializing temporary database tables...`
Explanation:	R2 CMS migration processing message.
Message:	`Successfully built temporary database tables.`
Explanation:	R2 CMS migration processing message.
Message:	`The stop date/time for all tables is: date`
Explanation:	Gives the stop date/time input on the R2 CMS Migration window.
Message:	`Migrating Historical Custom Report report name`
Explanation:	This message is printed for each historical custom report that is migrated.
Message:	`Migrating realtime Custom Report report name`
Explanation:	This message is printed for each real-time custom report that is migrated.
Message:	`Migration completed.`

Table 8-5: R2-to-R3V4 — Migration Log - Standard Messages (Contd)

Explanation:	CMS R3V4 finished migrating either the administration or historical data.

Error Messages

These messages appear in the log when the migration program detects a problem. These messages are presented alphabetically, with two special characters presented in this order: *, <. Variables in a message are italicized. Each message is presented with its cause and a resolution (see Table 8-6).

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages

Message:	`*** INTERNAL ERROR: contact services (`*`error number, time stamp`*`) ***`
Cause:	While processing data in the table listed above this message, an internal CMS R3V4 error occurred.
Resolution:	Contact services immediately and do not remove the migration log file. Services needs the *`error number`* and *`time stamp`* to find more information in their error log.
Message:	`<`*`calculation name`*`> contains items not found in R3 database.`
Cause:	The calculation *`calculation name`* has items in its formula that cannot be found in the R3V4 Dictionary database. These items can be database items or other calculations.
Resolution:	Verify the calculation's formula in the Dictionary subsystem, and either modify the formula or add back any calculations used in the formula.
Message:	`<`*`calculation name`*`> not found in the R3 database.`
Cause:	One of the following conditions may cause this message to occur: 1. The formula for *`calculation name`* has items that cannot be found in the R3V4 Dictionary. Usually this occurs when an R2 calculation contains a nested calculation, and the original calculation is migrated before the nested one. 2. The calculation or database item is misspelled, in which case the calculation fails on R2.
Resolution:	1. Migrating an original calculation before the nested one is not a problem. No action needs to be taken. Verify that they are both in the Dictionary.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

	2. If the calculation or database item is misspelled, use the R3V4 Dictionary subsystem to correct the spelling. Note that if you correct the spelling, the calculation or database item may work in R3V4.
Message:	<*group name*> was an extension group in R2, and is now an agent group in R3. The extensions in this group have been changed to login ids.
Cause:	CMS R3V4 does not allow groups set up by extension numbers, only by login IDs. Any R2 CMS extension groups migrated to CMS R3V4 are changed to agent groups, and the associated extensions are changed to login IDs.
Resolution:	Review this group to determine if using the extensions as login IDs is appropriate for your system. If using extensions as login IDs is not appropriate, you need to delete the contents of the group and then add the appropriate login IDs.
Message:	<*login ID*> has no default printer. Assign default printer via User Data.
Cause:	No default printer was assigned to *login ID* in the User Data window.
Resolution:	Use the User Data window and assign a default printer to *login ID*.
Message:	<*synonym name*> begins with non-alpha character. Change name after migration. Look for synonym in *synonym group*
Cause:	Synonym names must begin with a letter in CMS R3V4. The synonym *synonym name* does not begin with a letter and was migrated to CMS R3V4.
Resolution:	List the synonym in the R3V4 Dictionary subsystem, and modify *synonym name* to begin with a letter.
Message:	Calculation <*calculation name, calculation equation*>: already in R3 dictionary.
Cause:	The calculation *calculation name* already existed in the R3V4 Dictionary database when this migration was done.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Resolution:	Verify that the R3V4 calculation is appropriate for your reports, and modify it if necessary. User may choose to replace the standard calculation by the new one. If this is a standard R3V4 calculation, you must make a new R3V4 custom calculation with the R2 formula. Then change the custom reports that use the old calculation name to use the new calculation name. If you migrate the administration data more than once, this message will appear for all the calculations that were migrated the first time.
Message:	`calculation truncated: calculation name calculation equation`
Cause:	When this R2 CMS calculation was migrated, the formula was too long for CMS R3V4.
Resolution:	Modify the calculation using the CMS Dictionary: Calculation window so that it can be used in a custom report. This modification may require building other calculations to nest within this one.
Message:	`Call profile permissions exist for split split number R2 service level = service level R2 increment = interval size`
Cause:	The call profile parameters for split *split number* already existed in the CMS R3V4CMS R3V4 system when this migration was done.
Resolution:	Verify the split call profile parameters in the CMS ACD Administration subsystem, and modify them if necessary. If you migrate the administration data more than once, this message will appear for all the call profile permissions that were migrated the first time.
Message:	`Cannot migrate custom report: Custom report name` `compiler errors at bottom of file: /cms/migrate/r2customnn`
Cause:	The R2 custom report *custom report name* had compiler errors in the R2 system, so the report could not be migrated to CMS R3V4.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Resolution:	This custom report did not function in R2 because of the compiler errors. You have to manually re-create the report in the CMS R3V4 if the design is still needed. You can edit the failed report which is located in /cms/migrate/r2custom*nn*.
Message:	`Cannot find database item in dictionary: <item name>`
Cause:	The database item *item name* was not found in the R3V4 Dictionary.
Resolution:	If you need the database item in a custom report, manually add it to the R3V4 Dictionary.
Message:	`Cannot migrate R2 dictionary item <item name> to R3 dictionary item.`
Cause:	The R2 item *item name* did not have a map to an R3V4 Dictionary item. One of the following conditions cause this message to occur: 1. No mapping exists. 2. The item is misspelled.
Resolution:	1. Check Appendix B for the list of R2 items that are not mapped to R3V4. If the R2 item is not mapped, you need to replace the R2 item with a similar R3V4 item. 2. If the item is misspelled, you can correct the spelling and then manually add it the R3V4 system.
Message:	`Changed name of report to TMP`*n*`. Make adjustments as necessary.`
Cause:	A custom report already existing in the R3V4 system has the same name as an R2 custom report to be migrated. The R2 custom report was migrated to the R3V4 system under the name TMP*n*.
Resolution:	If you want to change the name of the TMP*n* report, use the R3V4 Custom Reports: Screen Painter for custom reports. First, add a report with a new name. Then, copy the TMP*n* report to the new name. Finally, delete the TMP*n* report.
Message:	`Constant <constant name, constant value>: already exists as an R3 constant.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	The constant *constant name* already existed in the R3V4 Dictionary database when this migration was done. The R2 constant, therefore, was not migrated.
Resolution:	Verify that the R3 constant is appropriate for your reports, and modify it if necessary. If you modify the constant, be careful that this constant is not being used in any new R3V4 custom reports, because the new value will affect those reports as well. If you migrate the administration data more than once, this message will appear for all the constants that were migrated the first time.
Message:	Custom Report: *report name* Failed to swap repeat and totals lines.
Cause:	R3 CMS does not allow repeated rows above a nonrepeated row. When this R2 custom report was migrated, the program attempted to swap the nonrepeated row with the repeated rows but was unsuccessful.
Resolution:	Use the R3V4 Custom Reports: Screen Painter and swap the repeated rows with the nonrepeated row. The problem report is *report name* entered on the line just above this error message.
Message:	Custom report field refers to <*database item*> which you must resolve to <*set of R3 database items*>
Cause:	The following R2 database items map to more than one R3V4 database items: **R2 Item** — **R3 Equivalent** ASSOCIATION — SPLIT, LOGID CALLPROFCHG — SVCLEVELCHG, PERIODCHG EVENT — MALICIOUS, ASSIST

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Resolution:	Determine which R3V4 equivalent is appropriate for the report. Use the Screen Painter to edit the report and substitute the R3V4 equivalent for the R2 database item. The custom report was the one being migrated at the time of this message. For example, to change CALLPROFCHG to SVCLEVELCHG, select the "Field" option on the Screen Painter and change CALLPROFCHG to SVCLEVELCHG. In the Dictionary subsystem, change the name (synonym) to `slvl_chg` (this indicates that the Acceptable Service Level has changed). After changing the name, the report will display YES/NO instead of 1/0.
Message:	`Date field being deleted because it goes beyond the width of report: row=<row> col=<col> width=<width>`
Cause:	The length of the date field in the migrated real-time report exceeds 132 columns and cannot be migrated.
Resolution:	You need to use the editor to add the field to the migrated report.
Message:	`Error adding acd permissions for user login`
Cause:	When migrating R2 CMS user logins, the migration program could not add the ACD permissions for *user login*.
Resolution:	Use the R3 User Permissions: ACD Permissions window and check the permissions for *user login*. Modify the permissions if necessary.
Message:	`Error in adding directory.`
Cause	The migration program could not add the home directory to the *UNIX* system.
Resolution:	Use the FACE program to add the login to the *UNIX* system.
Message:	`Error in adding login ID to UNIX.`
Cause:	The migration program could not add *login ID* to the password file.
Resolution:	Use the FACE program to add the login to the *UNIX* system.
Message:	`Error in adding <synonym name> to table.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	The migration program could not add the synonym *synonym name* to the R3V4 Dictionary database.
Resolution:	List the names (synonyms) in the R3V4 Dictionary subsystem, and add this name if necessary. The name type is whatever type that was being migrated at the time of the message; that is split/skill, vector, VDN, or trunk group. See the previous log entry for the name type.
Message:	Error in adding feature permissions for *user login*
Cause:	When migrating R2 CMS user logins, the migration program could not add the feature permissions for *user login*.
Resolution:	Use the CMS R3V4 User Data: Feature Access window and check the permissions for *user login*. Modify the permissions if necessary.
Message:	Error in adding input variable: *report variable*
Cause:	During the migration of an R2 custom report, the program could not add the variable *report variable* to the R3V4 version of the report.
Resolution:	Use the R3V4 Custom Reports: Screen Painter and add the variable for that report if that variable is necessary for the report to run. Verify all row search IDs to make sure they have the correct syntax.
Message:	Error in adding member <*member number*> to group <*group name*>.
Cause:	The migration program could not add group member *member number* to group *group name*.
Resolution:	Display the contents of the group in the R3V4 Dictionary subsystem, and add the member if necessary.
Message:	Error in adding *user login*
Cause:	When migrating R2 CMS user logins, the migration program could not add the login *user login*.
Resolution:	Use the CMS R3V4 User Permissions subsystem and check that the user login exists and has the correct permissions. Add or modify the user login if necessary.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Message:	`ERROR: too many select (repeat) statements: row search number`
Cause:	The number of select conditions in an R2 custom report exceeded the maximum of ten row search IDs for an R3V4 report.
Resolution:	The R2 report is not migrated. You have to re-create the report in CMS R3V4.
Message:	`ERROR: too many select statements: row search number`
Cause:	The number of select conditions in an R2 custom report exceeded the maximum of ten row search IDs for any report in CMS R3V4.
Resolution:	The R2 report is not migrated. You have to re-create the report in CMS R3V4.
Message:	`Errors during this compile. Cannot migrate custom report. Compiler errors at bottom of file: <source file>`
Cause:	The report did not compile in R2 and is not migrated to R3V4.
Resolution:	If you need the information from this report, re-create it in R3V4.
Message:	`Expression field being deleted because it goes beyond the width of report: row=<row> col=<col> width=<width> R3 expression: <expression>`
Cause:	This field in the migrated real-time custom report exceeded the allowable length of 132 columns and was not migrated.
Resolution:	You need to add the field to the real-time custom report in R3V4 using the editor.
Message:	`Expression (row=<row number>,col=<column number>) exceeds maximum length and has been truncated: <expression>`
Cause:	During migration, the expression *expression* changed and is too long for the `Select` field of the `Field` window.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Resolution:	Delete spaces from the expression. If this does not decrease the length of the expression enough, then create a custom calculation in the Dictionary for *expression*. Edit the report and substitute the custom calculation for the expression in the `Select` field of the `Field` window.
Message:	`Failed to deliver service parameters to running system.` `After the migration, stop and then restart data collection.`
Cause:	The split service parameters from the R2 migration are not in effect for the R3 system.
Resolution:	CMS R3V4 data collection must be stopped and then restarted to cause the R3V4 system to use R2 service level parameters. You stop and start data collection in the CMS R3V4 System Setup: Data Collection window.
Message:	`Fatal errors during custom report compilation (`*file*`, `*line*`)`
Cause:	R2 CMS custom report *custom report name* had compiler errors in the R2 system, so it was not migrated to CMS R3V4.
Resolution:	Services may further investigate the problem given the *file*, *line* information.
Message:	`Full disk: call services to regain file system space.`
Cause:	The migration of R2 CMS data in conjunction with the R3V4 system collecting data, caused the disk space to fill up.
Resolution:	Call services immediately to resolve this problem.
Message:	`Insufficient number of free blocks (`*number of blocks*`) in `*CMS file system*` for temporary database tables.`
Cause:	The file system does not contain enough free blocks for CMS R3V4 to create the temporary tables needed for the migration.
Resolution:	Call services to resolve this situation.
Message:	`Invalid user <`*logname*`>. Permissions not migrated.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	The CMS R3V4 system found permission information for a user that was deleted, so the permissions were not migrated. This message lets you know that this condition happened.
Resolution:	None needed.
Message:	`Logid in conflict with R3 CMS: user (user login)`
Cause:	When migrating the R2 CMS user logins, the program found that *user login* already existed in CMS R3V4.
Resolution:	All R2 permissions for *user login* were migrated to R3V4 except feature access permissions and split/skill access permissions. You may want to use the CMS R3V4 System Setup: User Data subsystem to verify that the R3V4 feature access and split/skill access permissions for this login are appropriate.
Message:	`Login ID <login ID name> already exists.`
Cause:	A login ID *login ID name* already existed in the R3V4 Dictionary database when this migration was done. The R2 login ID was not migrated.
Resolution:	Modify the R2 login ID, and manually add it to the R3V4 Dictionary subsystem if necessary. If you migrate the administration data more than once, this message will appear for all the login IDs that were migrated the first time.
Message:	`Member <member number> is already in group <group name>.`
Cause:	The group member *member number* of the group *group name* already existed in the R3V4 Dictionary database when this migration was done. The group member was not migrated. If you migrate the administration data more than once, this message will appear for all the group members that were migrated the first time.
Resolution:	Modify the group in the R3V4 Dictionary subsystem if necessary.
Message:	`Multiple repeat statements on different rows in this report. Can't swap.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	CMS R3V4 does not allow a vertically-repeated field to appear above another repeated field.
Resolution:	Use the R3V4 Custom Reports: Screen Painter and redesign the report so that all vertically-repeated fields are on the same row. Or, create multiple reports, where each report has a single row of vertically-repeated fields.
Message:	`Owner (user ID) not migrated to R3 CMS, ''cms'' will be owner of this report.`
Cause:	The R2 *user ID* was not migrated to the R3V4 system. This user owned the custom report that was being migrated at the time of this error message. Since the user was not on the R3V4 system, the migration program changes the owner of the report to the “cms” user ID.
Resolution:	Do the following to transfer ownership of the report back to the original user ID. First, add the R2 *user ID* to the R3V4 system. Next, add a new custom report name for that user. Then, copy the report owned by “cms” to the new custom report name. Finally, delete the report owned by “cms.” NOTE: A cms administrator logged in as “cms” should do this.
Message:	`Problem removing table. Call services to drop r2dbitems.`
Cause:	An internal temporary * table was not removed when the migration finished.
Resolution:	This condition causes no CMS problems, but you should contact services to remove the table to gain additional disk space.
Message:	`Problem removing table. Call services to drop r2loginid.`
Cause:	An internal temporary *INFORMIX* table was not removed when the migration finished.
Resolution:	This condition causes no CMS problems, but you should contact services to remove the table to gain additional disk space.
Message:	`Problem removing table. Call services to drop r2menuperms.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	An internal temporary *INFORMIX* table was not removed when the migration finished.
Resolution:	This condition causes no CMS problems, but you should contact services to remove the table to gain additional disk space.
Message:	`Problem removing table. Call services to drop r2synonyms.`
Cause:	An internal temporary *INFORMIX* table was not removed when the migration finished.
Resolution:	This condition causes no CMS problems. However, you should contact services to remove the table to gain additional disk space.
Message:	`R2 ASTATE is mapped to WORKMODE. You must manually add DIRECTION to the right of this field.`
Cause:	The R2 database item ASTATE was split into two database items for R3V4; that is, WORKMODE and DIRECTION. The migration program maps ASTATE only to WORKMODE.
Resolution:	Use the R3V4 Screen Painter to: 1. Make the WORKMODE field five columns. 2. Create a three-column field and enter "cagent.DIRECTION" in the Select field. In the Dictionary subsystem, set the synonym to "ag_dir." 3. Assign the new field to the same Row Search Id as WORKMODE. 4. Save the changes by selecting the "Save Design" option.
Message:	`R2 calculation <`*`calculation name`*`> contains <`*`database items`*`> which you must resolve to <`*`set of R3V4 database items`*`>.`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	The following R2 database items map to more than one R3V4 database item: **R2 Item** — **R3 Equivalent** ASSOCIATION — SPLIT, LOGID CALLPROFCHG — SVCLEVELCHG, PERIODCHG EVENT — MALICIOUS, ASSIST NONACD — CONNECTCALLS, OTHERCALLS RINGABANDON — ABNCALLS, ABNRINGCALLS RINGABNTIME — ABNTIME, ABNRINGTIME
Resolution:	Determine which equivalent R3V4 database item is appropriate for the calculation. Then, in the Calculations window of the Dictionary subsystem, substitute the equivalent R3V4 database item for the R2 item.
Message:	`R2 Login ID (<LOGID>) converted to (<logid>) due to upper case characters.`
Cause:	The migrated login ID contained upper case characters.
Resolution:	None. The login ID is automatically converted to all lower case characters.
Message:	`R2 standard calculation <calculation name> is already in R3V4 dictionary. Review all migrated custom reports using this calculation to make sure the R3 formula is appropriate.`
Cause:	Some standard R2 calculations are not included in the standard set of R3V4 calculations. Because they may be used in custom reports, these standard R2 calculations are migrated to the R3V4 system. If, before the migration, you created a custom calculation with the same name as these R2 calculations, the R2 calculation will not migrate and this message occurs.
Resolution:	You need to compare the R2 and R3V4 formulas. If the R3V4 formula is appropriate, no action needs to be taken. If you need to use the R2 formula, you can change the R3V4 calculation to contain the R2 formula. However, changing the R3V4 calculation to contain the R3V4 formula will affect R3V4 standard reports.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Message:	Row Search Id *row search number* will fail because the select list contains a mixture of aggregate and nonaggregate items, and the group by limit for R3 custom reports (8) has been exceeded (*number of nonaggregate*). Some of the fields will need to be changed or assigned to a duplicate Row Search ID before this report can be executed.
Cause:	R2 CMS allows a mixture of aggregate items (SUM, MAX, MIN, etc.) and nonaggregate items with the same search criteria. The R3V4 database, *INFORMIX*-SQL, has a limit of eight nonaggregate fields that can be in the same row search criteria with aggregate fields. If this limit is exceeded, this error message occurs.
Resolution:	Select the Field option on the R3V4 Custom Reports: Screen Painter. If only one field in the Row Search uses an aggregate and this field is “max” (tablename.MAXOCWTIME) or a similar database item, then remove the “max” from the field [MAXOCWTIME is the maximum for the collection interval, so max (tablename.MAXOCWTIME) is redundant].
Message:	Row Search *row search number*: where clause contains too many characters, *length*, maximum is 245.
Cause:	When the criteria for row search ID *row search number* was migrated to R3V4, it was too long for the “select rows where” field.
Resolution:	Edit the row search ID. Remove any unnecessary information in the “select rows where” field such as table name, or change the variable to allow a range and decrease the number of “and” or “or” clauses or both.
Message:	STARTTIME column too small: *number of columns* row=*row number*, col=*column number*
Cause:	The R3V4 database item STARTTIME has the form “starttime-endtime.” If the R2 report did not provide enough space for this expansion, this error occurs.
Resolution:	Use the R3V4 Custom Reports: Screen Painter to provide additional space.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Message:	`Synonym <synonym name> already exists.`
Cause:	The synonym *synonym name* already existed in the R3V4 Dictionary database when this migration was done. The R2 synonym was not migrated.
Resolution:	Modify the R2 synonym name and manually add it to the R3V4 Dictionary subsystem if necessary. The synonym type is whatever type was being migrated at the time of the message; that is, split/skill, vector, VDN, or trunk group. See the previous log entry for the synonym type. If you migrate the administration data more than once, this message will appear for all the synonyms that were migrated the first time.
Message:	`Table not migrated. Vectoring package not installed.`
Cause:	During the historical migration, vectoring data existed on the R2 migration tape, but vectoring was not activated on the R3V4 system. This outage caused the historical vectoring data (half-hour and daily VDN/vector data) to not be migrated.
Resolution:	Contact services to have vectoring activated on the R3V4 system and, when activated, remigrate the historical data.
Message:	`Terminated by user request?` `User not administered on UNIX: user login`
Cause:	The login *user login* was migrated to CMS R3V4 but does not exist as a login on the *UNIX* system.
Resolution:	Users will be unable to log into *CentreVu* CMS R3V4 until they are added to the *UNIX* system. To add the user login, access User Permissions: User Data window. Press Ctrl Z simultaneously to clear all fields. Type *user login* in the first field, select “Find one”, and then select “Add.” This procedure adds *user login* to the *UNIX* system and allows the user to log into *CentreVu* CMS R3V4. Follow the same steps for every user login that was not administered on the *UNIX* system.
Message:	`Text truncated after column 132: row=<row> col=<col>`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	A text field for a migrated real-time report either straddled or exceeded the allowable R3V4 line length of 132 columns. If the field exceeded 132 columns, it was not migrated. If it straddled 132 columns, it was truncated.
Resolution:	Use the editor to add or modify the report text field in R3V4.
Message:	`The expression <`*EXPRESSION*`> could not be resolved in the dictionary. You must fix the expression <`*EXPRESSION*`> for the report to work.`
Cause:	There is a calculation in the custom report that contains an invalid database item(s), and the calculation cannot be resolved in R3V4. The most likely causes for this message are that a referenced database item or another calculation cannot be found in the Dictionary subsystem or did not migrate.
Resolution:	Review previous comments in the migration log for references to the same expression. If there are other comments, this will help you define exactly what the problem is.
Message:	`This report goes beyond the maximum number of rows (25).`
Cause:	This is a quad report which is not allowed in CMS R3V4. Only the first quadrant is migrated.
Resolution:	To regain the other quadrants, you must create a new R3V4 custom report for each quadrant.
Message:	`Too many date display fields, now adding:` *date prompt.*
Cause:	Migrated custom reports can have only one hard-coded date selection. For example, if the report is for yesterday's data, the R2 custom report should designate the date as " –1." This error indicates that the custom report referenced different days among its select statements. For example, –1 and –3.
Resolution:	Use the Screen Painter to edit the report and correct the date.
Message:	`Unable to move scroll region to bottom of report. You must do this manually.`
Cause:	Not enough rows were available to move the repeated portion of the R2 report to the bottom of the R3V4 report.

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Resolution:	Edit the custom report via the R3V4 Custom Reports: Screen Painter and move the repeated row to the bottom of the report.
Message:	`UNRECOVERABLE ERROR READING TAPE, errno= Failed to open tape: no entry in the device directory. Make sure the Maintenance: Backup/Restore Devices screen has the correct Path.`
Cause:	The R2 migration program could not open the tape drive to read the R2 CMS data.
Resolution:	Check that the specified tape drive is set up with the correct path in the Maintenance: Backup/Restore Devices window. If you cannot resolve this problem, contact services for additional help. You may have a tape drive hardware problem or need a corrected tape device path.
Message:	`UNRECOVERABLE ERROR READING TAPE, errno= Tape drive not ready: there is no tape in the drive.`
Cause:	The R2 migration program could not open the tape drive to read the R2 CMS data.
Resolution:	Verify that the tape is positioned in the drive correctly, and restart the migration. Contact services if problems persist.
Message:	`User <`*user name*`>: access permissions already existed for table name.`
Cause:	A specific CMS user login *`user name`* already had access permissions for a certain *`table name`* (splits/skills, VDNs, vectors, or trunk groups).
Resolution:	Check that the access permissions for *`user login`* are correct. If not, manually change them using the R3V4 User Data windows.
Message:	`VDN Synonym <`*VDN synonym name, VDN number*`> already exists as R3 synonym.`
Cause:	A VDN synonym *`VDN synonym name`* already existed in the R3V4 Dictionary database when this migration was done.
Resolution:	Modify the R2 VDN synonym name, and manually add it to the R3V4 Dictionary subsystem if necessary.
Message:	`Warnings during this compile. Make sure the report works correctly. Warnings at bottom of file: <`*source file*`>`

Table 8-6: R2-to-R3V4 — Migration Log - Error Messages (Contd)

Cause:	During compilation of the custom report, the compiler detected problems. The report was migrated, but may not run in R3V4.
Resolution:	Before trying to run the custom report, review and edit it to ensure accuracy.

Appendix A
Fixing Migrated R2 Custom Reports

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Overview

Not all Release 2 (R2) custom reports work after you migrate them to the *CentreVu*™ Call Management System Release 3 Version 4 (CMS R3V4). In addition, migrated R2 custom reports run about 60 percent more slowly than R3V4 reports and may look different than the R2 versions. This appendix describes some of the steps you can do to get the migrated R2 custom reports working in R3V4.

To make the necessary changes to the migrated custom reports, you should have attended custom report training. Also, have a copy of the *CentreVu*™ *CMS R3V4 Custom Reports* (AT&T 585-215-802) document on hand as you go through the steps in this appendix.

During long custom report editing sessions, you should occasionally execute the `Save design` option to ensure that all report changes are kept. Before the last `Save design`, execute the `Test design` option and, if necessary, make corrections until no errors are found.

Complete the following steps to fix your R2 migrated custom reports:

Step 1: Move Misplaced Text

CentreVu CMS R3V4 does not allow repeated rows above a nonrepeated row. If an R2 custom report contains repeated rows above a nonrepeated row, the migration program swaps these rows so the repeated rows are at the bottom of the migrated report. This swapping may cause heading labels to be off, especially for real-time reports that combine agent and split data. Use the `Move block` action list option on the Screen Painter to move text to its appropriate location.

Step 2: Fix Report Input Fields

1. Check input field length.

   In migrated custom report input windows, the length of input fields is 10. Since synonyms or split names may be up to 20 characters long, you may want to lengthen the input fields to accommodate these entities.

2. Combine two input fields.

   It is more efficient to replace two input fields of a migrated R2 custom report with one input field defined as a range. For instance, R2 Daily reports have two input fields FIRST_INTERVAL and LAST_INTERVAL to display the start time and the end time of data in a report.

   To fix these reports, replace the two input fields with a single input field “Times.” Define “Times” as a range (Range/List=y), and select “Time (point in time)” in the `Type` field. Instead of entering the first and last interval to run the report, you enter a range of time (for example, 7:30AM-5:00PM).

   You can use the same method to fix input fields of migrated R2 weekly and monthly reports. Replace the input fields START_DAY and NUMBER_OF_DAYS with one input field “Dates.” Define “Dates” as a range, and select “Date” in the `Type` field.

   When replacing two input fields with one, you must also change the row search criteria that reference the input fields. That is, if you delete an input field, you must also delete the “where” clause(s) that use that input field’s variable. If you change an input field to accept a range, you must ensure that the “where” clause(s) that use that input field’s variable use only an equals sign (=).

3. Fix input values displayed on a report.

   When an R2 custom report is migrated to R3V4 and an input field value is displayed on the report, a separate `Row search ID` is assigned to display that value. For example, an input field is Split Number and that Split Number appears on the report. It is more efficient to use the `Variable/time/date` option on the Screen Painter to display input field values on a report. By using this option, you reduce the number of queries to the database, thus, reducing the time it takes to run the report.

   Complete these steps to use the Var/Time/Date window to display an input field value on a report:

   a. On the Screen Painter, select `Define input`. Select the `List all` action list option for the `Variable name` field. Obtain the name of the variable to be displayed on the report.

      Note Check that the input field is the appropriate length for the value the field will be accepting. This is the length that will appear on the report. Lengthen or shorten the input field accordingly.

b. Return to the Screen Painter and use the `Erase block` action list option to remove the report field.

c. Select the `Variable/Time/Date` action list option.

d. Move the cursor to the `Display input variable` option, and enter `x` to select. Enter the variable name (obtained in Step 2.3a) in the associated field.

e. Select the `Save` action list option.

Step 3: Fix Report Fields

1. Fix time fields.

   Any R2 field that displays time (for example, After Call Work [ACW] time, Automatic Call Distribution [ACD] time) that does **not** contain the division operator " / " is migrated to R3V4 as a "time" field. The format for the time is set depending on the type of report: real-time reports are set to minutes and seconds (mm:ss), and historical reports are set to hours and minutes (hh:mm).

   Any R2 field that contains an expression with the division operator, or any R2 field that contains a calculation name (for example, AVG_ANSWER_SPEED), is migrated to R3V4 as a "numeric" field. When reports are run with numeric fields representing time fields, the data displayed is number of seconds. In other words, an average speed of answer of 2 minutes is displayed as `20`. If you want these fields to be time fields, you must manually change the fields' type and format.

2. Adjust precision.

   If an R2 field contains an expression that uses the division operator (for example, ACDTIME/ACDCALLS), the precision is migrated and set on the R3V4 report. Unlike R2 CMS, R3V4 does not automatically set precision for calculation names that contain division (for example, PERCENT_CALLS_ANS). In migrated custom reports, therefore, precision is not set for fields that contain a calculation name that uses division. You need to manually enter the desired precision (decimal places) for these fields.

   Note In R3V4, the field length includes the decimal point. For example, to display "100.00" on a report, the field on the Screen Painter must be 6 characters long with the decimal digits set to 2.

3. Change database items.

   Note

   Appendix B, “Data Migration Tables,” contains the R3V4 equivalent database items and calculations for R2 database items. The R3V4 equivalents will appear in the migrated custom reports.

   Administrable Service Level Increments — For R3V4 call profile reports, you can administer each of the first nine service level increments to variable time lengths. Some migrated R2 call profile reports may use PERIOD1 and multiply that database item to get different service levels. You may want to modify these reports to use the R3V4 administrable service level increments (PERIOD1-9 database items).

   Number of Calls in Queue — For R2 Split, VDN, and Vector real-time reports, the database item for number of calls in queue is QUECALLS. When these reports are migrated, QUECALLS is mapped to the calculation INQUEUE+INRING. This mapping is acceptable for split reports but not for VDN and Vector reports. For real-time VDN reports, the number of calls in queue is the calculation INPROGRESS–ATAGENT. For Vector reports, the number of calls in queue is the database item INQUEUE. You need to manually change the calculation INQUEUE+INRING to the appropriate data expression in any migrated real-time VDN or Vector custom report.

4. Sum data for multiple agent logins.

   Agents can be logged into multiple splits/skills on Generic 3 switches. Historical Agent reports not run for a specific split will show multiple rows of data for an agent that was logged into more than one split. You will probably want to “sum” the data across all splits an agent logs into to display one row of data per agent.

   In addition, when an agent logs out and logs back in within the same interval, Interval reports will show multiple rows of data for each agent login session. You may want to “sum” the data for the interval to display one row of data per interval.

Step 4: Fix the Row Search Window

1. Sort data in a report.

   If you want your data sorted in a specific order, you must add `Order by` criteria in the Row Search window. For example, if a report displays data for multiple days, the data will not be ordered by the date unless you specify ROW_DATE in the `Order by` field.

   Similarly, if you want the data ordered by time in interval reports, specify STARTTIME in the `Order by` field.

2. Fix multiple row search IDs.

   Each `Row search ID` in a custom report represents a query to the database. The more `Row search IDs` in a report, the more time it takes to run the report. Sometimes migrated custom reports have multiple `Row search IDs` in the same row. For example, the row on the Screen Painter might look like this:

```
SPLIT                ACDTIME  ACDCALLS  ACWTIME  AUXTIME
0xxxxxxxxxxxxxxxxx   1xxxxxx  1xxxx     1xxxxxx  1xxxxx
```

   In the above example, `Row search ID 0` and `Row search ID 1` query the same database table (dsplit). It is more efficient to remove the SPLIT field from `Row search ID 0` and reassign it to `Row search ID 1` with the other fields.

   After the reassignment, the row on the Screen Painter would look like this:

```
SPLIT              ACDTIME  ACDCALLS  ACWTIME  AUXTIME
1xxxxxxxxxxxxxxxx  1xxxxxx  1xxxx     1xxxxxx  1xxxxx
```

   This reduces the number of queries to the database, thus, reducing the time it takes to run the report.

   Multiple Row search IDs may be necessary in the same row when the report contains data from different database tables (for example, data from split/skill and VDN tables).

   Separate Row Search for Agent Login ID — Agent reports often have a separate `Row search ID` for the Agent Login ID field (the login ID field is the only field assigned to the `Row search ID`). This may cause the display of the agent login ID and the associated data to be misaligned. The alignment can be corrected and the report made more efficient by removing the login ID from its current `Row search ID` and assigning it to the `Row search ID` of the remaining fields.

3. Change tables for weekly and monthly reports.

   CentreVu CMS R3V4 stores data in intrahour, daily, weekly, and monthly tables. The weekly and monthly tables are used in *CentreVu* CMS R3V4 for weekly and monthly reports where the report shows one row of data for the entire week or month. Migrated R2 weekly and monthly reports use the daily database tables which show multiple rows of data for the week or month. To make these R2 weekly and monthly custom reports more efficient and more consistent with *CentreVu* CMS R3V4, you may want to change them to use the weekly and monthly tables.

   To change tables in a report, you must change the table name in the `From table(s)` field of the Row Search window and in the `Select` field of the Field window.

   Also, if you want multiple days in the report, weekly or monthly reports that use intrahour tables (for example, hagent, hsplit, htkgrp, etc.) should be modified to use daily database tables so the reports will run faster.

Step 5: Add Highlighting

Video attributes set on R2 custom reports are **not** migrated to *CentreVu* CMS R3V4. You may want to set any highlighting for migrated custom reports.

Step 6: Define No-Scroll Regions

The no-scroll (stationary) regions are not set on migrated reports. You may want to set the no-scroll regions on those migrated reports you might display on the terminal.

Appendix B
Data Migration Tables

Overview **B-1**

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Data Migration Tables 1

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Overview

This appendix shows how the Release 3 (R3) Call Management System (CMS) data and the Release 2 (R2) CMS data are migrated to the Release 3 Version 4 (R3V4) system. The information is presented as follows:

- R3-to-R3V4 migration tables
- R2-to-R3V4 migration tables
  - Custom Report References to Database Items
  - Historical Database Item Mapping
  - Calculation Migration.

R3-to-R3V4 Migration Tables

Table B-1: R3-to-R3V4 Migration Tables

Table Name	Application	Description	System Admin	ACD Admin	Historical
aar_agents	Agent Act. Recorder	Agents being traced		X	
acd_shifts	DSA,FSA	Agent shifts		X	
acds	User Permissions	ACD access			
ag_actv&	Agent Trace	Agent trace data		X	
ag_ex_adm	Exceptions	Agent exceptions admin		X	
agex&	Exceptions	Agent exceptions data		X	
agrecadm	Agent Trace Records	Agent records admin			
agroups	Dictionary	Agent groups		X	
arch_stat	Archiver	Archive status			
br_dev_types	Backup/Restore	B/R device types			
br_devices	Backup/Restore	B/R devices			
br_fulls	Backup/Restore	Backup history: full backups			
br_increms	Backup/Restore	Backup history: inc. backups			
br_tables	Backup/Restore	B/R tables			
crecadm	Call Records	Call record admin		X	
customer_log	ELOG	Customer error log			
dagent&	Historical reports	Daily agent data			X
db/gem/h_custom#	Custom Reports	Report GEM files (historical)	X		
db/gem/r_custom#	Custom Reports	Report GEM files (real-time)	X		
db/journal/shortcut#	Time Tables	Shortcut settings	X		
db/journal/timetable#	Time Tables	Timetable settings	X		
dberrors	IDBM	Error map: Informix vs. CMS			
dbitems	Dictionary	Database items	X		
dbstatus	Backup/Restore	Hist./forecast tables update status			
dbtbls	Dictionary	Database tables	X		
dcadmin	DSA,SPI,install	Data collection admin			
dcalloc	DSA,FSA	Data storage allocation admin			
dcwc	Historical reports	Daily call work codes data			X
dsplit&	Historical reports	Daily splits data			X
dtkgrp&	Historical reports	Daily trunk groups data			X
dtrunk	Historical reports	Daily trunks data			X
dvdn	Historical reports	Daily VDNs data			X
dvector	Historical reports	Daily vector data			X
error_msg	ELOG	Canned customer error msgs			
ex_msgs	Exceptions	Canned exception messages			
f_agposrep	Forecast	Agent Positions Required Report			
f_cday&	Forecast	Current Day Report		X	
f_cdayconf&	Forecast	Current Day Config.		X	
f_cdayrep&	Forecast	Current Day Report		X	
f_chpap	Forecast	Call Handling Profile		X	
f_chprof	Forecast	Call Handling Profile		X	
f_cstap	Forecast	Costs Profile		X	

Table B-1: R3-to-R3V4 Migration Tables (Contd)

Table Name	Application	Description	System Admin	ACD Admin	Historical
f_cstprof	Forecast	Costs Profile		X	
f_dataarch	Forecast	Data Storage Alloc.		X	
f_dsplit&	Forecast	Daily Split Data			X
f_dtkgrp	Forecast	Daily Trunk Group Data			X
f_fin	Forecast	Financial Report			
f_finrep	Forecast	Financial Report			
f_hfinrep	Forecast	Hypothetical Financial Report			
f_hypodata	Forecast	Hypothetical Data	X		
f_hyporep	Forecast	Hypothetical Report			
f_intra	Forecast	Intraday Report			
f_intrarep	Forecast	Intraday Report			
f_ispday&	Forecast	Special Day Split Data			X
f_isplit&	Forecast	Interval Split Data			X
f_itkgrp	Forecast	Interval Trunk Group Data			X
f_long	Forecast	Long Term Report			
f_longrep	Forecast	Long Term Report			
f_spdays&	Forecast	Special Day Admin		X	
f_specrep	Forecast	Special Day Report			
f_status	Forecast	Forecast Manager Status		X	
f_tkgpprof	Forecast	Trunk Group Profiles		X	
f_tkreqrep	Forecast	Trunk Required Report			
f_tperfrep	Forecast	Trunk Performance Report			
features	User Permissions	Feature access	X		
filesys	DSA,FSA	Historical reports file systems			
fs_check	CRT	File systems for free space check			
h_custom#	Custom Reports	Custom reports: historical	X		
hagent&	Historical reports	Intrahour agent data			X
haglog&	Historical reports	Intrahour agent login-logout data			X
hcwc	Historical reports	Intrahour call work code data			X
hsplit&	Historical reports	Intrahour split data			X
htkgrp&	Historical reports	Intrahour trunk group data			X
htrunk	Historical reports	Intrahour trunk data			X
hvdn	Historical reports	Intrahour VDN data			X
hvector	Historical reports	Intrahour vector data			X
linkex*	Exceptions	Link exceptions data		X	
magent&	Historical reports	Monthly agent data			X
main_menu#	CRT	Main menu	X		
mctex&	Exceptions	Malicious call trace exceptions		X	
mcwc	Historical reports	Monthly call work code data			X
menu#	CRT	Submenu	X		
menu_add#	CRT	Menu additions	X		
menu_help	CRT	Menu help			
menu_item_help	CRT	More help for menu items			
msplit&	Historical reports	Monthly split data			X
mtkgrp&	Historical reports	Monthly trunk group data			X

Table B-1: R3-to-R3V4 Migration Tables (Contd)

Table Name	Application	Description	System Admin	ACD Admin	Historical
mtrunk	Historical reports	Monthly trunk data			X
mvdn	Historical reports	Monthly VDN data			X
mvector	Historical reports	Monthly vector data			X
print_adm	Printer Admin	Printer parameters			
r_custom#	Custom Reports	Custom reports: real time	X		
scwininfo#	Short Cuts	Shortcut window info	X		
sp_ex_adm	Exceptions	Split exceptions admin		X	
spex&	Exceptions	Split exceptions		X	
split_pro&	ACD profiles	Split profile		X	
splits&	User Permissions	Split access		X	
std_rpts	Custom Reports	Standard reports list			
synonyms	Dictionary	Synonyms		X	
sys_info	DSA,FSA	DC parameters			
tg_ex_adm	Exceptions	Trunk group exceptions admin		X	
tgex	Exceptions	Trunk group exceptions		X	
tgroups	User Permissions	Trunk groups access		X	
ttsc#	Time Tables,User Perms	Timetables	X		
ttsched#	Time Tables,User Perms	Schedules	X		
ttsctasks#	Time Tables,User Perms	Associated tasks	X		
user_colors#	CRT	Color options	X		
user_defval#	CRT	User defaults	X		
users#	User Permissions	Users	X		
vdn_pro	ACD profiles	VDN profile		X	
vdn_x_adm	Exceptions	VDN exceptions admin		X	
vdnex	Exceptions	VDN exceptions data		X	
vdns	User Permissions	VDN access		X	
vec_x_adm	Exceptions	Vector exceptions admin		X	
vecex	Exceptions	Vector exceptions data		X	
vectors	User Permissions	Vector access		X	
wagent&	Historical reports	Weekly agent data			X
wcwc	Historical reports	Weekly call work code data			X
workcodes	User Permissions	Work codes access			X
wsplit&	Historical reports	Weekly split data			X
wtkgrp&	Historical reports	Weekly trunk group data			X
wtrunk	Historical reports	Weekly trunk data			X
wvdn	Historical reports	Weekly VDN data			X
wvector	Historical reports	Weekly vector data			X

Note

&=tables/data that are affected by EAS format.
#=tables/data that could be affected by user CMS ID conflicts.
Tables/data with no 'X' mark will not be migrated in *subsequent* ACDs. For the first ACD, they are either migrated or re-initialized by installation feature.

Custom Report References to Database Items

When migrating from R3V1 to R3V4, all database items are migrated with the same names, except for:

- I_AUXTIME which is TI_AUXTIME in R3V4
- INTERVAL which is INTRVL in R3V4.

In addition, the following table lists database items that have been added to the *CentreVu*™ CMS R3V4 (see Figure B-2):

Table B-2: Custom Report References to Database Items

Tables	Items	Type
Agent tables	LOGONSKILL	real-time status
	LOGONSKILL2-5	real-time status
	SKILLTYPE,2-4	real-time status
	WORKSKILL	real-time status
	WORKSPLIT4-5	real-time status
	DA_ACWINCALLS	
	DA_ACWINTIME	
	DA_ACWOCALLS	
	DA_ACWOTIME	
	DA_ACWOADJCALLS	
	DA_ACWOOFFCALLS	
	DA_ACWOOFFTIME	
	NOANSREDIR	
Agent login/logout table	LOGONSKILL2-5	
	SKILLTYPE,2-4	
Split tables	DA_ACWINCALLS	
	DA_ACWINTIME	
	DA_ACWOCALLS	
	DA_ACWOTIME	
	NOANSREDIR	
	O_ABNCALLS	
	O_OTHERCALLS	
	OTHERCALLS	
	OTHERTIME	
VDN tables	CONNTALKTIME	
	HOLDABNCALLS	
	HOLDCALLS	
	HOLDTIME	

Table B-2: Custom Report References to Database Items (Contd)

Tables	Items	Type
	MAXOCWTIME	
VDN tables (contd)	MAXWAITING	
	NOANSREDIR	
	OLDESTCALL	real-time status
	SKILL1-3	
	SKILLCALLS1-3	
	SKILLTIME1-3	
	SKILLACWTIME1-3	
Call record table	ACD	
	ACWTIME	
	ANSHOLDTIME	
	ANSLOGIN	
	ASSIST	
	AUDIO	
	CALLID	
	CALLING_PARTY	
	CONFERENCE	
	CONSULTTIME	
	DA_QUEUED	
	DIALED_NUM	
	DISPIVECTOR	
	DISPOSITION	
	DISPPRIORITY	
	DISPSPLIT	
	DISPTIME	
	DISPVDN	
	DURATION	
	EQLOC	
	EVENT1-9	
	FIRSTIVECTOR	
	FIRSTIVDN	
	HELD	
	HOLDABN	
	LASTCWC	
	LASTDIGITS	
	LASTOBSERVER	
	MALICIOUS	

Table B-2: Custom Report References to Database Items (Contd)

Tables	Items	Type
	OBSERVINGCALL	
	ORIGLOGIN	
Call record table (contd)	ROW_DATE	
	SEGMENT	
	SEGSTART	
	SEGSTOP	
	SPLIT1	
	SPLIT2	
	SPLIT3	
	TALKTIME	
	TKGRP	
	TRANSFERRED	

R2-to-R3V4 Migration Tables

Custom Report References to Database Items

The following table lists the R3V4 equivalent database items and calculations for R2 database items (see Table B-3). These R3 equivalents may appear in custom reports and in custom calculations in the dictionary. Items marked “Report reference" have no direct equivalent in the R3V4 database. In these cases, you must change the custom report.

Table B-3: R2-to-R3V4 — Custom Report References to Database Items

R2 Item	R3 Equivalent	Note
ABANDON1-10	ABNCALLS1-10	
ABANDONS	ABNCALLS	interval-based to call-based
ABANTIME	ABNTIME	
ACDCALLS	ACDCALLS	interval-based to call-based
ACDCOUNT	ONACD	
ACDTIME	I_ACDTIME	
ACWCOUNT	INACW	
ACWINCALLS	ACWINCALLS	interval-based to call-based
ACWINCOUNT	ONACWIN	
ACWINTIME	I_ACWINTIME	
ACWOUTCALLS	ACWOUTCALLS	interval-based to call-based
ACWOUTCOUNT	ONACWOUT	
ACWOUTTIME	I_ACWOUTTIME	
ACWTIME	I_ACWTIME	
AGENTS	POSITIONS	
AGTIME	ACDTIME	
ALLINUSE	ALLINUSETIME	
ALLTRKSBUSY	–	Report reference
ANSBACK	BACKUPCALLS	
ANSDELAY	ANSTIME	
ANSMAIN	ACDCALLS–BACKUPCALLS	
ANSWERED	ACDCALLS	
ASSISTS	ASSISTS	

Table B-3: R2-to-R3V4 — Custom Report References to Database Items (Contd)

R2 Item	R3 Equivalent	Note
ASSOCIATION	SPLIT, LOGID or none	Report reference
ASTATE	WORKMODE	Report that user will need to add DIRECTION
ATAGENT	ATAGENT	
AUXCOUNT	INAUX	
AUXINCALLS	AUXINCALLS	interval-based to call-based
AUXINCOUNT	ONAUXIN	
AUXINTIME	I_AUXINTIME	
AUXOUTCALLS	AUXOUTCALLS	interval-based to call-based
AUXOUTCOUNT	ONAUXOUT	
AUXOUTTIME	I_AUXOUTTIME	
AUXTIME	TI_AUXTIME (agent) or I_AUXTIME (split)	Report reference (calculations)
BABANDONS	BH_ABNCALLS	
BHANDLEDIN	BH_ACDCALLS	
BALLINUSE	BH_ALLINUSETIME	
BFAILURES	–	Report reference
BINCALLS	BH_INCALLS	
BINTIME	BH_INTIME	
BMBUSYTIME	–	
BNONACD	BH_OTHERCALLS	
BOUTTIME	BH_OUTTIME	
BSOFTFAILS	–	
BUSYHOUR	BH_STARTTIME	
CABINET	–	Report reference
CALLATAGENT	–	Report reference
CALLPROFCHG	SVCLEVELCHG or PERIODCHG	Report reference
CALLS1-10	ACDCALLS1-10	
CARRIED	INCALLS	
CARRIER	–	Report reference
CIRCUIT	–	Report reference
CMODE	–	Report reference
CUMACW	ACWTIME	
CUMRING	RINGTIME	
CUMTALK	ACDTIME	
DIRECTION	DIRECTION	
DNCALL	–	Report reference

Table B-3: R2-to-R3V4 — Custom Report References to Database Items (Contd)

R2 Item	R3 Equivalent	Note
DNEXT	VDN	
DNS	NUMVDNS	
DNSTARTDATE	–	Report reference
DNSTARTTIME	–	Report reference
DNWAITTIME	INTIME–ACDTIME	
EQLOCATION	EQLOC	
EVENT	MALICIOUS or ASSIST	Report reference
EXTCALL	DIRECTION	Report reference
EXTCALLDATE	–	Report reference
EXTCALLTIME	–	Report reference
EXTENSION	EXTENSION	
FAILURES	FAILURES	R2 item includes inbound SHORTCALLS; R3 item does not
FBUSYCALLS	BUSYCALLS	
FBUSYTIME	BUSYTIME	
FDISCCALLS	DISCCALLS	
FDISCTIME	DISCTIME	
FLOWTIME	OUTFLOWTIME	
GROUP	–	Defined in dictionary
GROUPSIZE	TRUNKS	
HOLDABANS	HOLDABNCALLS	
HOLDABANTIME		
HOLDS	HOLDCALLS	
HOLDTIME	HOLDTIME	
IDLETIME	I_AVAILTIME	
INCALLS	INCALLS	
INCOUNT	INBOUND	
INFLOW	INFLOWCALLS	
INPOOL	AVAILABLE	
INPROGRESS	INPROGRESS	
INTIME	INTIME	
INVECTOR	INVECTOR	
LOGDATE	–	Report reference
LOGID	LOGID	
LOGMODE	–	Report reference
LOGTIME	–	Report reference
MAXAGENTS	MAXSTAFFED	
MAXCALLSWAIT	MAXINQUEUE	

Table B-3: R2-to-R3V4 — Custom Report References to Database Items (Contd)

R2 Item	R3 Equivalent	Note
MAXOLDCW	MAXOCWTIME	
MBUSYCOUNT	MBUSY	
MBUSYTIME	MBUSYTIME	
MODULE	–	Report reference
NONACD	CONNECTCALLS (tk gp, vdn) or OTHERCALLS (trunk)	Report reference
NUMACW	–	Report reference
NUMRING	RINGCALLS	
NUMTALK	ACDCALLS	
OCW	OLDESTCALL	
ONHOLD	ONHOLD	
OUTCALLS	OUTCALLS	
OUTCOUNT	OUTBOUND	
OUTFLOW	OUTFLOWCALLS	
OUTTIME	OUTTIME	
OVERFLOWS	BLOCKAGE	
PRICALLS	MEDCALLS	
PRILEVEL	PRIORITY	
PRIORITY	PRIORITY	
QUECALLS	INQUEUE + INRING	
RINGABANDON	ABNCALLS (agent) or ABNRINGCALLS (split)	Report reference
RINGABNTIME	ABNTIME (agent)	Report reference for split table and calculations
RINGANSTIME	ANSRINGTIME (agent)	Report reference for split, VDN tables and calculations
RINGANSWER	ACDCALLS	
RINGASSOC	–	Report reference
RINGCALLS	RINGCALLS	
RINGCOUNT	INRING	
RINGTIME	I_RINGTIME	
ROUTEDCALLS	INTERFLOWCALLS	
ROUTETIME		
SLOT	–	Report reference
SOFTFAIL	–	Report reference
SPLIT	SPLIT	
STAFCOUNT	STAFFED	
STAFTIME	I_STAFFTIME	
STATE_DATE	–	Report reference

Table B-3: R2-to-R3V4 — Custom Report References to Database Items (Contd)

R2 Item	R3 Equivalent	Note
STROKE1-9	EVENT1-9	
SVCLVL	SERVICELEVEL	
TIMEMARK	AGTIME	TIMEMARK was time of day; AGTIME is duration in state
TRK_NDX	EQLOC	
TRKGRP	TKGRP	
TRKSINUSE	NUMINUSE	
TRUNKASSOC	–	Report reference
TRAFFIC	ACCEPTABLE	
TSTATE	TKSTATE	
VECCALL	–	Report reference
VECSTARTDATE	–	Report reference
VECSTARTTIME	–	Report reference
VECTIME	INTIME	
VECTOR	VECTOR	
WINDOW	PERIOD1-9	R2 item was constant; R3 item may have different value for each period

Historical Database Item Mapping

The following tables (Table B-4 through Table B-9) show how the R2 historical data values are migrated to the R3V4 database. If the R3V4 Equivalent column contains a dash, the R2 value is not migrated to *CentreVu* CMS R3V4.

Many R2 items with the "TIME" suffix (for example, ACWINTIME) are migrated to two items in the R3V2 database: an interval-based item (I_ACWINTIME) and a call-based item (ACWINTIME).

The value 30 is put into the R3V4 item INTRVL, since R2 CMS stores data in 30-minute intervals.

In some cases, the meanings of the R2 and R3V4 items are **not** the same. The migration program attempts to migrate the data values to that R3V4 item which is closest in meaning to the corresponding R2 item; however, some items are not identical. These items are identified in the "Notes" column.

Table B-4: Agent Data

R2 Item	R3 Equivalent	Notes
ACDCALLS	ACDCALLS	interval-based to call-based
ACDTIME	I_ACDTIME, ACDTIME	R2 value migrates to two R3 items
ACWINCALLS	ACWINCALLS	interval-based to call-based
ACWINTIME	I_ACWINTIME, ACWINTIME	R2 value migrates to two R3 items
ACWOUTCALLS	ACWOUTCALLS	interval-based to call-based
ACWOUTTIME	I_ACWOUTTIME, ACWOUTTIME	R2 value migrates to two R3 items
ACWTIME	I_ACWTIME, ACWTIME	R2 value migrates to two R3 items
AGHOUR	–	
AGMINUTE	–	
ASSISTS	ASSISTS	
AUXINCALLS	AUXINCALLS	interval-based to call-based
AUXINTIME	I_AUXINTIME, AUXINTIME	R2 value migrates to two R3 items
AUXOUTCALLS	AUXOUTCALLS	interval-based to call-based
AUXOUTTIME	I_AUXOUTTIME, AUXOUTTIME	R2 value migrates to two R3 items
AUXTIME	TI_AUXTIME	
CMODE	–	
EXTENSION	EXTENSION	
GROUP	–	Defined in dictionary
IDLETIME	I_AVAILTIME, TI_AVAILTIME	R2 value migrates to two R3 items
INTERVAL	STARTTIME	
JDATE	ROW_DATE	
LOGID	LOGID	

Table B-4: Agent Data (Contd)

R2 Item	R3 Equivalent	Notes
LOGMODE	–	
QUALITY	INCOMPLETE	
SERIAL	–	
SPLIT	SPLIT	
STAFTIME	I_STAFFTIME, TI_STAFFTIME	R2 value migrates to two R3 items
STROKE1-9	EVENT1-9	

Table B-5: Split Data

R2 Item	R3 Equivalent	Notes
ABANDON1-10	ABNCALLS1-10	
ABANDONS	ABNCALLS	
ABANTIME	ABNTIME	
ACDCALLS	ACDCALLS	interval-based to call-based
ACDTIME	I_ACDTIME	
ACWINCALLS	ACWINCALLS	interval-based to call-based
ACWINTIME	I_ACWINTIME, ACWINTIME	R2 value migrates to two R3 items
ACWOUTCALLS	ACWOUTCALLS	interval-based to call-based
ACWOUTTIME	I_ACWOUTTIME, ACWOUTTIME	R2 value migrates to two R3 items
ACWTIME	I_ACWTIME	
ANSDELAY	ANSTIME	
ANSWERED+ABANDONS+ OUTFLOW	CALLSOFFERED	
ASSISTS	ASSISTS	
AUXINCALLS	AUXINCALLS	interval-based to call-based
AUXINTIME	I_AUXINTIME, AUXINTIME	R2 value migrates to two R3 items
AUXOUTCALLS	AUXOUTCALLS	interval-based to call-based
AUXOUTTIME	I_AUXOUTTIME, AUXOUTTIME	R2 value migrates to two R3 items
AUXTIME	I_AUXTIME	
CALLPROFCHG	SVCLEVELCHG, PERIODCHG	R2 value migrates to two R3 items
CALLS1-10	ACDCALLS1-10	
CUMACW	ACWTIME	
CUMTALK	ACDTIME	
HOLDABANS	HOLDABNCALLS	
HOLDABANTIME		
HOLDS	HOLDCALLS	
HOLDTIME	HOLDTIME	
IDLETIME	I_AVAILTIME	
INFLOW	INFLOWCALLS	
INTERVAL	STARTTIME	
JDATE	ROW_DATE	
MAXAGENTS	MAXSTAFFED	

Table B-5: Split Data (Contd)

R2 Item	R3 Equivalent	Notes
MAXCALLSWAIT	MAXINQUEUE	
MAXOLDCW	MAXOCWTIME	
NUMACW	–	
NUMTALK	–	
OUTFLOW	OUTFLOWCALLS	
PRICALLS	MEDCALLS	
QUALITY	INCOMPLETE	
SERIAL	–	
SPLIT	SPLIT	
STAFTIME	I_STAFFTIME	
STROKE1-9	EVENT1-9	
SVCLVL	SERVICELEVEL	
TRAFFIC	ACCEPTABLE	
WINDOW	PERIOD1-9	R2 item was constant, R3 item may have different value for each period

Table B-6: Trunk Group Data

R2 Item	R3 Equivalent	Notes
ABANDONS	ABNCALLS	
ALLINUSE	ALLINUSETIME	
ANSWERED	ACDCALLS	
BABANDONS	BH_ABNCALLS	interval-based to call-based
BHANDLEDIN	BH_ACDCALLS	interval-based to call-based
BALLINUSE	BH_ALLINUSETIME	
BFAILURES	–	
BINCALLS	BH_INCALLS	interval-based to call-based
BINTIME	BH_INTIME	interval-based to call-based
BMBUSYTIME	–	
BNONACD	BH_OTHERCALLS	
BOUTCALLS	BH_OUTCALLS	interval-based to call-based
BOUTTIME	BH_OUTTIME	interval-based to call-based
BSOFTFAILS	–	
BUSYHOUR	BH_STARTTIME	
FAILURES	FAILURES	R2 item includes inbound SHORTCALLS; R3 item does not
GROUPSIZE	TRUNKS	
INCALLS	INCALLS	
INTERVAL	STARTTIME	
INTIME	INTIME	

Table B-6: Trunk Group Data (Contd)

R2 Item	R3 Equivalent	Notes
JDATE	ROW_DATE	
MBUSYTIME	MBUSYTIME	
NONACD	CONNECTCALLS	
OUTCALLS	OUTCALLS	
OUTTIME	OUTTIME	
QUALITY	INCOMPLETE	
SERIAL	–	
SOFTFAIL	–	
TRKGRP	TKGRP	

Table B-7: Trunk Data

R2 Item	R3 Equivalent	Notes
ABANDONS	ABNCALLS	
ANSWERED	ACDCALLS	R2 item includes ACDCALLS plus calls that went to coverage or were forwarded; R3 item is only ACDCALLS.
CABINET	EQLOC	R2 item is a segment of R3 item
CARRIER	EQLOC	R2 item is a segment of R3 item
CIRCUIT	EQLOC	R2 item is a segment of R3 item
FAILURES	FAILURES	R2 item includes inbound SHORTCALLS; R3 item does not
INCALLS	INCALLS	
INTERVAL	STARTTIME	
INTIME	INTIME	
JDATE	ROW_DATE	
MBUSYTIME	MBUSYTIME	
MODULE	EQLOC	R2 item is a segment of R3 item
NONACD	OTHERCALLS	
OUTCALLS	OUTCALLS	
OUTTIME	OUTTIME	
QUALITY	INCOMPLETE	
SERIAL	–	
SLOT	EQLOC	R2 item is a segment of R3 item
SOFTFAIL	–	
TRKGRP	TKGRP	
TRK_NDX	–	

Table B-8: Vector Data

R2 Item	R3 Equivalent	Notes
ABANDONS	ABNCALLS	
ABANTIME	ABNTIME	
ANSBACK	BACKUPCALLS	
ANSDELAY	ANSTIME	
ANSMAIN+ANSBACK	ACDCALLS	
CARRIED	INCALLS	
FBUSYCALLS	BUSYCALLS	
FBUSYTIME	BUSYTIME	
FDISCCALLS	DISCCALLS	
FDISCTIME	DISCTIME	
FLOWTIME	OUTFLOWTIME	
FLOWTIME + FBUSYTIME + FDISCTIME	OTHERTIME	
INFLOW	INFLOWCALLS	
INTERVAL	STARTTIME	
JDATE	ROW_DATE	
NONACD + OUTFLOW + FBUSYCALLS + FDISCCALLS	OTHERCALLS	
OUTFLOW	OUTFLOWCALLS	
QUALITY	INCOMPLETE	
ROUTEDCALLS	INTERFLOWCALLS	
ROUTETIME	INTERFLOWTIME	
SERIAL	–	
VECTIME	INTIME	
VECTOR	VECTOR	

Table B-9: VDN Data

R2 Item	R3 Equivalent	Notes
ABANDONS	ABNCALLS	
ABANTIME	ABNTIME	
AGTIME	ACDTIME	
ANSDELAY	ANSTIME	
ANSWERED	ACDCALLS	
CARRIED	INCALLS	
DNEXT	VDN	
DNWAITTIME+AGTIME	INTIME	
FBUSYCALLS	BUSYCALLS	
FBUSYTIME	BUSYTIME	

Table B-9: VDN Data (Contd)

R2 Item	R3 Equivalent	Notes
FDISCCALLS	DISCCALLS	
FDISCTIME	DISCTIME	
FLOWTIME	OUTFLOWTIME	
FLOWTIME + FBUSYTIME + FDISCTIME	OTHERTIME	
INFLOW	INFLOWCALLS	
INTERVAL	STARTTIME	
JDATE	ROW_DATE	
NONACD	CONNECTCALLS	
OUTFLOW	OUTFLOWCALLS	
OUTFLOW + FBUSYCALLS + FDISCCALLS + NONACD	OTHERCALLS	
QUALITY	INCOMPLETE	
SERIAL	–	
VECTOR	VECTOR	

Calculation Migration

The following table lists the R3 equivalent calculations for R2 calculations (see Table B-10).

Table B-10: Calculation Migration

R2 Calculation	R3V4 Equivalent	Notes
AGENT_CALL_OUT	No R3 calculation	maps to ONACWOUT + ONAUXOUT
AUX_WORK_TIME	No R3 calculation	maps to I_AUXTIME – I_AUXOUTTIME – I_AUXINTIME (split) or to TI_AUXTIME – I_AUXOUTTIME – I_AUXINTIME (agent)
AVG_ABANDON_TIME	AVG_ABANDON_TIME	
AVG_ABANDON_TIME_SUM	AVG_ABANDON_TIME_SUM	
AVG_ACD_TALK_TIME	AVG_ACD_TALK_TIME	call-based in R3; interval-based in R2
AVG_ACD_TALK_TIME_HH	AVG_ACD_TALK_TIME	
AVG_ACD_TALK_TIM_SUM	AVG_ACD_TALK_TIM_SUM	call-based in R3; interval-based in R2
AVG_ACD_TT_HH_SUM	AVG_ACD_TALK_TIM_SUM	
AVG_ACW_TIME	AVG_ACW_TIME	R2 calc does not include ACW (After Call Work) extn time; R3 calc does; call-based in R3; interval-based in R2
AVG_ACW_TIME_SUM	AVG_ACW_TIME_SUM	R2 calc does not include ACW extn time; R3 calc does; call-based in R3; interval-based in R2
AVG_ANSWER_SPEED	AVG_ANSWER_SPEED	
AVG_ANSWER_SPEED_SUM	AVG_ANSWER_SPEED_SUM	
AVG_COMP_ACW_TIME	AVG_ACW_TIME	
AVG_COM_TALK_TIME	AVG_ACD_TALK_TIME	
AVG_HOLD_TIME_IN	AVG_TRK_HOLD_TIME_IN	call-based in R3; interval-based in R2
AVG_HOLD_TIME_IN_SUM	AVG_TRK_HOLD_IN_SUM	call-based in R3; interval-based in R2
AVG_HOLD_TIME_OUT	AVG_TRK_HOLD_TIM_OUT	call-based in R3; interval-based in R2
AVG_HOLD_TIM_OUT_SUM	AVG_TRK_HOLD_OUT_SUM	call-based in R3; interval-based in R2
AVG_HUNTANS_TIME	No R3 calculation	maps to (ANSTIME – ANSRINGTIME) / ACDCALLS
AVG_INIT_RING_TIME	No R3 calculation	maps to RINGTIME / RINGCALLS
AVG_RINGABN_TIME	No R3 calculation	maps to ABNTIME / ABNCALLS [agent table only]
AVG_RINGANS_TIME	No R3 calculation	maps to ANSRINGTIME / ACDCALLS
AVG_TALK_TIME_IN	AVG_TALK_TIME_IN	call-based in R3; interval-based in R2
AVG_TALK_TIME_IN_SUM	AVG_TALK_TIME_IN_SUM	call-based in R3; interval-based in R2
AVG_TALK_TIME_OUT	AVG_TALK_TIME_OUT	call-based in R3; interval-based in R2
AVG_TALK_TIM_OUT_SUM	AVG_TALK_TIM_OUT_SUM	call-based in R3; interval-based in R2
AVG_TERM_RING_TIME	No R3 calculation	maps to RINGTIME / RINGCALLS

Table B-10: Calculation Migration (Contd)

R2 Calculation	R3V4 Equivalent	Notes
AVG_WORK_TIME	No R3 calculation	maps to (I_ACDTIME + I_ACWTIME – I_ACWINTTIME – I_ACWOUTTIME) / ACDCALLS
AVG_WORK_TIME_SUM	No R3 calculation	maps to sum(I_ACDTIME + I_ACWTIME – I_ACWINTTIME – I_ACWOUTTIME) / sum(ACDCALLS)
CALLS_OFFERED	No R3 calculation	maps to database item CALLSOFFERED
DNTIME	No R3 calculation	maps to database item INTIME
EXT_CALL_IN	EXT_CALL_IN	call-based in R3; interval-based in R2
FULLTIME_AGENT	AVG_POS_STAFF	
FULL_AG_NUM_CALL	CALLS_PER_POS	
HR_STAFF_TIME	No R3 calculation	maps to I_STAFFTIME / 3600
HUNTABANDON	No R3 calculation	maps to ABNCALLS – ABNRINGCALLS
HUNTANSTIME	No R3 calculation	maps to ANSTIME – ANSRINGTIME
INCOMING_CCS	No R3 calculation	maps to INTIME / 100
MIN_STAFF_TIME	No R3 calculation	maps to I_STAFFTIME / 60
NUM_CALL_IN	No R3 calculation	maps to ACDCALLS / MAXSTAFFED
NUM_CALL_OUT1	No R3 calculation	maps to INTERVAL * 60 * ((AUXOUTCALLS + ACWOUTCALLS) / (I_STAFFTIME – I_AUXTIME))
NUM_CALL_OUT2	EXT_CALL_OUT	call-based in R3; interval-based in R2
OUTGOING_CCS	No R3 calculation	maps to OUTTIME / 100
PERCENT_ACD_TIME	PERCENT_ACD_TIME	
PERCENT_ACD_TIME_SUM	PERCENT_ACD_TIME_SUM	
PERCENT_AUX_WORK	PERCENT_AUX_WORK	
PERCENT_AUX_WORK_SUM	PERCENT_AUX_WORK_SUM	
PERCENT_BUSY_ALL	PERCENT_ALL_BUSY	
PERCENT_BUSY_ALL_SUM	PERCENT_ALL_BUSY_SUM	
PERCENT_CALL_ABAN	PERCENT_CALL_ABAN	R3V2 calculation includes all calls offered; R2 calculation includes only answers, abandons and outflows
PERCENT_CALL_ANS	PERCENT_CALL_ANS	R3V2 calculation includes all calls offered; R2 calculation includes only answers and abandons
PERCENT_CALL_ANS_SUM	PERCENT_CALL_ANS_SUM	R3 calc includes all calls offered; R2 calc includes only answers and abandons
PERCENT_MAINT_TIM	PERCENT_MBUSY	
PERCENT_MAINT_TM_SUM	PERCENT_MBUSY_SUM	
PERCENT_SERV_LEVL	PERCENT_SERV_LVL_SPL	

Table B-10: Calculation Migration (Contd)

R2 Calculation	R3V4 Equivalent	Notes
PERCENT_STAFF_IN	No R3 calculation	maps to 100 * (I_ACDTIME + I_ACWTIME – I_ACWINTIME – I_ACWOUTTIME) / I_STAFFTIME
PERCENT_STAFF_OUT	No R3 calculation	maps to 100 * (I_ACWOUTTIME + I_AUXOUTTIME) / I_STAFFTIME
SEC_STAFF_TIME	No R3 calculation	maps to I_STAFFTIME
TRKBUSY	No R3 calculation	maps to INTIME + OUTTIME
V_AVG_ANS_SPEED_SUM	AVG_ANSWER_SPEED_SUM	

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