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CentreVu™ **Call Management System**
Release 3 Version 5
Change Description

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CentreVu™ **Call Management System**
Release 3 Version 5

Change Description

Table of Contents

General Information

The *CentreVu™ Call Management System Release 3 Version 5 Change Description* (585-215-823) document is written for call center customers who are:

- Upgrading from Release 2 (R2) CMS to *CentreVu* CMS R3V5 (Chapters 1-4).

- Upgrading from Release 3.0 (R3) CMS to *CentreVu* CMS R3V5 (Chapters 2-4).

- Upgrading from Release 3 Version 2 (R3V2) CMS to *CentreVu* CMS R3V5 (Chapters 3 and 4).

- Upgrading from Release 3 Version 4 (R3V4) CMS to *CentreVu* CMS R3V5 (Chapter 4).

Organization and Use of This Document

Organization of Document

This document is organized as follows:

Chapter 1	**Differences Between R2 CMS and R3 CMS**
Chapter 2	**Differences Between R3 CMS and R3V2 CMS**
Chapter 3	**Differences Between R3V2 CMS and *CentreVu* CMS R3V4**
Chapter 4	**Differences Between *CentreVu* CMS R3V4 and *CentreVu* CMS R3V5**

Use of Document

You will use this document to understand the major differences between your current version and the latest version of *CentreVu* CMS.

Previous editions of this document (such as *CentreVu*™ *Call Management System Release 3 Version 4 Change Description* [585-215-803]) tried to include all the differences between each major version of CMS and the latest version in each chapter. This resulted in much redundancy from one chapter to the next.

By contrast, this edition of the document includes the differences between each version of CMS ***and the next major version that was released***. This means that users can begin reading the chapter for the version from which they are upgrading, and continue with subsequent chapters to bring them up to the current version.

General Information

Audience

This chapter is written for customers who are upgrading from a Release 2 3B Call Management System (R2 CMS) to a Call Management System Release 3 (R3 CMS).

Introduction

This chapter describes the significant differences between the 3B Call Management System Release 2 (R2 CMS) and the Call Management System Release 3 (R3 CMS). Release 3 CMS has major enhancements and is quite different from 3B CMS. The concept of tracking calls processed through the Automatic Call Distribution (ACD) feature of the switch is the same, however.

This document lists major differences in the following areas:

- General Differences
- Data Differences
- User Interface
- Title Bar
- Main Menu
- Screen-Labeled Key (SLK)
- Reports
- Shortcuts and scheduling Timetables
- Dictionary
- Exceptions
- Forecasting
- ACD Administration
- Custom Reports
- User Permissions
- System Setup
- Maintenance.

| Note | This document includes related information about CMS Vectoring and the Graphics package.

Differences and Enhancement Overview

This section overviews the major differences in and enhancements to the R3 CMS software in comparison to the R2 CMS. The remainder of this chapter provides more in-depth information on the differences between R2 CMS and R3 CMS.

General Changes

- R3 CMS runs on faster computers.

- The first version of R3 CMS **does not** support multiple ACDs on one CMS. Subsequent versions of R3 CMS **do** support multiple ACDs.

- R3 CMS uses switch time, not UNIX system time as R2 CMS did.

Data Changes

The real-time and historical databases in R3 CMS are **not** identical to those in R2 CMS. The changes in composition are due primarily to the following:

- R3 CMS has three times as many database items as R2 CMS, thus offering more detailed information about the calls handled by your call center. For example, a Generic 2.2 or Generic 3 switch notifies CMS when agents transfer or conference calls or put them on hold. R3 CMS tracks these events; R2 does not. This also means that the database tables require more space than they did in R2.

- Most R3 CMS database items are **call-based**, meaning that the data for a given call are not recorded until the call and any associated after call work have completed. This is different from R2 CMS, in which data are recorded for a call at several points during the call. This could lead to inconsistencies in the data recorded, since data for part of the call may have been recorded in one interval, while other data for the same call may have been recorded in the next interval.

  In R3, average times (like average ACW time, average talk time) are calculated using call-based times and counts (e.g., ACDTIME/ACDCALLS for average talk time). This means that an average for an interval is the average time for calls that *ended* in the interval. In R2, average times are calculated using interval-based times and counts. This means that a call that spans an interval boundary contributes time to the average in both intervals, but the call itself is only counted in the interval in which it *started*. This can lead to a situation where there is time credited to an interval but

there is no call corresponding to it in the interval. There are very few interval-based items in R3 CMS. R3 CMS data is recorded only for completed calls, so the data will be consistent.

.This change also eliminates duplicate database items (call-based and interval-based items as in R2) and changes the way some items are recorded in R3 CMS.

- For example, R2 had the items **ACDCALLS** (interval-based) and **ANSWERED** (call-based); both items represented the number of answered ACD calls (for the split, agent, VDN, etc.). In R3 CMS, there is a single, call-based item, **ACDCALLS**, across all the tables (agent, split, VDN, etc.).

Note	See the *Call Management System Migration* (585-215-113) document for the R2 to R3 CMS database mapping and references. Also, all R3 CMS database items and calculations are described in Appendix A, "Database Items and Calculations," in the *CMS R3 Administration* (595-215-511) document.

- The number of ACD calls shown on a report may be lower in R3 CMS than in R2 because R3 does not count the call until it has completed successfully (call-based). Calls that do not complete successfully (for example, due to hardware failures on the trunk) are not recorded as ACD calls in R3, although these calls are recorded as **ACDCALLS** in R2. **ACDCALLS** in R2 was interval-based.

- When the link to the switch comes up, R3 CMS will place all staffed agents in the OTHER state, which is considered staffed. These agents will accrue staffed time during translations pumpup. With the same situation in R2 CMS, agents are put in the INIT state, which is not considered staffed, until they change states or an audit tells CMS the agents' states. Thus, R2 CMS agents accrue less staffed time when the link drops than R3 agents do.

- In R3, ASSISTS and event counts are recorded *only* if the agent is on a call or in call-related after call work (ACW). In R2, an agent could press an event count or ASSIST button at any time and the event was recorded.

  Also, the R2 database item EVENT, which could have the values ASSIST or MCT, corresponds to the following two different items in R3: ASSIST and MALICIOUS.

- In R3 CMS, agent time staffed is subdivided into two additional states: agent time with ACD calls ringing at the set and agent time doing other work. In R2 CMS, time spent with calls ringing at the set and time spent making or receiving personal calls was collected as available time. In most cases, time spent with a call on hold was

tracked as talk time in R2, whereas that time is tracked as time doing other work in R3.

> **Note** R2 CMS was enhanced to track the time an ACD call rings at an agent's set, but this enhancement only works with appropriate changes to the Generic 2 or System 85 switch.

- In R3 CMS, if an agent uses call pickup to answer another agent's ACD call, that call is counted as an extension-in call for the answering agent instead of an ACD call, as in most R2 CMS releases. (The call will be recorded as an outflow from the split, in the same way it would be recorded if it had covered to a station.)

- The database tables have been restructured in R3 CMS. For example, the agent login/logout information has its own database table rather than being stored in the agent table, as in R2.

- Some R2 CMS items have no direct equivalent in R3 CMS because the data for those items have been restructured. The information conveyed by the R2 items has been preserved in R3 CMS, but it is accessed in a different way. For example, R2 CMS had items to track **ANSMAIN** and **ANSBACK** in the vector table. In R3 CMS, there are items for **ACDCALLS** and **BACKUPCALLS**. The number of calls answered in the vector by the main split can be calculated by subtracting **BACKUPCALLS** from **ACDCALLS**.

- Many items with essentially the same meaning as in R2 have been renamed in R3 for consistency, clarity, or accuracy. For example, the R2 item **CARRIED** in the vector table has been renamed **INCALLS** for R3 to be consistent with items in other R3 CMS tables with the same meaning and the name INCALLS.

- The calculation for "% answered" (for split calls) has been changed to percentage of calls *offered* that were answered. This makes it possible to compare the "% Answered" with the "% Abandoned." This was not possible in R2, since in R2 the "% Abandoned" was the percentage of calls *offered* that abandoned, but the "% Answered" was the percentage of calls *answered or abandoned* that were answered. The R2 calculation was "**ACDCALLS**/(**ACDCALLS**+**ABANDONS**)". In R3 CMS, the calculation is "**ACDCALLS**/**CALLSOFFERRED**", where **CALLSOFFERRED** includes answered, abandoned, and outflowed calls.

- The following new items have been added to the R3 database tables to increase tracking accuracy and to support new switch features.

  — Transfers

  — Conferences

— Call work codes

— Lookahead attempts

— Adjunct routed calls

— Personal calls

— Internal versus external outgoing calls

— Outbound ACD calls

— Direct agent calls

— Busy-hour calls.

- R3 CMS stores data differently than R2 CMS. For example, the R2 item **INTERVAL** was a number that represented the interval during the day for which data was collected (1 to 48). In R3 CMS, interval data is retrieved by the start time of the interval, rather than by an interval number, and the database item **INTERVAL** is the number of minutes contained in an interval (15, 30, or 60 minutes).

- The number of calls waiting in a vector is more accurate in R3 CMS than in R2, because R3 CMS includes all calls in vector processing as waiting calls, while R2 includes only those calls in the vector that are queued to splits.

- The number of calls waiting in a VDN now reflects more accurately the caller's point of view, because R3 CMS counts calls in vector processing, in split queues and ringing as VDN calls waiting. R2 counts only those calls in split queues as VDN calls waiting.

- The number of calls that abandoned from a vector may be greater in R3 than in R2, because R3 CMS counts calls that abandoned while in vector processing, in split queues and from ringing. R2 counts only those calls that abandoned from split queues.

- In the vectoring environment, the percent within service level calculated in R3 may be lower than in R2, because calls given a forced busy or disconnect by the vector will also count against the service level. In R2 CMS, only calls answered, abandoned, and outflowed count against the service level.

- The number of backup calls shown in R3 CMS may be greater than the number in R2, since R3 CMS counts as backup calls any calls answered in a split as a result of a vector command other than a "queue to main'' command (for example, calls that route to a split or queued via the message split command). R2 CMS counts only calls answered in a split as the result of the "check backup'' vector command.

- In R3 CMS, vector outflows are calls that routed to another destination via the "go to vector" command or via "route to" or "adjunct routing" to a destination other than a split. In R2 CMS, vector outflows are calls routed to internal destinations via a "route to" command. R2 CMS has a separate item to count vector calls that route to external (off-switch) destinations.

- In R3 CMS, VDN outflows are calls that routed to another VDN or to an external (off-switch) destination. In R2 CMS, VDN outflows are any calls routed via the "route to" command.

- Calls unsuccessful due to hardware or software failures are no longer included in the calls carried counts for trunk/trunk groups in R3 CMS. R2 includes these calls in the calls carried counts.

- R3 CMS records calls with short holding times (less than 2 seconds) separately from calls that experienced hardware failures (see the following definition). R2 includes these short calls in the count of hardware failures.

  SHORTCALLS — The number of inbound and outbound calls that occupied the trunk for less than 2 seconds and that did not:

    — queue to a split,

    — forward to a split,

    — get answered by an agent,

    — get a forced busy or forced disconnect from the switch,

    — or produce a trunk failure or maintenance busy.

Agents in Multiple Splits

R3 CMS has been enhanced to track an agent working in multiple splits as a single agent. R3 CMS requires agents to log into multiple splits using the *same login ID* for all splits. This allows CMS to track the agent as a single person and to coordinate data for that agent. In R2 CMS, agents working in multiple splits are tracked as separate agents, one for each split. This makes it difficult to track the agent's time accurately.

With real-time reports, as long as the agent is not on a call or the agent is in AUX and is available in at least some splits, real-time reports will show all the splits in which the agent is available. If an ACD call is ringing the agent's voice terminal, the real-time report will show the RING state (Generic 3 only). If a personal call is ringing the agent's voice terminal, the real-time report will show the OTHER state. No split will be shown for the AUX and UNKNOWN states because these states are not split related. The agent will be shown as being in AUX *only* if the agent is in AUX in *all* splits.

With historical reports, agents in multiple splits are treated in one of two ways. Most reports (for example, Agent Summary by Interval) present the sum of all work the agent performed in any split. A few reports (for example, Agent Interval by Split) present the agent's work broken out by each split in which the agent worked.

See Chapter 4, "Real-Time Reports — Agents in Multiple Splits'' and Chapter 5, "Historical Reports — Agents in Multiple Splits,'' in the *Call Management System R3 Administration* (585-215-511) document for more specific information.

Multiple Split Queuing

On a DEFINITY® Communications System Generic 3 switch with the Vectoring feature, calls can be queued to as many as three splits simultaneously. For the first split to which a call is queued (primary split), CMS pegs an answer, outflow (leaves vector processing or is answered by an agent in another split), or abandon. For the second and third splits to which a call is queued, CMS pegs an answer and an inflow if the call is answered in that split. If the call is answered in another split, the call outflows the split, or the caller abandons, CMS pegs a dequeue for the second and third split.

See Chapter 4, "Real-Time Reports — Multiple-Split Queuing'' and Chapter 5, "Historical Reports — Multiple-Split Queuing,'' in the *Call Management System R3 Administration* (585-215-511) document for more specific information.

R3 CMS User Interface

For additional information on the user interface, please refer to Chapter 2 of the *CMS R3 Administration* (585-215-511) document.

General Changes

The user interface for R3 CMS has been totally redesigned since R2 CMS was released. When you log into R3 CMS you will notice:

- The title bar has changed; it has more information.

- The Main Menu is different.

- A ">" behind a menu selection indicates another menu will display. You will see a ">" on the Main Menu, subsystem menus (for example, Reports >), and screen-labeled keys (SLKs).

- The SLKs are different from R2 CMS. The SLKs in R3 CMS are always the same, no matter where you are in the system.

- R3 CMS has windowing capabilities.

- The way you move through the menus and windows has changed.

- An Action List, in menu format, appears in the upper right corner of user windows. Action Lists display the different actions that can be performed in each user window (like CHANGE in R2 CMS on an SLK).

- The way you select actions and perform procedures is consistent throughout most of R3 CMS.

> **Note** Because the user interface for R3 CMS is totally different from R2 CMS, it is extremely important that you read Chapter 2, "User Basics," in the *CMS R3 Administration* (585-215-511) document before trying to complete any CMS task. The chapter gives action list procedures, special key movement, terminology used in R3 CMS, a description of the user interface; and more.

Title Bar

Figure 1-1 and Figure 1-2 show the differences between the R2 CMS title bar and the R3 CMS title bar. A descriptive comparison follows the figures.

```
Call Management System                 Switch_Name:Up                        Time
```
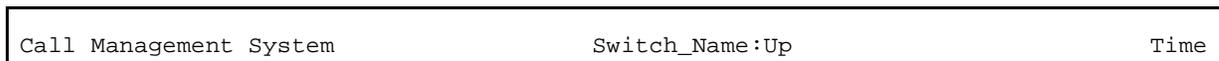
Figure 1-1: R2 CMS Title Bar


```
05/20/93 08:30 AM    Call Management System    Ex: 40        Windows: 0 of 12* ^^^^
```
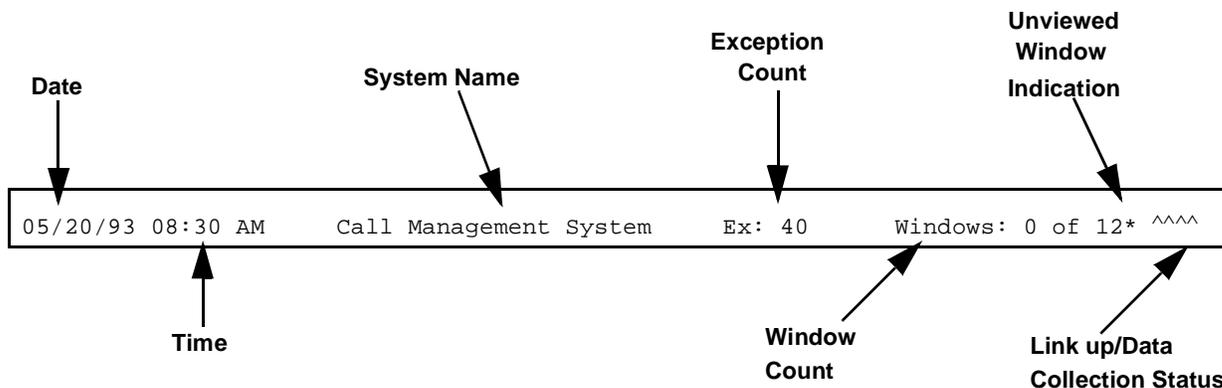
Figure 1-2: R3 CMS Title Bar

R3 CMS title bar displays the following information.

Date	The current month, day, and year
Time	CMS time, which is the *UNIX* system date and time. The time is updated every 60 seconds.
System Name	Call Management System.
Exception Count	The number of current exceptions
Keep	Only appears when you are creating or editing a timetable or shortcut (in "Keep" mode).
Window Count	The first number is the number of primary windows currently open, and the second number is the maximum number of primary windows you are allowed.

> **Note** There is a maximum limit of ten open primary windows per CMS user at one time. The CMS administrator can limit the number of windows open at any one time (one to ten) for each user. See "User Permissions — User Data" in the CMS Administration document for more information.

*   An unviewed window indication, an asterisk,
                     appears in the window count area any time a newly
                     opened window is not made current using the
                     `Current` SLK or `Window` SLK—List menu item. The
                     asterisk serves as a reminder that the new window
                     has arrived, but may not be visible.

Link Status   A "^" displays if data collection from the switch is on,
                     and a "v" displays if data collection is turned off or
                     the link to the switch is down.

R2 CMS to R3 CMS Main Menu

This section describes the major differences between the R2 CMS and R3 CMS main menus (Figure 1-3). The differences between the R2 CMS and R3 CMS Reports, Dictionary, Exceptions, Forecasting, ACD Administration, Custom Reports, User Permissions, System Setup, and Maintenance subsystems are described in later sections of this chapter.

| Note | A **>** indicates that another menu will display when you select this menu item. |

R2 CMS Main Menu Item	R3 CMS Main Menu Item
[ ] REPORTS	**Reports >**
[ ] DICTIONARY	**Dictionary >**
[ ] CONFIGURATION	**Exceptions >**
[ ] SCHEDULE	**Forecast>**
[ ] FORECAST	**ACD Administration >**
[ ] EXCEPTIONS	**Custom Reports >**
[ ] CUSTOM REPORTS CREATION	**User Permissions >**
[ ] ADMINISTRATION	**System Setup >**
[ ] MAINTENANCE	**Maintenance >**
[ ] UNIX	**Logout**
[ ] MAIL	**;_____**
[ ] PASSWORD	

Figure 1-3: R2 CMS and R3 CMS Main Menus

The following list maps the R2 CMS menu items to the R3 CMS menu.

- REPORTS maps to **Reports >** in R3 CMS. Use **Reports >** to select standard real-time and historical reports here. Custom real-time and historical reports are accessed through **Custom Reports >**.

- DICTIONARY maps to **Dictionary >** in R3 CMS.

- CONFIGURATION maps to **ACD Administration >** in R3 CMS.

- SCHEDULE is not a main menu selection in R3 CMS. In R3 CMS, *schedules are called timetables* and are created and scheduled using the **Timetable** menu selection from the |Keep| SLK.

- FORECAST maps to **Forecast >** in R3 CMS.

- EXCEPTIONS maps to **Exceptions >** in R3 CMS.

- CUSTOM REPORTS CREATION maps to **Custom Reports >** in R3 CMS. You will create *and* run custom reports in R3 CMS from the **Custom Reports >** main menu item.

- ADMINISTRATION maps to **User Permissions >** in R3 CMS.

- MAINTENANCE maps to **System Setup >** and **Maintenance >** in R3 CMS.

- *UNIX* System is a menu selection on the |Commands| SLK.

- MAIL is no longer on *any* R3 CMS menu. R3 CMS uses error logs (Customer Error Log, Migration Error Log, and Services Error Log) to report failures. R3 CMS does not use mail at all.

- PASSWORD is a menu selection on the |Commands| SLK.

New R3 Main Menu Items

These R3 CMS Main Menu items were not available in R2 CMS:

- **Custom Reports >** allows you to create *and* run custom reports.

- **System Setup >** allows you to view windows that display how your CMS was configured during installation. You can also turn data collection on and off, go from multi-user to single-user mode, and more. See the "System Setup" section for a complete list.

- **Logout** logs you out of CMS.

- ;_____ is to run a shortcut. See the "Timetables and Shortcuts" section for additional information on using this item.

Screen-Labeled Keys

The R3 CMS SLKs never change. In R2 CMS, the SLKs changed depending on your action(s). These actions (like **CHANGE**) now appear in an Action List on the right-hand side of user windows.

Figure 1-4 shows the R3 CMS SLKs. Figure 1-5 shows the associated menu(s) and submenu(s) for each SLK. The Exit, Scroll, Current, and MainMenu SLKs do not have menus.

| Help | Window | Commands | Keep | Exit | Scroll | Current | MainMenu |
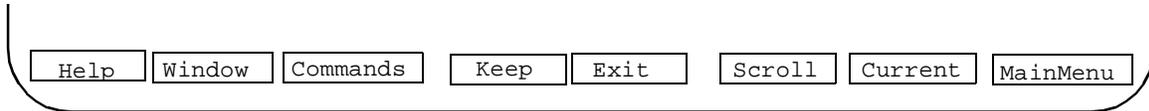
Figure 1-4: R3 CMS Screen-Labeled Keys

```
                                              Help
                                              Window
                              Windows         Commands
                              Field Editing   Keep
                              Menus           Exit
           Field Help         Action Lists    Current
           More Help          SLKs >          MainMenu
           General Help >     Title Bar
           Automatic On
           Automatic Off

            Help


           Move              Window title #1
           Size              Window title #2
           List >            Window title #3
           Redraw Screen

            Window                  Color
                                    Default printer
                                    Exceptions notification
           Print Window             Log out with open windows
           Password                 Current ACD
           UNIX (r) System          Save as default
           Options >                Restore system default

            Commands


           Timetable
           Shortcut
           Stop

            Keep
```

Figure 1-5: SLKs and Their Associated Menus

The following list maps the R2 CMS SLKs to the R3 CMS SLKs and defines the R3 CMS SLKs.

- COMMAND LINE is not on any SLK. When scheduling anything, select the [Keep] SLK and then the **Timetable** item.

- UPDATE is not on any SLK. In R3 CMS, you can set refresh rate for real-time reports to automatically refresh from any report input window.

- LOGOUT is now a selection on the R3 Main Menu.

- **Help** SLK brings up the Help menu that allows access to the basic CMS user information.

- **Window** SLK is used to list, move, and size windows.

- **Commands** SLK allows you to print the current window, create and change passwords, access the *UNIX* system, select color and video attributes, select a default printer, change your ACD (real or pseudo), save your own default values, restore the system default values, set the type of exception notification you receive, and receive a warning when you try to log off with open windows.

- **Keep** SLK allows you to create, modify, view, or delete timetables and shortcuts.

- **Exit**

  — With **user windows**, closes the current window and moves to the previously opened window, or if no other windows are open, returns you to the Main Menu.

  — With **menus/submenus**, moves the cursor to the previous menu/submenu selection (the current submenu goes away).

  — With **SLK menus**, if the cursor is on the first SLK menu (not an SLK submenu) and you press [Exit], then the cursor returns to the previous position in the current open window or to the Main Menu if there are no open windows.

- **Scroll** SLK allows you to page (scroll) through certain user windows.

- **Current** rotates through the open windows.

- **MainMenu** returns you to the CMS Main Menu and leaves the current window open.

Data, Database Items, and Calculations

The following data, database items, and calculations have changed between R2 CMS and R3 CMS.

Data

The real-time and historical databases in *CentreVu* CMS are very different from the R2 CMS databases. This section outlines the main differences in data handling, the capability of agents to log into multiple splits, and the process of multiple split queuing.

The following paragraphs outline the major data changes between R2 CMS and R3 CMS, including:

- Transferred and Conferenced Calls
- Audio Difficulty
- Abandoned Calls
- Non-ACD Calls
- Personal Calls
- Personal Call Tracking (PCT)
- Trunk State and Calling Agent
- Trunk Data
- Trunk Groups
- Adjunct Routing
- AUX Work vs. AUX IN (Generic 2.2 without EAS or System 85)
- Call History Table
- Switch Translation Table Corruption
- Vectoring
- Agent States
- Busying Out the Line to CMS
- R3 CMS Configuration
- Hold Calls/Agent States.

New Data Types in the Database Tables

The following items have been added to the R3 CMS database tables to increase tracking accuracy and to support new switch features.

- Transfers
- Conferences

- Call work codes

- Look Ahead attempts

- Adjunct routed calls

- Personal calls

- Internal versus external outgoing calls

- Outbound ACD calls

- Direct agent calls

- Busy-hour calls.

R3 CMS has almost three times as many database items as R2 CMS did. This increase in database items makes more detailed information about the calls handled by your call center available to you. Items have been added to the database to support tracking for new switch features (such as EAS) and to provide some detailed tracking when used with newer switch releases. For example, a Generic 2.2 or Generic 3 switch notifies R3 CMS when agents transfer or conference calls or put them on hold. R3 CMS tracks these events; R2 CMS did not. This also means that the database tables require more space than they did in R2 CMS.

The database tables have also been restructured in R3 CMS. For example, the agent login/logout information has its own database table rather than being stored in the agent table, as it was in R2 CMS.

Call-Based Data Tracking

Most R3 CMS database items are *call-based*, meaning that the *data for a given call are not recorded until the call and any associated after call work have completed.* In R2 CMS, data were recorded for a call at several points during the call.

In R3 CMS, average times (like average ACW time, average talktime) are calculated using call-based times and counts (for example, **ACDTIME**/**ACDCALLS** for average talktime). This means that an average for an interval is the average time for calls that *ended* in the interval. In R2 CMS, average times were calculated using interval-based times and counts. This meant that it was possible to calculate an average for an interval in which no calls were recorded, resulting in a "divide-by-0" error. There are very few interval-based items in R3 CMS. R3 CMS data are recorded only for completed calls, so the data will be consistent.

This change eliminates duplicate database items (call-based and interval-based) and changes the way some items are recorded. For example, R2 CMS had the items **ACDCALLS** (interval-based) and **ANSWERED** (call-based); both items represented the number of answered ACD calls for the split, agent, VDN, etc. In R3 CMS, there is a

single, call-based item, **ACDCALLS**, across all the tables (agent, split, VDN, etc.).

> **Note** See the *CMS R3 Migration* (585-215-113) document for the R2 and R3 CMS database mapping references. Also, all R3 CMS database items and calculations are described in Appendix A, "Database Items and Calculations," of the *CMS R3 Administration* (585-215-511) document.

The number of ACD calls shown on a report may be lower in R3 CMS than in R2 CMS because R3 CMS does not count the call until it has completed successfully (call-based). Calls that do not complete successfully (for example, due to hardware failures on the trunk) are not recorded as ACD calls in R3 CMS. **ACDCALLS** in R2 CMS was interval-based and recorded the call when it began, even if it failed later. (Failed calls are recorded in error logs on the R3 CMS.)

Data Storage

R3 CMS stores data differently than R2 CMS. For example, the R2 CMS item **INTERVAL** was a number that represented the interval during the day for which data was collected (1 to 48). In R3 CMS, interval data are retrieved by the start time of the interval, rather than by an interval number, and the database item **INTRVL** is the number of minutes contained in an interval (15, 30, or 60 minutes).

Agent States

When the link to the switch comes up, R3 CMS places all staffed agents in the **OTHER** state, which is considered staffed. These agents accrue staffed time during translations pumpup. In R2 CMS, the agents were put in the INIT state, which is not considered staffed, until they changed states or an audit told CMS the agent states. R2 CMS agents accrued less staffed time when the link dropped than R3 CMS agents do.

In R3 CMS, agent time staffed is subdivided into two additional states: agent time with ACD calls ringing at the set and agent time doing other work. In R2 CMS, time spent with calls ringing at the set and time spent making or receiving personal calls was collected as available time. In most cases, time spent with a call on hold was tracked as talktime in R2 CMS, whereas that time is tracked as time doing **OTHER** work in R3 CMS.

> **Note** R2 CMS was enhanced to track the time an ACD call rings at an agent's set, but this enhancement only works with appropriate changes to the Generic 2 switch.

Agents using multiple splits are no longer reported in the OTHER state when they log out.

ASSIST Button and Event Counts

In R3 CMS, ASSISTS and events counts are recorded *only* if the agent is on a call or in call-related after call work. In R2 CMS, an agent could press an event count or ASSIST button at any time and the event was recorded.

Extension-In Calls vs. ACD Calls

In R3 CMS, if an agent uses call pickup to answer another agent's ACD call, that call is counted as an extension-in call for the answering agent instead of an ACD call, as in most R2 CMS releases. (The call will be recorded as an outflow from the split, in the same way it would be recorded if it had covered to a station.)

Vectors

The number of calls waiting in a vector is more accurate in R3 CMS than in R2 CMS, because R3 CMS includes all calls in vector processing as waiting calls, while R2 CMS included only those calls in the vector that were queued to splits.

In R3 CMS, vector outflows are calls that routed to another destination via the "go to vector" command or via "route to" or "adjunct routing" to a destination other than a split. In R2 CMS, vector outflows were calls routed to internal destinations via a "route to" command. R2 CMS had a separate item to count vector calls that routed to external (off-switch) destinations.

The number of calls that abandoned from a vector may be greater in R3 than in R2 CMS. This is because R3 CMS counts calls that abandoned while in vector processing, in split queues and from ringing. R2 CMS counted only those calls that abandoned from split queues.

In the vectoring environment, the percent within service level calculated in R3 CMS may be lower than in R2 CMS. This is because calls given a forced busy or disconnect by the vector also count against the service level. In R2 CMS, only calls answered, abandoned, and outflowed counted against the service level.

The number of backup calls shown in R3 CMS may be greater than the number in R2 CMS. Since R3 CMS counts any calls answered in a split as a result of any vector command other than a "queue to main" command (for example, calls that route to a split or are queued via the "messaging split" command) as backup calls. R2 CMS counted only calls answered in a split as the result of the "check backup" vector command.

VDNs

The number of calls waiting in a VDN now reflects more accurately the caller's point of view, because R3 CMS counts calls in vector processing, in split queues and ringing as VDN calls waiting. R2 CMS counted only those calls in split queues as VDN calls waiting.

In R3 CMS, VDN outflows are calls that routed to another VDN or to an external (off-switch) destination. In R2 CMS, VDN outflows were any calls routed via the "route to" command.

Hardware and Software Failures

Calls unsuccessful due to hardware or software failures are no longer included in the calls carried counts for trunk/trunk groups. R2 CMS included these calls in the calls carried counts.

R3 CMS records calls with short holding times (less than 2 seconds) separately from calls that experienced hardware failures (**SHORTCALLS**). R2 CMS included these short calls in the count of hardware failures. **SHORTCALLS** is the number of inbound and outbound calls that occupied the trunk for less than 2 seconds and that did not: queue to a split or skill, forward to a split or skill, get answered by an agent, get a forced busy or forced disconnect from the switch, or produce a trunk failure or maintenance busy.

Agents in Multiple Splits

R3 CMS tracks an agent working in multiple splits as a single agent. R3 CMS requires agents to log into multiple splits using the **same login ID** for all splits/skills. This allows CMS to track the agent as a single person and to coordinate data for that agent. In R2 CMS, agents working in multiple splits were tracked as separate agents, one for each split. This made it difficult to track the agent's time accurately.

Real-Time reports assume that agents can only be doing one thing at a time. Agents can be in the following states: AVAIL, ACD, ACW, AUX, DACD, DACW, RING, UNKNOWN, OTHER, or UNSTAFFED. When an agent logs into multiple splits, the split number(s) will be shown on the report(s) for the states (ACD, DACD, AVAIL, ACW, and RING) associated with the call. For example, if an agent logged into Split 1 and Split 2 and answered an ACD call for Split 2, the split number shown in the standard real-time report(s) will be **2**.

In CMS, you can get two views of an agent's work:

- By viewing the agent's work consolidated across all splits or skills.

- Or, by viewing the agent's work from the perspective of a particular split or skill.

> **Note** Summing the split views (I_TIME items) across splits will *not* match the TI items.

For splits, as long as the agent is not on a call or the agent is in AUX and is available in at least some splits, real-time reports will show all the splits in which the agent is available.

For skills, the agent cannot be available in some skills and in AUX in others. The Skill Status report shows all the agent's login skills.

If an ACD call is ringing the agent's voice terminal, the real-time report will show the RING state. If a personal call is ringing at the agent's voice terminal, the real-time report will show the OTHER state.

No split will be shown for the AUX and UNKNOWN states because these states are not split related. The agent will be shown as being in AUX *only* if the agent is in AUX in *all* splits/skills.

With real-time split reports, if an agent is available in Split 1 and in AUX in Split 2, and you request the Split report which displays both splits, the report will show the agent as AVAIL in Split 1 and as OTHER in Split 2.

Multiple Split Queuing
On a Generic 3 switch, calls can be queued to as many as three splits simultaneously. For the first split to which a call is queued (primary split), CMS pegs an answer, outflow (leaves vector processing or is answered by an agent in another split), or abandon. For the second or third split to which a call is queued, CMS pegs an answer and an inflow if the call is answered in that split. If the call is answered in another split, the call outflows, or the caller abandons, CMS pegs a dequeued call for the second and third split.

> **Note** If a call rings in a second or third split and then abandons, an inflow and abandon will be counted for that split; an outflow or dequeue will be counted for the other splits.

See Appendix A, "Database Items and Calculations," in the *CMS R3 Administration* (585-215-511) document for more specific information.

Transferred and Conferenced Calls

- Transferred and conferenced calls are tracked as held calls while the call(s) wait to be transferred or added to a conference.

- When an agent ends a conference call, the agent returns to the call state prior to setting up the conference.

- If an agent is talking, then places the ACD call on hold to transfer that call, and then completes the transfer, the agent then goes to the AVAIL state (Auto-In) or to ACW (Manual-In) following the transfer.

- Transferred or conferenced unmeasured split, trunk group, or VDN calls are now tracked. Prior to PCT, these calls were not tracked.

- R3 CMS measures ABANDON calls that occur when a call is conferenced.

Audio Difficulty

You now get the trunk associated with audio difficulty for personal calls if the trunk group is measured. Prior to PCT, audio difficulty was restricted to ACD calls.

Abandoned Calls

VDN calls that route to extensions and are then abandoned are counted as abandoned calls for the VDN.

Non-ACD Calls

The first measured split or skill an agent is logged into is used by CMS to track non-ACD calls unless the agent has an ACD call on hold, and the agent is not yet available for other ACD calls. In this case, the call is counted for the split or skill associated with the held ACD call.

Personal Calls

The first measured split or skill a logical agent is logged into (whether primary or secondary) is used by CMS to track non-ACD calls unless the agent has an ACD call on hold, and the agent is not yet available for other ACD calls. In this case, the call is counted for the split or skill associated with the held ACD call.

Personal Call Tracking (PCT)

Personal Call Tracking (PCT) offers the following additional data tracking capabilities:

- Data is now available for calls on hold, time for calls on hold, and calls abandoned from hold. Without PCT, time for calls on hold was counted as talktime.

- CMS split and agent data reflects calls made while another call is on hold.

- When an agent places a call on hold, the agent returns to his/her previous state before the call unless the previous state was AVAIL. If the agent was in the AVAIL state, the agent is placed in the OTHER state until the agent dials a valid number (if the number dialed is

invalid, the agent remains in OTHER), reconnects with the held call, or the held call abandons. When the agent reconnects to the held call, the original agent state for the call displays.

- Agents do not have a **hold** state. Hold time is associated with a call placed on hold. Agent states reflect the current activity of the agent.

- Hold time (HOLDTIME) is the time the call spent on hold. HOLDCALLS is the number of calls that were placed on hold at least once, and HOLDABNCALLS is the number of calls that abandoned while on hold.

- I_OTHERTIME is the time during the collection interval that the agent was doing other work.

  For Generic 3, this includes time while in the Auto-In or Manual-In mode during which the agent put a call on hold and performed no further action, the agent placed a call or activated a feature, or a personal call rang with no further activity.

- When an agent dials a valid extension, the agent's state changes to AUX OUT (if the agent was in AUX or OTHER) or to ACW OUT (if the agent was in ACW).

- An increase in the number of extension in/out calls made or received by agents, if agents make or receive calls while they have a call on hold.

- Agent time on AUXIN/AUXOUT calls will increase.

- If agents do a lot of conferences and transfers, the average talktime for extension out calls will probably drop, since time spent in AUX for conferences and transfers is very short (a matter of seconds).

- The average talktime on ACD calls will drop if agents put calls on hold, since the time on hold is no longer included as ACD talktime.

For more information, see the "Differences and Enhancements Overview" section of this chapter.

Trunk State and Calling Agent

The calling agent no longer affects the trunk state. The trunk state will display only the inbound call progress. If an agent makes a call, the trunk state will be SEIZED (not CONN). Also, if the calling agent puts a call on hold or reconnects to the call, the trunk state will not change. R3 CMS will continue to track the outbound talktime and hold time, but the state of the trunk will not change.

Trunk Data

- Trunk data will no longer be marked as incomplete if some trunks are marked as maintenance busy. This means data are still valid for use with the Forecasting Trunk Performance report.

- When you upgrade from R2 CMS to R3 CMS, it seems that trunk CCS data has *disappeared* during the upgrade. In R2 the CCS calculations (which were based on trunk **INTIME** and **OUTTIME**, call-based data items) were wrong. These CCS values must be interval-based to make sense. R3 CMS software has new, interval-based items that are used to calculate CCS. The calculation used by standard reports to generate the CCS values was changed to use the new items. Therefore, your old data exist under the old data items. The new items were not populated with any data during the upgrade.

Trunk Groups

- If you change a trunk group's termination point (via switch administration) while trunks in the group are actively carrying calls, the data are now correct. Previously, the data were not stored correctly.

- Trunk group status information (**NUMINUSE** real-time) is now correct for trunks which are audited as busy when the link is coming up.

- Any trunk group data that was migrated from Release 2.0 CMS is not included in any of the forecast tables.

    When the trunk CCS calculation was corrected in Issue 1.4 of the CMS software, the data used by the Forecast Trunk Performance report had to be changed to correct the same trunk CCS data problem. Two new trunk group columns (`i_inocc` and `i_outocc`) were added to the trunk group tables in Issue 1.4. The migrated data does not contain data for the new columns. Migrated trunk group data will not be put in the new forecast tables.

    When the Forecast Manager ran, it would fail when trying to re-collect data, because there was no data in these columns. The Forecast Manager will no longer fail, and you will be able to run the Forecasting Trunk Performance report on new data generated after the Issue 1.3 CMS software.

Adjunct Routing

When an adjunct routes a call to a split queue or a direct agent queue, you will see an ADJROUTED call for the VDN and vector. In R2 CMS you did not see this.

AUX Work vs. AUX IN (G2.2 Without EAS or System 85 R2V4)

If an agent puts a call on hold, transfers the call, or conferences the call, the agent is now put in AUX work. Previously, the agent was put in AUX IN. The Agent Trace report will no longer show this transition.

Call History (crec) Table

The **DURATION** column of the call history or `crec` table now stores data correctly. In R2 CMS, on segments of calls which were transferred, the DURATION was wrong. Now one segment, usually the first, contains the total call time. Each of the segments will contain the valid time length for that segment.

Switch Translations Table Corruption

R3 CMS continues to collect data after switch translations table corruption is detected. When this corruption problem occurs, the R3 CMS data also becomes corrupted. Messages informing you of the table corruption problem appear in an Acknowledgment window on all active screens. The corruption problems are also logged into the Error Log. These error messages must be addressed to ensure that the corruption problem does not escalate. If the corruption problem is not resolved, table corruption messages will be displayed for the next person that logs in.

Busying Out the Link to CMS

You can add, delete, or change measured trunks, trunk groups, agent extensions, agent login IDs, VDN extensions, and splits without busying out the link to CMS and losing CMS data.

CMS tells the switch how many of each facility it can support, and if an agent or the switch administrator attempts to exceed the CMS limits, they are blocked by the switch until the CMS configuration is increased. This means the agent is denied the ability to log in, and the switch administrator is not able to make the change. In order to make the change, you need to put CMS into single-user mode with data collection off, and then increase the storage parameters in the Data Storage Allocation window. When you return CMS to the multi-user mode with data collection on, CMS will renegotiate the CMS configuration parameters with the switch, the agent is allowed to log in, and the switch administrator is allowed to make the change.

R3 CMS Configuration

R3 CMS tells the Generic 3 Version 2 and later switches how many of each facility it can support. If an agent or the switch administrator attempts to exceed the CMS limits, they are blocked (agents cannot log in, switch administrators cannot make the change on the switch) by the switch until the CMS configuration is increased. To make the change:

1. Put CMS in single-user mode with data collection off.

2. Increase the storage parameters in the Data Storage Allocation window.

3. Return CMS to multi-user mode with data collection on.

After CMS renegotiates the CMS configuration parameters with the switch, the agent will be able to log in and the switch administrator will be able to make the change.

Database Items

Some R2 CMS database items have no direct equivalent in R3 CMS because the data for those items have been restructured. The information conveyed by the R2 CMS items has been preserved in R3 CMS, but it is accessed in a different way. For example, R2 CMS had items to track **ANSMAIN** and **ANSBACK** in the vector table. In R3 CMS, there are items for **ACDCALLS** and **BACKUPCALLS**. The number of calls answered in the vector by the main split can be calculated by subtracting **BACKUPCALLS** from **ACDCALLS**.

Also, the R2 CMS database item EVENT, which could have the values ASSIST or MCT, corresponds to the ASSIST and MALICIOUS database items in R3 CMS.

Many database items have been renamed in R3 CMS for consistency, clarity, or accuracy. For example, the R2 CMS item **CARRIED** in the vector table has been renamed **INCALLS** for R3 CMS to be consistent with items in other R3 CMS tables with the same meaning and the name **INCALLS**.

For a complete mapping of R2 CMS to R3V5 CMS database items, see the *CentreVu™ CMS R3V5 Upgrades and Migration* (585-215-826) document.

For a complete listing of R3V5 database items and calculations, see Appendix A of the *CentreVu ™ CMS R3V5 Real-Time and Historical Reports* document.

Calculations

- The calculation for percent answered (for split calls) has been changed to percentage of calls *offered* that were answered. This makes it possible to compare the percent answered with the percent abandoned. This was not possible in R2 CMS, since in R2 CMS the % Abandoned was the percentage of calls *offered* that abandoned, but the percent answered was the percentage of calls *answered or abandoned* that were answered. The R2 CMS calculation was:

  ```
  ACDCALLS/(ACDCALLS+ABANDONS)
  ```

  The calculation is now:

  `ACDCALLS/CALLSOFFERRED`, where CALLSOFFERRED includes answered, abandoned, and outflowed calls.

- The **<CALLS_PER_POS_SUM>** calculation is now:

  ```
  (sum(INTRVL*60) * sum(ACDCALLS))/sum(I_STAFFTIME).
  ```

- The <**PERCENT_SLVL_SPL_SUM>**, calculation has been added. The calculation was added to address the `% Within Service Level` report column in the Split Status historical report. The calculation definition is:

  ```
  100*(sum(ACCEPTABLE) / sum(CALLSOFFERED))
  ```

- The <**INT_AUXTIME**> calculation has been added. The calculation is used to display the stafftime in the Historical Reports Split Report daily report. The calculation definition is:

  ```
  I_STAFFTIME - I_AVAILTIME - I_ACDTIME - I_ACWTIME
  - I_OTHERTIME - I_RINGTIME - I_DA_ACDTIME -
  I_DA_ACWTIME
  ```

Real-Time Reports

For additional information on the Real-Time Reports subsystem, please see Chapter 4 of the *CMS R3 Administration* (585-215-800) document.

R2 to R3 Menu Items

Major differences and the cross-reference table for the R3 CMS real-time reports follow the menus (Figure 1-6).

R2 CMS	R3 CMS
REPORTS	**Reports >**
Standard	
[ ] Real-Time	**Real-time >**
[ ] Split Status	**Split >**
[ ] Group Status	**Status**
[ ] System Status	**Report**
[ ] Agent/Split Comparison	**Call Profile**
[ ] Split Summary	**Agent Report**
[ ] Call Profile	**Agent Group Report**
[ ] Trunk Group Summary	**Queue/Agent Summary**
[ ] Split Performance	**Trunk Group Report**
[ ] Split Event Count Summary	**Event Count Summary**
[ ] VDN Status	**Graph >**
[ ] Vector Status	**Split**
[ ] VDN/Trunk Activity Matrix	**Queue**
[ ] System Status Graph	**Split Call Profile**
[ ] Split Performance Graph	**VDN Call Profile**
[ ] Split Profile Graph	**Vector Report**
[ ] VDN Profile Graph	**VDN >**
	Report
	Call Profile

Figure 1-6: R2 CMS and R3 CMS Real-Time Reports Menu

Cross-Reference

Table 1-1 lists the standard R2 CMS real-time reports and the closest equivalent report in R3 CMS. Reports, and individual items within reports, **do not** map exactly between the two releases.

Table 1-1: Real-Time Reports Cross-Reference

R2 CMS Report	R3 CMS Report
Split Status	Split Report (does not include trunk data)
System Status	Split Report
Group Status	Agent Group Report (for one group only)
Split Summary	Agent Report and Split Report (two reports)
Agent/Split Comparison	No standard report equivalent. Could create a custom report.
Call Profile	Split Call Profile
Trunk Group Summary	Trunk Group Report
Split Performance	No standard report equivalent. Could create a custom report.
Split Event Count Summary	Event Count Summary
VDN Status	VDN Report
Vector Status	Vector Report (vector data only)
VDN/Trunk Activity Matrix	No standard report equivalent. Could create a Custom Report
System Status Graph	Queue Graph
Split Performance Graph	Split Graph
Split Real-Time Profile Graph	Split Call Profile Graph
VDN Real-Time Profile Graph	VDN Call Profile Graph

New R3 Real-Time Report

The following R3 CMS real-time report has no equivalent in R2 CMS:

- **VDN Call Profile report** — displays the numbers of answered/connected and abandoned calls to the specified VDN.

See the *CMS R3 Administration* (585-215-511) document for examples of the report and the report input window.

General Changes

R2 CMS real-time reports do not map exactly to the R3 CMS real-time reports. You need to read this section, the "General Changes" section for Historical reports, the cross-reference tables, and see Chapter 4 of the *CMS R3 Administration* (585-215-511) document to become familiar with the differences. Some of the general differences are:

- The column headings for R3 CMS reports have been updated to make them more consistent and easier to understand.

- R3 CMS report headings and summary lines do not scroll when the reports are displayed on the terminal screen.

- Report titles have been changed for consistency. For example, summary reports generally have one line per entity or time period summarized. Reports without the word *summary* are detail reports. (The R3 Interval Trunk Group Summary report shows one line of data summarized over the entire trunk group for each interval in the report. The R2 CMS Trunk Group Summary report showed a detail for each trunk in the trunk group for the date given.)

- Most agent reports include data for all splits in which the agent worked during the period covered in the report.

- R3 CMS has three new agent states and one agent state renamed.

  — **DACD**: The agent is on a direct agent ACD call (Generic 3).
  — **DACW**: The agent is in the after call work state for a direct agent ACD call (Generic 3).
  — **OTHER**: The agent is working on a direct agent call, working on a call for another split, or has put a call on hold and has not chosen another work mode, is dialing an outbound call, or has a non-ACD call ringing.
  — **UNKNOWN**: Was INIT in R2 CMS.

- All graph reports use Dictionary calculations in R3 CMS. R2 CMS graph reports used hard-coded calculations. Graph reports can be customized in R3 CMS.

- With R3 CMS, agents in multiple splits **must** use the same login for all splits. This allows the agent to be tracked as a single agent. With R2 CMS, agents used different logins.

- With R2 CMS, the UPDATE SLK refreshed reports. In R3 CMS when you order a real-time report, you must specify a refresh rate for the report. This rate determines how often the report updates itself to display new data.

Historical Reports

For additional information on the Historical Reports subsystem, please see Chapter 5 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

Major differences and the cross-reference table for the R3 CMS historical reports follow the menus (Figure 1-7).

R2 STANDARD HISTORICAL REPORTS

Split	Split Event	System	Summary
[ ] Daily	[ ] Daily	[ ] Daily	[ ] Split
[ ] Weekly	[ ] Weekly	[ ] Weekly	[ ] Group
[ ] Monthly	[ ] Monthly	[ ] Monthly	[ ] Trunk Group
Agent	Agent Event	Trunk Group	Daily-Only
[ ] Daily	[ ] Daily	[ ] Daily	[ ] Login Logout
[ ] Weekly	[ ] Weekly	[ ] Weekly	[ ] Call Profile
[ ] Monthly	[ ] Monthly	[ ] Monthly	[ ] Trunk
VDN	Vector		
[ ] Daily	[ ] Daily		
[ ] Weekly	[ ] Weekly		
[ ] Monthly	[ ] Monthly		

R3 CMS Historical Reports

Historical >		
Agent >	**System >**	**VDN >**
Summary >	**System >**	**Status**
Split >	**Multi-ACD >**	**Report >**
Attendance >	**Multi-ACD by Split >**	**Call Profile >**
Group Attendance >	**Trunk/Trunk Group >**	**Busy Hour**
Login/Logout	**Trunk >**	**Multi-ACD Flow >**
Trace	**Trunk Group >**	**Vector >**
Event Count >	**Trunk Group Summary >**	
Group Summary >	**Busy Hour**	
In/Outbound Call >	**Graph >**	
Split>	**Split Call Profile >**	
Status	**Split Service Level >**	
Reportl >	**Split Avg Speed Answer >**	
Summary >	**VDN Call Profile >**	
Call Profile >	**VDN Service Level >**	
Outbound >	**Call Work Code >**	
Forecast Summary >		

Figure 1-7: R2 and R3 CMS Historical Reports Menus

Cross-Reference   Table 1-2 maps the standard R2 CMS historical reports to the equivalent report in R3 CMS. Reports, and individual items within reports, **do not** map exactly between the two releases.

Table 1-2: Historical Reports Cross-Reference

R2 CMS Report	R3 CMS Report
Daily Reports	Interval Reports (global change)
Weekly/Monthly Reports	Daily Reports (global change)
Split	Split Summary
Split Event Count	No equivalent. Could create a Custom Report.
Agent	Agent Summary
Agent Event Count	Agent Event Count
Trunk Group	Trunk Group Summary
System	System
Split Summary	Split Report
Group Summary	Group Summary
Trunk Group Summary	Trunk Group
Login and Logout	Login/Logout
Call Profile	Split Call Profile
Trunk	Trunk
Vector	Vector
Vector Directory Number	VDN
Split Historical Profile Graph	Split Call Profile Graph

New R3 Historical Reports

The following R3 CMS historical reports have no equivalent in R2 CMS:

- Agent Split reports
- Agent Attendance reports
- Agent Group Attendance reports
- Agent Trace report
- Agent Inbound/Outbound Call reports
- Split Status report
- Split Outbound reports
- Split Forecast Summary reports
- System Multi-ACD reports
- System Multi-ACD by Split reports
- Trunk/Trunk Group Busy Hour reports
- Split Service Level Graph reports
- Split Average Speed of Answer Graph reports
- VDN Call Profile Graph reports
- VDN Service Level Graph reports
- Call Work Code report
- VDN Status report
- VDN Call Profile report
- VDN Busy Hour report
- VDN Multi-ACD Flow reports.

See the *CMS R3 Administration* (585-215-511) document for examples of these reports and of the report input windows.

General Changes

R2 CMS historical reports do not map exactly to the R3 CMS historical reports. You need to read this section, the "General Changes" section for real-time reports, the cross-reference tables, and see Chapter 5 of the *CMS R3 Administration* (585-215-511) document to become familiar with the differences. Some of the general differences are:

- The column headings for R3 CMS reports have been updated to make them more consistent and easier to understand.

- R3 CMS report headings and summary lines do not scroll when the reports are displayed on the terminal screen.

- Report titles have been changed for consistency. For example, summary reports generally have one line per entity or time period summarized. Reports without the word *summary* are detail reports. (The R3 Interval Trunk Group Summary report shows one line of data summarized over the entire trunk group for each interval in the report. The R2 CMS Trunk Group Summary report showed detail for each trunk in the trunk group for the date given.)

- Most agent reports include data for all splits/skills in which the agent worked during the period covered in the report.

- R3 CMS has three new agent states and one agent state renamed.
  - **DACD**: The agent is on a direct agent ACD call (Generic 3 only).
  - **DACW**: The agent is in the after call work state for a direct agent ACD call (Generic 3 only).
  - **OTHER**: The agent is working on a direct agent call, working on a call for another split, or has put a call on hold and has not chosen another work mode, is dialing an outbound call, or has a non-ACD call ringing.
  - **UNKNOWN**: Was INIT in R2 CMS.

- All graph reports use Dictionary calculations in R3 CMS. R2 CMS graph reports used hard-coded calculations. Graph reports can be customized in R3 CMS.

- With R3 CMS, agents in multiple splits **must** use the same login for all splits. This allows the agent to be tracked as a single agent. With R2 CMS, agents used different logins.

- Summary lines for historical reports are at the top of the report.

- R3 CMS historical reports are available in *interval, daily*, *weekly*, and *monthly* versions.

— **Interval** reports contain breakdowns of data by the interval you have defined (15, 30, or 60 minutes).

Interval reports correspond to R2 CMS Daily reports.

— **Daily** reports display summarized interval data, one line for each day, for the day(s) you specify.

Daily reports correspond to R2 CMS Weekly/Monthly reports.

— **Weekly** reports display summarized daily data for the week(s) you specify, one line for each week.

The data for the weekly reports comes from the weekly tables. The weekly tables only contain summarized daily data for complete weeks.

R2 CMS weekly reports display a daily summary for each day in the week (7 different days) to make up a weekly report.

— **Monthly** reports display summarized daily data for the month(s) you specify, one line for each month.

R2 CMS monthly reports displayed a daily summary for each day in the month.

The data for the monthly reports comes from the monthly tables. The monthly tables only contain summarized daily data for complete months.

- Time columns in R2 CMS historical reports (columns showing the amount of time spent on some activity) displayed in minutes and hundredths of minutes (mm.mm). R3 CMS shows the time columns in minutes and seconds (mm:ss) and hours, minutes, and seconds (hh:mm:ss).

- The R3 Agent Trace report is in the Historical Reports subsystem. All users now have access to this report. In R2 CMS, the agent trace report was in the CONFIGURATION subsystem.

You cannot delete agent trace records in R3 CMS. When the agent trace file is full, the oldest records are overwritten by new records. You should periodically print the Agent Trace report before new records overwrite old records.

- R3 CMS Historical reports do not appear in 132-column format on the terminal's screen.

Set Destination Action Item

The `Set dest` action list item has been removed from the action list and the information now appears on the input window for all historical reports (Reports, Dictionary, Exceptions, ACD Administration Configuration, and Forecasting subsystems).

This change lessens the confusion with Timetable tasks and running a report. Also, you can run as many as 100 reports on a Timetable, even if you send the output to different destinations.

Timetables and Shortcuts

For additional information on using the Timetable and Shortcut items on the Keep Screen-Labeled Key (SLK), please refer to Chapter 6 of the *CMS R3 Administration* (585-215-511) document.

SCHEDULE to Timetable SLK

Timetable on the [Keep], SLK maps to SCHEDULE in R2 CMS. See Chapter 6, "Timetables and Shortcuts," in the *CMS R3 Administration* (585-215-511) document for a complete description and procedures.

R2 CMS   **R3 CMS**
SCHEDULE   **Timetable**
[ ] Scheduler   **Shortcut**
[ ] Program Editor   **Stop**

Keep

Figure 1-8: R2 SCHEDULE Menu and R3 Keep SLK Menu

Shortcut is new for R3 CMS and is a series of tasks saved by CMS. Shortcuts happen immediately and are a fast, easy way to select windows that you might look at every day or several times during the day.

After you have created your shortcut, type the name of the shortcut after the semicolon on the Main Menu and press [Return]. The shortcut starts immediately.

Timetable allows you to schedule tasks for completion at a time convenient for you on a timetable.

General Changes

- Data summaries are already scheduled to run on a timetable when you receive your system. You cannot access or change data summary timetables.

- A full and incremental backup have been created on a timetable for you, but neither has been scheduled. You will have to schedule full and incremental backups.

- Timetables that fail to run are logged to the Error Log in the Maintenance subsystem.

- Most R3 CMS windows can be placed on a timetable. With each window/report description in the *CMS R3 Administration* (585-215-511) document, you are told if the window can be placed on a timetable.

- To print a report multiple times using a timetable, you must enter the task(s) each time on the timetable. With R2 CMS, you had to edit the command line.

- CMS automatically sends your timetable print requests to your default printer unless you specify another printer.

- You do not have to use the *UNIX* system and the vi editor with timetable to edit the command line. Use `Get contents` in the Timetable window to see a copy of the tasks on a timetable.

- The Timetable List All window shows the status of all timetables.

New R3 Shortcut Capability

Shortcut has been added. Shortcut is new for R3 and is a series of tasks saved by CMS. Shortcuts happen immediately and are a fast, easy way to select windows that you might look at every day or several times during the day.

After you have created your shortcut, type the name of the shortcut after the semicolon on the Main Menu and press the Return key.

The shortcut starts immediately.

Dictionary

For additional information on the Dictionary subsystem, please refer to Chapter 7 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS DICTIONARY maps to R3 CMS **Dictionary >** (Figure 1-9).

R2 CMS	R3 CMS
DICTIONARY	**Dictionary >**
[ ] Login-Identification	**Login Identification**
[ ] Agent Groups	**Agent Groups**
[ ] Extension-Groups	**Calculations**
[ ] Calculations	**Constants**
[ ] Constants	**Database Items >**
[ ] Database-Items	**Agent String Values**
[ ] Split-Synonyms	**Split String Values**
[ ] Trunk-Group-Synonyms	**Trunk String Values**
[ ] VDN-Synonyms	**Standard CMS Items**
[ ] Vector-Synonyms	**Custom Items**
	ACDs
	Splits
	Trunk Groups
	Global Search
	Report
	Call Work Codes
	VDNs
	Vectors

Figure 1-9: R2 and R3 CMS Dictionary Menus

Cross-Reference

Table 1-3 maps the standard R2 CMS Dictionary menu item to the equivalent menu item in R3 CMS. Dictionary items *do not* map exactly between the two releases.

Table 1-3: Dictionary Cross-Reference

R2 CMS	R3 CMS
Login-Identification	Login Identification
Agent Groups	Agent Groups
Extension-Groups	None
Calculations	Calculations
Constants	Constants
Database-Items	Database Items
Split-Synonyms	Splits
Trunk-Group-Synonyms	Trunk Groups
VDN-Synonyms	VDNs
Vector-Synonyms	Vectors

New R3 Menu Items

The following R3 CMS Dictionary menu items have no equivalent in R2 CMS:

- **ACDs** — allows you to assign names to real or pseudo-ACDs.
- **Global Search** — allows you to search the entire Dictionary.
- **Report** — creates reports on any part of the Dictionary.
- **Call Work Codes** — allows you to add, delete, modify, or view call work codes.

General Changes

- R3 CMS uses the word **name** instead of the word **synonym**.

- Extension Groups do not exist on R3 CMS.

- You can assign names to ACDs (real and pseudo) and call work codes in R3 CMS.

- R3 CMS Dictionary subsystem allows searching for patterns in all fields (names, numbers, and descriptions) and in all sections of the Dictionary using the "Global Search" window.

- You can get a listing of all your split, trunk group, call work code, VDN, vector, agent group names and login IDs at any time with the `List all` action list selection.

- You can change the descriptive words that appear on reports dealing with agents (for example, AVAIL, ACD, IN, OUT, PHONE, etc.) to meet your call center's needs.

- You can change the descriptive words that appear on the Split Call Profile reports to meet your call center's needs.

- You can change the descriptive words that you see on trunk reports (for example, IDLE, HOLD, LOW, IN, YES, etc.) to meet your call center's needs.

- You can select any section of the Dictionary listed on the Report window to be printed or displayed in a set of reports (one report for each section of the Dictionary), or you can have a report on all the Dictionary sections listed.

- **Calculations** and **Constants**

  — Calculations can now have the "unique" keyword inside the calculation.

  — Calculation names and constant names can no longer contain embedded blanks. All other Dictionary names can still contain embedded blanks.

- **Agent Groups Window**

  When adding a range of agent login IDs in the Agent Groups window, an Acknowledgment window is displayed if one or more of the logins in the range already exists. The Acknowledgment window displays how many IDs already existed and how many were added.

- **Global Search Window**

  You can now use ***** (asterisk) or a blank in the Global Search window to match all entries.

Exceptions

For additional information on the Exceptions subsystem, please refer to Chapter 8 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS EXCEPTIONS map to **Exceptions >** in R3 CMS (Figure 1-10).

R2 CMS	R3 CMS
EXCEPTIONS	**Exceptions >**
	Real-time Exception Log
Reports	**Historical Reports >**
[ ] Splits	**Agent Exceptions**
[ ] Trunk-Groups	**Split Exceptions**
[ ] Vectors	**Trunk Group Exceptions**
	Vector Exceptions
Administration	**VDN Exceptions**
[ ] Splits	**Other Exceptions >**
[ ] Trunk-Groups	**Malicious Call Trace**
[ ] Vectors	**Data Collection**
	Administration >
	Agent Exceptions
	Split Exceptions
	Trunk Group Exceptions
	Vector Exceptions
	VDN Exceptions

Figure 1-10: R2 and R3 CMS Exception Menus

Cross-Reference

Table 1-4 maps the standard R2 CMS Exceptions menu item to the equivalent menu item in R3 CMS. Exceptions items **do not** map exactly between the two releases.

Table 1-4: Exceptions Cross-Reference

R2 CMS	R3 CMS
Split report	Split Exceptions historical report
Trunk-Groups report	Trunk Group Exceptions historical report
Vectors report	Vector Exceptions historical report
Splits administration	Split Exceptions administration
Trunk-Groups administration	Trunk Group Exceptions administration
Vectors administration	Vector Exceptions administration

New R3 Menu Items

The following R3 CMS Exceptions menu items have no equivalent in R2 CMS:

- **Agent Exceptions historical report**
- **VDN Exceptions historical report**
- **Malicious Call Trace historical report**
- **Data Collection historical report**
- **Agent Exceptions administration**
- **VDN Exceptions administration**

General Changes

- In R3 CMS, when the occurrences of an exception *exceed* the threshold, you are notified of an exception. This is different from R2 CMS. In R2 CMS, when the occurrences of an exception met the threshold, you were notified of an exception.

- The text of reported exceptions in R3 CMS includes the Dictionary names for agents, splits, trunk groups, VDNs, and vectors, instead of the numbers which R2 CMS used.

- In R3 CMS, exception permissions are turned on/off based on User ID. In R2 CMS, exceptions permissions were tied to read permission for a split, trunk group, etc.

- Exception alerting (screen flash/beep) is basically the same.

- In the title bar, the `Ex` field shows a running count of current exceptions. The count resets to zero when a new intrahour interval starts.

- In R3 CMS, exceptions are stored in the Real-Time Exception Log. Exceptions do not pop up at the bottom of your screen as they did in R2 CMS.

- You have more agent, split, trunk group, vector, and VDN exceptions to choose from.

- By default in R3 CMS, most exceptions are turned off. However, exceptions checking for the following events are *always turned on* and *cannot* be turned off in R3 CMS.

  — Malicious call traces (Generic 2 and Generic 3r only)

  — Data collection disruptions (for example, ACD link goes down)

  — Agent login attempts that are not permitted.

ACD Administration

For additional information on the ACD Administration subsystem, please see Chapter 9 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS CONFIGURATION maps to **ACD Administration >** in R3 CMS (Figure 1-11).

R2 CMS	R3 CMS
CONFIGURATION	**ACD Administration >**
Split	
[ ] Extension-Assignments	**Move Agent Extensions Between Splits**
[ ] Trunk-Group-Assignments	**Trunk Group Assignments**
[ ] Parameter-Administration	**Split Parameters** (No Vectoring**)**
[ ] Call-Profile-Administration	**Split Call Profile Setup**
	Activate Agent Trace
Vector	**Configuration Reports >**
[ ] Trunk-Group Assignments	**Split Members**
[ ] Directory-Number Assignments	**Trunk Group Members**
[ ] Specifications	**Vector**
[ ] Split-References	**Call Work Codes**
	VDN Assignments
[ ] Agent Trace	**VDN Call Profile Setup**
	Vector Contents
	Split References in Vectors

Figure 1-11: R2 CONFIGURATION Menu and R3 ACD Administration Menu

Cross-Reference

Table 1-5 maps the standard R2 CMS ACD Administration menu item to the equivalent menu item in R3 CMS. ACD Administration items **do not** map exactly between the two releases.

Table 1-5: ACD Administration Cross-Reference

R2 CMS	R3 CMS
Split Extension-Assignments	Move Extensions Between Splits
Split Trunk-Group-Assignments	Trunk Group Assignments
Split Parameter-Administration	Split Parameters (no vectoring)
Split Call-Profile-Administration	Split Call Profile Setup
Vector Trunk-Group Assignments	Trunk Group Assignments
Vector Directory-Number Assignments	VDN Assignments
Vector Specifications	Vector Contents
Vector Split-References	Split References in Vectors
Agent Trace	Activate Agent Trace

New R3 Menu Items

New additions to R3 CMS ACD Administration subsystem are:

- **Configuration Reports** for Split Members, Trunk Group Members, and Vectors
- **Call Work Codes**
- **VDN Call Profile Setup**

General Changes

- R2 CMS Split Extension Assignments maps to the **Move Extensions Between Splits** window on R3 CMS.

- R2 CMS Split/Vector Trunk Group Assignments maps to the **Trunk Group Assignments** window (depending on your switch).

- R2 CMS Split Parameter-Administration maps to the **Split Parameters** window on R3 CMS.

- R2 CMS Split Call Profile-Administration maps to **Split Call Profile Setup** on R3 CMS.

- R2 CMS Vector Directory-Number-Assignments map to **VDN Assignments** on R3 CMS.

- R2 CMS Vector Specification maps to **Vector Contents** on R3 CMS.

- R2 CMS Split References map to **Split References in Vectors** on R3 CMS.

- Agent Trace is different on R3 CMS. In the **Activate Agent Trace** window, you turn on or off an agent trace for one or more agents. The agent trace report is in the Reports subsystem in R3 CMS.

  You cannot delete agent trace records in R3 CMS. When the agent trace file is full, the oldest records are overwritten by new records. If you want certain agent trace information on a particular agent, you should periodically print the Agent Trace report before new records overwrite old records.

- The default for split and VDN call profile intervals and service level is "0" in R3 CMS. In R3 CMS, you are allowed to set your intervals to different lengths (for example, 15, 20, 35). R2 CMS had defaults of 10 seconds for profile intervals and 30 seconds for service level. If you set your split call profile values on R2 CMS, these values migrate to R3 CMS. If you were using the R2 CMS default values, you had to enter values in the Split Call Profile Setup window.

- To intraflow calls in R2 CMS you needed access permission for the split receiving the calls. This is no longer necessary on R3 CMS.

User Permissions

For additional information on the User Permissions subsystem, please see Chapter 10 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS ADMINISTRATION maps to **User Permissions >** in R3 CMS (Figure 1-12).

R2 CMS	R3 CMS
ADMINISTRATION	**User Permissions >**
[ ] System Access	**User Data**
[ ] Split Access	**Feature Access**
[ ] Trunk-Group Access	**Main Menu Addition Access**
[ ] Vector-Access	**Split Access**
	Trunk Group Access
	ACD Access
	Vector Access
	VDN Access

Figure 1-12: R2 CMS ADMINISTRATION and R3 CMS User Permissions Menus

Cross-Reference

Table 1-6 maps the standard R2 CMS User Permissions menu item to the equivalent menu item in R3 CMS. User Permissions items *do not* map exactly between the two releases.

Table 1-6: User Permissions Cross-Reference

R2 CMS	R3 CMS
System Access	Feature Access
Split Access	Split Access
Trunk-Group Access	Trunk Group Access
Vector-Access	Vector Access

New R3 Menu Items

The following R3 CMS User Permissions menu items have no equivalent in R2 CMS:

- **Main Menu Addition Access** — Allows you to assign, view, modify, or delete a CMS user's access permissions to additional Main Menu items.

- **ACD Access** — Allows you to assign, view, modify, or delete a user's access to real or pseudo ACDs.

- **VDN Access** — Allows you to assign, view, modify, or delete a CMS user's access permissions to specific VDNs.

General Changes

- R2 CMS System Access maps to the **User Data** and **Feature Access** windows in the User Permissions subsystem.

- R2 CMS Split Access maps to **Split Access** in R3 CMS.

- R2 CMS Trunk Group Access maps to **Trunk Group Access** in R3 CMS.

- R2 CMS Vector Access maps to **Vector Access** in R3 CMS.

- *Remove Existing Password* and *Add/Change Password On Next Login* do not exist on any window in R3 CMS.

- You also turn on or off the exception alerting (beep/flash) from the Split Access, Trunk Group Access, ACD Access, VDN Access, or Vector Access windows.

- Default access is no (except ACD access).

System Setup

For additional information on the System Setup subsystem, please refer to Chapter 11 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS MAINTENANCE maps to either the R3 CMS **System Setup >** subsystem or the **Maintenance >** subsystem (Figure 1-13).

R2 CMS	R3 CMS
MAINTENANCE	**System Setup >**
	Switch Setup
[ ] Backup-Data	**Pseudo-ACD Setup**
[ ] Restore-Data	**Load Pseudo-ACD Data**
	Data Storage Allocation
[ ] Archive-Parameters	**Free Space Allocation**
[ ] Daily-Data-Archive	**Storage Intervals**
	Agent Trace Record Contents
[ ] Session-Status	**Main Menu Addition**
	CMS State
[ ] Error-Log	**Data Collection**
	Data Summarizing
[ ] Forecast Manager	**R2 Migrate Data**
	Maintenance >
	Back Up Data
	Restore Data
	Backup/Restore Devices
	Printer Administration
	Connection Status
	ACD Status
	Archiving Status
	Error Log Report

**Figure 1-13: R2 CMS MAINTENANCE to R3 CMS
System Setup and Maintenance Menus**

Cross-Reference

Table 1-7 maps the standard R2 CMS MAINTENANCE menu item to the equivalent menu item in R3 CMS. MAINTENANCE items **do not** map exactly between the two releases.

Table 1-7: System Setup Cross-Reference

R2 CMS	R3 CMS
Backup-Data	Back Up Data (Maintenance)
Restore-Data	Restore Data (Maintenance)
Archive-Parameters	Data Storage Allocation (System Setup)
Daily-Data-Archive	Storage Intervals (System Setup) Data Summarizing (System Setup)
Session-Status	Switch Setup (System Setup) Archiving Status (Maintenance)
Error-Log	Error Log (Maintenance)
Forecast Manager	Forecast Manager (Forecast)

New R3 Menu Items

The following R3 CMS System Setup menu items have no equivalent in R2 CMS:

- **Free Space Allocation** window in the **System Setup >** subsystem. This window lists the number of administered splits, agents, trunk groups, exceptions, etc., as set up during installation. This window allows you to identify and specify where you would like to store specific CMS files.

- **Pseudo-ACD Setup** and **Load Pseudo-ACD Data** in the **System Setup >** subsystem allow you to create an area on your CMS for a model ACD (Pseudo-ACD). One use for a pseudo-ACD is running historical multi-ACD reports.

- **Agent Trace Record Contents** in the **System Setup >** subsystem allows you to specify what agent data and how much agent data to collect for later use in the Agent Trace historical report.

- **Main Menu Addition** in the **System Setup >** subsystem allows you to add as many as eight additional items to the CMS Main Menu.

- **CMS State** in the **System Setup >** subsystem allows you to take CMS from single-user to multi-user mode and vice versa.

- **R2 CMS Migrate Data** window in the **System Setup >** subsystem will be used when you are ready to migrate R2 CMS data to R3 CMS. See the *CMS R3 Migration* (585-215-113) document for all the procedures and information.

- **Back Up/Restore Devices** in the **Maintenance >** subsystem allows you to name and describe a full path name for a device used for data backup, data migration, data restore, and loading pseudo-ACDs.

- **Printer Administration** in the **Maintenance >** subsystem allows you to assign a name, description, and some options to a printer. This printer then becomes known by CMS and can be used for printing any CMS report or window.

General Changes

- R2 CMS Archive Parameters maps to **Data Storage Allocation** in the **System Setup** subsystem. CMS can store data as follows:
  — Intrahour Storage up to 62 days.
  — Daily Storage up to 5 years (1825 days, 260 weeks, or 60 months).
  — Weekly/Monthly Storage up to 10 years (3650 days, 520 weeks, or 120 months).
  — Exception data up to 2000 records for each type of exception.

- R2 CMS Daily Data Archive maps to:
  — **Storage Intervals** in the **System Setup >** subsystem. R3 CMS uses the entries in this window to automatically archive your data. Intrahour intervals in R3 CMS can be 15, 30, or 60 minutes. The Storage Intervals window is also used to select the days of the week that your call center is in operation and CMS is actively collecting data.
  — **Data Summarizing** in the **System Setup >** subsystem will do archiving on demand and should only be used if the previous archive did not work.

  > **Note** In R2 CMS with Daily Data Archive, you could enter a date of "-4" and R2 CMS would summarize data from four days ago through today. In R3 CMS if you enter "-4", data is summarized for just one day that occurred four days ago.

- R2 CMS Error Log maps to **Error Log Report** in the **Maintenance >** subsystem. The Error Log Report only logs errors that you can

correct. This log also includes entries that were previously placed in R2 CMS MAIL.

- R2 CMS Forecast Manager maps to **Forecast Manager** in the **Forecasting >** subsystem.

- R2 CMS Session Status maps to:

  — **Switch Setup** window in **System Setup >** and gives the switch name, switch release, CMS administrable switch features (for example, Vectoring).

  — **Archiving Status** window in the **Maintenance >** subsystem and gives the type of archives (interval, daily, weekly, and monthly), status (success, failure, not run, running), the date, and time.

  — **Data Storage Allocation** in the **System Setup >** subsystem. This window also allows you to enter the number of splits/skills, agent logins, trunk groups, trunks, call work codes, vectors, and VDNs for which you want space allocated.

  — **Connection Status** window in the **Maintenance >** subsystem and allows you to monitor the data link between the CMS processor and the switch.

  — **Data Collection** window in the **System Setup >** subsystems and turns data collection on or off.

  — **ACD Status** in the **Maintenance >** subsystem and displays information about the current ACD.

- **Data Storage Allocation**

  With R3 CMS, the value in the `Number of Agent login/logout records` field on the Data Storage Allocation window is the number of records you want to store, not the number of days as in the R2 CMS.

Maintenance

For additional information on the Maintenance subsystem, please refer to Chapter 12 of the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS MAINTENANCE maps to either the R3 CMS **System Setup >** subsystem or the **Maintenance >** subsystem (Figure 1-14).

R2 CMS	R3 CMS
MAINTENANCE	**Maintenance >**
	Back Up Data
[ ] Backup-Data	**Restore Data**
[ ] Restore-Data	**Backup/Restore Devices**
	Printer Administration
[ ] Archive-Parameters	**Connection Status**
[ ] Daily-Data-Archive	**ACD Status**
	Archiving Status
[ ] Session-Status	**Error Log Report**
	System Setup >
[ ] Error-Log	**Switch Setup**
	Pseudo-ACD Setup
[ ] Forecast Manager	**Load Pseudo-ACD Data**
	Data Storage Allocation
	Free Space Allocation
	Storage Intervals
	Agent Trace Record Contents
	Main Menu Addition
	CMS State
	Data Collection
	Data Summarizing
	R2 Migrate Data

Figure 1-14: R2 CMS MAINTENANCE to R3 CMS Maintenance and System Setup Menus

Cross-Reference

Table 1-8 maps the standard R2 CMS MAINTENANCE menu item to the equivalent menu item in R3 CMS. MAINTENANCE items *do not* map exactly between the two releases.

Table 1-8: Maintenance Cross-Reference

R2 CMS	R3 CMS
Backup-Data	Back Up Data (Maintenance)
Restore-Data	Restore Data (Maintenance)
Archive-Parameters	Data Storage Allocation (System Setup)
Daily-Data-Archive	Storage Intervals (System Setup) Data Summarizing (System Setup)
Session-Status	Switch Setup (System Setup) Archiving Status (Maintenance)
Error-Log	Error Log (Maintenance)
Forecast Manager	Forecast Manager (Forecast)

New R3 Menu Items

The following R3 CMS System Setup menu items have no equivalent in R2 CMS:

- **Back Up/Restore Devices** in the **Maintenance >** subsystem allows you to name and describe a full path name for a device used for data backup, data migration, data restore, and loading pseudo-ACDs.

- **Printer Administration** in the **Maintenance >** subsystem allows you to assign a name, description, and some options to a printer. This printer then becomes known by CMS and can be used for printing any CMS report or window.

General Changes
- R2 CMS Backup-Data maps to **Back Up Data** in the **Maintenance >** subsystem. An **incremental** backup has been added as well as the ability to back up individual tables

  Full and **incremental** backup timetables have been created for you, but you must schedule the time for either of these to run.

- R2 CMS Restore-Data maps to **Restore Data** in the **Maintenance >** subsystem.

- R2 CMS Error Log maps to **Error Log Report** in the **Maintenance >** subsystem. The Error Log Report only logs errors that you can correct. This log also includes entries that were previously placed in R2 MAIL.

- R2 CMS Forecast Manager maps to **Forecast Manager** in the **Forecasting >** subsystem.

- R2 CMS Session Status maps to:
  — **Switch Setup** window in **System Setup >** and gives the switch name, switch release, CMS administrable switch features (for example, Vectoring).
  — **Archiving Status** window in the **Maintenance >** subsystem and gives the type of archives (interval, daily, weekly or monthly), status (success, failure, not run, running), the date, and time.
  — **Data Storage Allocation** in the **System Setup >** subsystem. This window also allows you to enter the number of splits/skills, agent logins, trunk groups, trunks, call work codes, vectors, and VDNs for which you want space allocated.
  — **Connection Status** window in the **Maintenance >** subsystem and allows you to monitor the data link between the CMS processor and the switch.
  — **Data Collection** window in the **System Setup >** subsystems and turns data collection on or off.
  — **ACD Status** in the **Maintenance >** subsystem and displays information about the current ACD.

- **Error Log**

  The correct day is now logged in the Error Log report for archives and timetables that run near midnight.

- **Printer Administration**

  If you enter a print type other than compressed, pica, or elite in this window, an Acknowledgment window tells you that you entered something different, and asks you if that is what you really want.

- **Connection Status**

  When the link is down for several minutes (at least five), the Connection status may be waiting session accept. If this happens, you need to reboot the R3 CMS by logging in as root and performing the **shutdown -i6 -g0 -y** command.

- **Back Up Data**

  The estimated number of backup tapes required for a multi-ACD system is now more accurate.

  The R3 CMS file system backup has been modified to include the 14 Gigabyte tape device.

  The Verify tape field on the Maintenance: Backup Data screen now defaults to yes.

  Cartridge tapes are now retensioned prior to R3 CMS backup initiation. This minimizes the potential for tape problems.

- **Restore Data**

  When restoring data, the disk space is now checked for all file systems used for historical data when historical data restore is being done. If any file system is more than 90% full, restore will give a warning in an Acknowledgment window. You can choose to ignore the warning or rearrange the file systems.

Custom Reports

The R3 CMS custom reports interface has been totally redesigned. See the *CMS Custom Reports* (585-215-513) document for all necessary information.

Custom Reports allow the design of custom call record reports. Most of the call record reporting you do will be done via custom reports designed to meet your call center's needs. This report menu item will not appear on the reports menu if you have an external call record application.

R2 to R3 Menu Items

You create and run custom reports from this menu selection.

R2 CMS	R3 CMS
[ ] CUSTOM REPORTS CREATION	**Custom Reports >**
Standard Reports	**Real-time >**
[ ] Real-time Reports	**Historical >**
[ ] Historical Reports	**Edit Report >**
Custom Reports	
[ ] Real-time Reports	
[ ] Historical Reports	

Figure 1-15: R2 and R3 CMS Custom Reports Menus

Cross-Reference

Table 1-9 maps the standard R2 CMS CUSTOM REPORTS menu item to the equivalent menu item in R3 CMS. CUSTOM REPORTS items ***do not*** map exactly between the two releases.

Table 1-9: Custom Reports Cross-Reference

R2 CMS	R3 CMS
Standard Reports— Real-time Reports	Real-time Edit Report
Standard Reports— Historical Reports	Historical Edit Report
Custom Reports— Real-time Reports	Real-time Edit Report
Custom Reports— Historical Reports	Historical Reports Edit Report

New R3 CMS Capabilities

The R3 CMS Custom Reports subsystem gives you more options and flexibility than you had in R2 CMS Custom Reports. The things you can do in R3 CMS that you cannot do in R2 CMS are:

- Design custom bar graphs (if you have purchased the R3 CMS Graphics package).

- Include Current Day Forecast data and exceptions data in custom historical reports.

- Create custom data tables in *INFORMIX*[*] into which you can enter any data you wish. Then, you can include that data in custom historical reports.

- Copy the designs of multiple reports, standard or custom, into one custom report.

- Assign additional video attributes to the elements of a custom report, including color (if you have color terminals).

- Define areas of a report (for example, column headings, column totals, and row identifiers) that do not scroll. Thus, the headings and totals remain in place while you scroll through the associated data.

- Merge data from two tables (for example, the Intrahour Agent and Intrahour Split tables) in a report field calculation.

- Create intrahour historical reports that include intrahour data for multiple days.

- Create data functions with multiple values (SUM, MAX, MIN) that display just one value. In addition, another data function, AVG, is available. AVG displays the average of all values found by the search criteria.

> **Note** R2 CMS "data functions" are called "aggregate functions" in R3 CMS.

- Merge data from multiple ACDs (the real ACD and pseudo-ACDs).

- Use `count(*)` to count and display the number of occurrences of a particular piece of data (for example, the number of agents with fewer than 15 ACD calls in the hour).

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What You Cannot Do in R3 CMS

In R3 CMS Custom Reports, you cannot design reports that have hard-coded relative dates. That is, you cannot, as you could in R2 CMS, specify a relative date (for example, `-1` for yesterday) for a report so that the report will always run for that relative date.

General Changes

The following list discusses significant areas of difference between R2 CMS Custom Reports and R3 CMS Custom Reports.

- **Running Reports**

  You run R3 CMS custom reports via the `Custom Reports` main menu option, *not* via the `Reports` option as in R2 CMS.

- **Defining Report Fields and Criteria Statements**

  In R2 CMS, you defined the data expression for a field and the criteria statement in a single window — the Data Item window.

  In R3 CMS, you define the data expression for a field in the Field window and the criteria statement in the Row Search window. You then assign the criteria statement to the field. This separation of tasks in R3 CMS allows you to assign a criteria statement to multiple fields at one time, which in turn allows you to avoid repetitious typing of criteria statements.

- **Defining Dates**

  In R2 CMS, you defined the dates for custom reports using two fields in the Data Item Window — the **Start Date** and **Number of Days** fields. In R3 CMS, you define the dates for custom reports using criteria statements that select on the database item **ROW_DATE**, using syntax that is almost identical to the criteria statements used for any other type of data.

- **Report Select Window**

  When you select the Delete action from this window, you see the following message:

  ```
  Do you really want to delete the report named
  "rpt_name"?
  ```

  You are required to answer yes to delete the report or no to cancel the Delete action.

- **Row Search Window**

  The `Order by` field help states that you cannot order by synonym.

- **Associated ACD**

  Custom Report input fields are validated against the ACD which is specified, not the current ACD.

  Previously, Custom Reports did not provide an ACD association in the same way as standard reports.

  — To provide an ACD association for custom reports, an `Associated ACD` field has been added to the Screen Painter Field Definition and the Variable/Time/Date windows.

  — Before the `Associated ACD` field can be used, the input field type must be defined as "ACD" on the Define Input window.

  — On the Screen Painter Field Definition window, if you select `Synonym` in the `Field Format` list, you must also complete the `Associated ACD` fields.

  — On the Variable/Time/Date window, the `Associated ACD` field is used only in association with the `Display input variable` field.

- **Creating Report Input Screens/Windows**

  In the R2 CMS Data Item window, you defined variable criteria statements and variable Start Date and Number of Days statements. With variable criteria statements, R2 CMS automatically placed input fields on the Report Parameters screens (called Report Input windows in R3 CMS) so that a user selected the data for the report to include.

  R3 CMS does not automatically create input fields from your variable criteria. In addition, you do not enter the input field's prompt as part of the criteria statement. Instead, the definition of report input fields (done in the Define Input window) has been separated from the definition of fields (done in the Field window) and data search criteria (done in the Row Search window). See Figure 1-16.

- **Defining Ranges in Criteria Statements**

  In R2 CMS, you could define ranges of values with criteria statements that used the greater than (**>**) and less than (**<**) symbols. In R3 CMS, you can specify that a report input field allow the user to enter a range. R3 CMS automatically converts a criteria statement that uses an equals sign (**=**) to a criteria statement that defines a range.

- Help text is now available from all areas of Custom Reports consistent with the rest of R3 CMS and should be helpful in creating custom reports.

- The custom reports editor no longer overlaps fields when combining graph reports and standard reports.

Report Input Windows

```
Custom Reports: Hist: daily split by int
                                                          Run

 Split: 1_____
 Date: 07/01/93_____
 Interval(s): 8:00am-11:00am_____

 Report destination (Select one):
  <x> Terminal
  < > Printer, Printer name: _____
  < > File,
      File name: _____
                 _____
```

Define Input Windows

| Variable name: i_split | Variable name: i_date | Variable name: i_time |
| Prompt: Split | Prompt: Date | Prompt: Interval(s) |

Row Search Window

```
Row search ID: 1

From table(s): hagent_____
Select rows where: SPLIT = $i_split and ROW_DATE = $-_date
                   and STARTTIME = $i_time and ACD = $acd
```

Figure 1-16: R3 CMS Definition of Report Input Windows

Forecasting

For additional information on the Forecast subsystem, please see Chapter 14 in the *CMS R3 Administration* (585-215-511) document.

R2 to R3 Menu Items

R2 CMS FORECAST maps to **Forecast >** in R3 CMS (Figure 1-17). For complete information, see the R3 *CMS Administration* (585-215-511) document.

R2 CMS	R3 CMS
FORECAST	**Forecast >**
	Reports >
Reports	**Longterm**
[ ] Long-Term	**Financial**
[ ] Intraday	**Current Day**
[ ] Current-Day	**Intraday**
[ ] Special-Day	**Special Day**
[ ] Agent-Position-Required	**Agent Positions Required**
[ ] Trunk-Engineering	**Trunks Required**
	Trunk Performance
Administration	**Hypothetical >**
[ ] Special-Days	**Data >**
[ ] Call-Characteristics	**Copy Historical Data**
[ ] Trunk-Group-Blocking	**Edit Values**
[ ] Weighting-Coefficients	**Report**
	Financial Report
	Administration >
	Call Handling Profiles
	Costs Profiles
	Trunk Group Profiles
	Current Day Configuration
	Special Days
	Data Storage Allocation
	Forecast Manager

Figure 1-17: R2 and R3 CMS Forecast Menus

Cross-Reference

Table 1-10 maps the standard R2 CMS FORECAST menu item to the equivalent menu item in R3 CMS. FORECAST items *do not* map exactly between the two releases.

Table 1-10: Forecasting Cross Reference

R2 CMS	R3 CMS
Long-Term report	Longterm report
Intraday report	Intraday report
Current-Day report	Current Day report
Special-Day report	Special Day report
Agent-Position-Required report	Agent Positions Required report
Trunk-Engineering report	Trunks Required Trunk Performance
Special-Days	Special Days administration
Call-Characteristics	Call Handling Profiles administration
Trunk-Group-Blocking	Trunk Group Profiles administration
Weighting-Coefficients	Forecast Manager

New R3 Menu Items

The following R3 CMS System Setup menu items have no equivalent in R2 CMS:

- **Financial report**
- **Hypothetical Data**
- **Hypothetical report**
- **Hypothetical Financial Report**
- **Costs Profiles**
- **Current Day Configuration**
- **Data Storage Allocation**

New R3 CMS Capabilities

The R3 CMS Forecast subsystem gives you more options and flexibility than you had in R2 CMS Forecasting. The things you can do in R3 CMS that you could not do in R2 CMS are:

- Create and use hypothetical data in forecasts.

- Calculate profit margins based on forecasted call traffic, costs, and revenue.

- Select past days that are either one day apart or seven days apart to supply the historical input data for your forecasts.

- Store current day forecast data for later retrieval in the standard Forecast Summary Report, in current day forecasts, or in custom reports.

- Store forecast input data for definite periods of time so you can use it for forecasts that you want to rerun or for forecasts where seasonal trending or special day data is much older than a year.

- Run a forecast based on the number of calls you expect, not just on historical data.

- Select one of several forecast methods or algorithms to calculate your report. A new method you can select finds the current trend (in the last four weeks) and projects that trend in the forecast.

General Changes

The following list discusses significant areas of difference between R2 CMS forecasting and R3 CMS forecasting.

- In R2 CMS, you created a set of Forecast Call Characteristics and assigned it to a split at the same time. In R3 CMS, sets of Call Characteristics (called Call Handling Profiles in R3 CMS) are created generically and then selected for a split when you run a forecast on the split. In this way, you can avoid unnecessary duplication of effort when splits have the same call handling objectives. In addition, you can define several call handling profiles for a single split, if desired, and use different profiles as forecast conditions change.

- In R2 CMS, you could define a special set of call characteristics (defined for Split 0) that could be used for forecasts on any split. In R3 CMS, the fact that you can create numerous call handling profiles and use them in forecasts for any split means that a special set of call characteristics for Split 0 is unnecessary.

- In R3 CMS, you access the Forecast Manager via the **Forecast** main menu option, not via the **Maintenance** option as in R2 CMS.

- In R3 CMS, you can specify how long to store forecast input data and current day forecast data, a special Data Storage window is available via the Forecast main menu option. In R2 CMS, you administered, via the Maintenance — Data Storage Allocation window, only the length of special day data storage.

- **Forecast Manager**

  An acknowledgment was added that warns you about data being deleted when data is recollected.

- **Intraday Forecast Report**

  If you request an Intraday Forecast report and the Current Day report does not exist, you get a status message that says Current Day report does not exist.

Miscellaneous

Migration

You must migrate your CMS data before upgrading to R3 CMS. See the *CMS R3 Migration* (585-215-113) document for instructions on migrating CMS data collected with R2 CMS for use with R3 CMS.

Installation & Maintenance

- The prompt for authorizing the number of agents was changed to read:

  ```
  Enter maximum number of agent members that can be
  administered (1-5200):
  ```

- There is no default for the above statement unless the CMS has been previously administered, in which case, the default is the current value.

- If the administrator is removing an ACD which is the default ACD for any existing logins, the following message will appear at the terminal:

  ```
  There are login ids which have this ACD as the
  default ACD. These logins will be changed to have
  the master ACD as their default ACD. See
  /cms/install/logdir/admin.log for details.
  ```

- If CMS is on when you start a cmsadm backup, the following question now appears **after** the calculation for the number of tapes needed for the backup, but **before** the backup actually begins:

  ```
  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:
  ```

  If you press ⎡Enter⎤, the backup begins and dots are printed on the terminal (one per file) to let you know that the backup is running. You will not see a message on your terminal when CMS is turned off or when CMS is turned back on. The Backup Log file will show you when CMS was turned off and on, and at what time each occurred.

- The time it takes to estimate the number of tapes required for the backup has been reduced significantly.

Printers

If a printer stops printing for no apparent reason, do the following from the *UNIX* system.

1. Enter `/usr/bin/lpstat -t` to check printer status.

2. Enter `/usr/bin/disable <printer name>` to disable the printer.

3. Enter `/usr/bin/enable <printer name>` to reset the printer.

The printer should start printing.

General Information

Audience

This chapter is written for customers who are upgrading from a Release 3 Call Management System (R3 CMS) to a Release 3 Version 2 Call Management System (R3V2 CMS).

Introduction

This chapter describes the differences between the R3 CMS and the R3V2 CMS.

The chapter is organized in the following sections:

- General Differences/Enhancements
- Data, Database Items, and Calculations
- Multi-ACDs
- CMS and Expert Agent Selection (EAS)
- Personal Call Tracking
- Call Records
- Data Migration
- Reports
- Timetables and Shortcuts
- Exceptions
- System Setup
- Custom Reports.

General Differences/Enhancements

Increased Capacities

CMS now supports the following switch capacities:

- 5200 agent/split combinations for Generic 3 Version 2

- 5200 agent/skill combinations for Generic 3 Version 2 with Expert Agent Selection (EAS)

- 5115 agent/skill combinations for Generic 2.2 with EAS

- 255 split/skills for Generic 3 Version 2

- 600 skills (numbered 10 to 609) for Generic 2.2 with EAS

- 665 trunk groups for Generic 3 Version 2 (255 trunk groups for Generic 2.2)

- Generic 3 Version 2 agents may log into up to four splits or skills (an increase from three).

- Generic 2.2 agents may log into up to four skills plus the default skill.
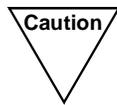
> **Caution** Even though R3V2 CMS supports these additional capacities, you will not be able to upgrade unless you have sufficient free space on your disk to accommodate all the data you want to collect. Your current disk space allocation may specify more items to be measured for longer lengths of time than you actually have space on your disk. This means, you must purchase more disk, or change the length of time data is stored, or the number of entities measured before you can upgrade.

Personal Calls

The first measured split or skill an agent is logged into is used by CMS to track non-ACD calls unless the agent has an ACD call on hold, and the agent is not yet available for other ACD calls. In this case, the call is counted for the split or skill associated with the held ACD call.

Performance

If you have the same configuration on R3V2 CMS as you did on R3.0 CMS, the performance should be similar.

Expert Agent Selection should not have any direct impact on performance. From a performance standpoint, skills are equivalent to splits. For large CMS call centers, you may require additional memory because a larger number of skills may be used with R3V2 CMS than the number of splits used with R3.0 CMS.

The maximum allowed values of the various parameters have been increased in R3V2 CMS, and this has an indirect effect on performance. For example, the maximum number of agent-skill pairs is about five times larger on R3V2 CMS than on R3.0 CMS. This obviously can result in more disk and RAM being needed.

Internal call history (call records), when enabled, will cause additional load on processor occupancy and may require that you slow your refresh rates. Internal call history will only be used by small call centers with low call rates, so the effect on performance should be small. The effect of external call history on performance should also be small.

Call Vectoring

- CMS now supports 32 vector steps per vector with the Generic 3 Version 2 switch. The Vector Contents window in the ACD Administration subsystem is a multipage screen.

- CMS now supports the *converse* step. This vector step is only available with the Generic 3 Version 2 switch as part of the Call Vectoring feature.

  If you will be using converse, you will need to administer more unmeasured trunks, since the *converse* command reports about a call using an unmeasured trunk.

Data, Database Items, and Calculations

The following data, database items, and calculations have changed between R3.0 CMS and R3V2 CMS.

Data

You can now add, delete, or change measured trunks, trunk groups, agent extensions, agent login IDs, VDN extensions, splits, and skills (on a Generic 3 Version 2) without busying out the link to CMS and losing CMS data.

CMS now tells the Generic 3 Version 2 switch how many of each facility it can support, and if an agent or the switch administrator attempts to exceed the CMS limits, they are blocked by the switch until the CMS configuration is increased. This means the agent is denied the ability to log in, and the switch administrator would not be able to make the change. In order to make the change, you need to put CMS into single-user mode with data collection off and then increase the storage parameters in the Data Storage Allocation window. When you return CMS to the multiuser mode with data collection on, CMS will renegotiate the CMS configuration parameters with the switch, and the agent would be allowed to log in, and the switch administrator would be allowed to make the change.

Database Items

INTERVAL in R3.0 has been changed to **INTRVL** in R3V2 CMS.

For a complete mapping of R3.0 CMS database items to the current items, see the appendix in the *CentreVu™ CMS R3V5 Upgrades and Migration* (585-215-826) document.

For a complete listing of the current database items and calculations, see the appendix in the *CentreVu™ CMS R3V5 Real-Time and Historical Reports* (585-215-821) document.

Calculations

No new calculations have been added.

Multi-ACDs

Release 3 Version 2 CMS now supports multiple ACDs. The areas that have changed follow.

Title Bar

Multi-ACD link status on the title bar.

Reports

New Real-Time Multi-ACD reports

These reports allow you to access data from multiple ACDs on the same reports. This could be different splits/skills from different ACDs.

Exceptions

- The Exception Count, exception alerting, and entries in the exception log are for all ACDs for which the user has exceptions permissions.
- The Exceptions Log now specifies the ACD where the exception occurred.

User Permissions

You can set up permissions for each user for each ACD. Also, you can set up permissions by each ACD (e.g., you might want to give a CMS user permission for an entire ACD).

Commands SLK

Change ACDs from the `Commands:Options:Current ACD` menu item.

Windows

The current ACD name or number appears in the upper right corner of each window so you will know which windows apply to which ACD.

CMS and Expert Agent Selection (EAS)

Expert Agent Selection (EAS) is an optional feature that builds on the power of the Call Vectoring and ACD features of the switch by routing incoming calls to the correct agent on the first try. By using the ACD queuing and the vector commands *Queue-to-Main* and *Check-Backup*, a call routes to an agent that has the **skills** required to handle that call.

With EAS, call distribution is based on **skill**. Calls are queued to skills and handled by an agent who is a member of at least one of the skills associated with the skills that a caller requires.

| Note | The EAS feature requires extensive planning before implementing, and Generic 2.2 EAS and Generic 3 Version 2 EAS have different capabilities. This section gives a very high-level description of EAS and the changes on CMS to track this feature. See Appendix E, "CMS and the Expert Agent Selection Feature," in the *CMS R3V2 Administration* (AT&T 585-215-521) document for a more in-depth description. |

Generic 3 Version 2 EAS

With Generic 3 Version 2 Expert Agent Selection and logical agent, agent login IDs must be part of the extension dialing plan and must also be different from the agent voice terminal extensions. It may be necessary if you have already have an R3.0 CMS to readminister the CMS agent login ID synonyms in the Dictionary. If you must change login IDs, the agent data collected prior to the EAS cut will have a different login ID and will require a separate report invocation.

Generic 2.2 EAS

With Generic 2.2, EAS increases the number of agent groups by expanding each ACD split into a set of 10 skills called a *skill tens group*. That is, when EAS is active, each ACD split becomes a skill tens group (e.g., 10, 20, 30 ... up to 600, see example).

Split		Skill Group
1	→	10-19
2	→	20-29
3	→	30-39
4	→	40-40
•		
•		
•		
60	→	600-609

When creating vectors, a call can be queued to up to three skills at the same time (Multiple Skill Queuing) as long as the skills all belong to the same skill tens group. For example, queuing to skills 26 and 21 is multiple skill queuing, but queuing to skills 21, and 53 is not, the call outflows from skill 21 and inflows to skill group 53. Likewise, queuing to skills 24, 21, and 33 results in an outflow from 24 and 21 and an inflow to skill 33 because it is in a different skill group.

Skill groups ending in zero (20, 30, 40, etc.) are default skill groups. These are super groups for the skill tens group, that is, a call to skill 10 can be delivered to anyone with skills 10-19. Agents are administered to defaults and then enter other skills via their voice terminals.

Additions to CMS for EAS

The following items have been added to CMS to track the Expert Agent Selection feature.

- **Real-Time Reports**

  — On menus and input fields, Split now displays as Split/Skill. Valid minimum and maximum values are determined by switch type and release (for Generic 3 Version 2, skills range from 1 to 255; and on Generic 2.2, skills range from 10 to 609).

  — New Skill Status report shows logged in skills (different from the Split Status report).

  — New VDN Skill Preference report shows the call handling for the VDN as a whole and lists the number of calls handled by each of the VDN skill preferences.

- **Historical Reports**

  — On menus and input fields, Split now displays as Split/Skill. Valid minimum and maximum values are determined by switch type and release.

  — New VDN Skill Preference report

  — The Agent Login/Logout report shows skills logged into by agents.

- **Dictionary** (see Chapter 7, "Dictionary")

  — Split/Skill names

  Assign names to skills so skill names appear on CMS reports.

  — Split/Skill string values.

  Change the descriptive words that appear on the Skill Call Profile reports. The *words* are used to describe the value of the data.

- **Exceptions** (see Chapter 8, "Exceptions").

  Split exceptions are now Split/Skill exceptions.

- **ACD Administration** (see Chapter 9, "ACD Administration")

  From CMS, you can do the following at any time:

  — **VDN Skill Preferences**

  Change VDN skill preferences is a new menu item.

  Generic 2.2 Switch — When the VDN skill preferences are changed on a Generic 2.2 switch, the new skill preferences take effect for the new calls to the VDN. Any calls currently in progress in the VDN at the time the change is made are processed with the *old* VDN skill preferences.

  Generic 3 Version 2 Switch — When the VDN skill preferences are changed on a G3V2 switch, the change takes effect immediately and can affect the processing of any calls currently in the VDN at the time of the change.

  — **Change Agent Skills** (Generic 3 Version 2)

  Add, change or delete agent skills using the Change Agent Skills window. Agent must log out and then back in for changes to take effect. Agent login IDs must be one to five digits in length. An agent can have up to four skills and each skill is assigned a type, either primary or secondary.

  — Use the **Vector Contents** window to create, modify, or delete skill vectors.

— **Move Agent Extensions** (Generic 2.2 with EAS only).

This window allows you to move agent extensions between skill tens groups. It also allows you to get a list of the extensions assigned to a particular skill group. Valid entries in the Skill group field must be a positive integer ending in "0" representing a skill group number. The skill group 0 can be entered to list extensions assigned to skill 0, where they are measured, but are not members of any skill group. Extensions must be up to 5 digits.

— The **Vector Configuration** report contains VDN skill information and is called Vector Configuration with Skills on the report.

- **User Permissions** (see Chapter 10, "User Permissions")

  Grant skill access from the Split/Skill Access window.

- **Custom Reports**

  The *Get copy of design* window will list all the Skill reports with EAS.

- **Maintenance**

  With EAS, the ACD Status window has the following changes:

  — `Maximum skill members` is new and displays the total skill members allowed for your system.

  — `Skill members in use` is new and displays the number of agent/skill pairs currently logged in.

  — `Measured split` field has been removed.

  — `Split members, summed over all splits` field has been removed.

EAS Vector Commands

- The following vector commands have been changed from the split usage to skill usage with EAS. These commands can queue to a specific skill, or can reference a VDN skill preference, or can check the conditions in the skill.

- check backup skill

- go to step

- go to vector

- messaging skill

- queue to main skill.

> **Note** See Chapter 9, "Vector Contents — ACD Administration" for a description.

Additional Call Data with EAS

With EAS, the following additional data tracking is available.

- **Direct Agent Calls (Generic 3)**

  With the proper class-of-restriction settings, calls to agent login IDs can be tracked as direct agent calls. These calls are queued to a specific agent and are tracked as a special type of ACD call for the agent.

  Direct agent calls queue to the agent but use a queue slot in the first primary skill the agent is logged into. CMS tracks the queue time for the direct agent call to the agent and the skill the call queues to, unless that skill is unmeasured.

  > **Note** It is recommended (if possible) to either expand the queue size for the first skill the agent logged into or to assign a special "direct agent" skill as the first primary skill for all logical agents so that the queue slots for the other skills the agent is logged into are not used by direct agent calls.

Agent Tables

The agent tables separate direct agent calls from skill calls, and direct agent call tracking provides the same information as other agent calls.

> **Note** The standard real-time and historical reports combine direct agent calls and split/skill calls. For agents, you can separate these items by creating a custom report. See the *CMS R3V2 Custom Reports* (AT&T 585-215-523) document for custom report creation information.

Skill/Split Tables

The Skill/Split tables keep the following direct agent call information.

— Number of direct agent calls in queue.

— Number of direct agent calls ringing.

— Oldest direct agent call.

— Number of agents on direct agent calls or in direct agent after call work.

— Direct agent calls using the skill queue slots.

— Agent time on direct agent calls is tracked as OTHER time in skill tables.

— No call data is kept for direct agent calls.

VDN/Vector Tables

The VDN and vector tables include direct agent calls with skill calls as ACD calls.

- **Personal calls**

The first measured skill a logical agent is logged into (whether primary or secondary) is used by CMS to track non-ACD calls unless the agent has an ACD call on hold, and the agent is not yet available for other ACD calls. In this case, the call is counted for the skill associated with the held ACD call.

Personal Call Tracking

Enhanced Data Tracking Capabilities

The Personal Call Tracking (PCT) feature on the Generic 3 and Generic 2.2 switches sends CMS information to track all personal calls an agent makes and receives. This includes calls made or received when the agent has a call on **hold**.

Before Personal Call Tracking

Older switches did not notify CMS when an agent put an ACD call on hold, so agent time with an ACD call on hold was counted as ACD talk time. There was also no tracking of any calls an agent may have made (for example, to consult with a supervisor or to transfer or conference an ACD call) or received while the ACD call was on hold.

With Personal Call Tracking

With the Personal Call Tracking feature, CMS now tracks calls an agent makes or receives with a call on hold. Calls are tracked as AUX IN or AUX OUT calls. Time is tracked as OTHER or AUX. If you upgraded from an older switch release to a Generic 3 or Generic 2.2 switch, you will see the following data tracking changes:

- An increase in the number of extension in/out calls made or received by agents, if agents make or receive calls while they have a call on hold.

- Agent time on AUXIN/AUXOUT calls will increase.

- If agents do a lot of conferences and transfers, the average talk time for extension out calls will probably drop, since time spent in AUX for conferences and transfers is very short (a matter of seconds).

- The average talk time on ACD calls will drop if agents put calls on hold, since the time on hold is no longer included as ACD talk time.

New Database Items

New database items have been added to the R3V2 CMS to provide better tracking of agent time with ACD calls on hold.

> **Note** The new personal call tracking database items are not in any of the standard real-time or historical reports. If you want to use these, you must create a custom report.

Table 2-1: Personal Call Tracking Real-Time Status Database Items

Database Item	Description	Table
ACDONHOLD	The number of direct agent and split/skill ACD calls on hold at the agent. (System 85 R2V4, Generic 2, and Generic 3)	Agent
DA_INRING	The current number of direct agent ACD calls ringing at an agent in this split/skill. (Generic 3 only)	Split

Table 2-2: Personal Call Tracking Historical Database Items

Database Item	Description	Table
ACDAUXOUTCALLS	The number of AUXOUTCALLS the agent made with at least one split/skill or direct agent ACD call on hold. This includes calls made to transfer or conference the ACD call. (Generic 2.2 and Generic 3)	Agent
I_ACDAUX_OUTTIME	Time during the collection interval that the agent spent dialing (Generic 2.2) and talking on AUXOUT calls with at least one split/skill or direct agent ACD call on hold. (Generic 2.2 and Generic 3)	Agent
I_ACDAUXINTIME	Time during the collection interval that the agent spent talking on AUXIN calls with at least one split/skill or direct agent ACD on hold. (Generic 2.2 and Generic 3)	Agent
I_ACDOTHERTIME	Time during the collection interval that the agent spent in the OTHER state (dialing an outgoing call [Generic 3], with a ringing personal call [Generic 3], or with calls on hold and with no other state selected) with at least one split/skill or direct agent ACD call on hold. (Generic 2.2 and Generic 3)	Agent
ACDAUXOUTCALLS	The number of AUXOUTCALLS agents in the split/skill made with at least one split/skill ACD call on hold. For agents in multiple splits (Generic 3), the call is counted for the split/skill of the last ACD call the agent put on hold. ACDAUXOUTCALLS includes calls made to transfer or conference the ACD call. (Generic 2.2 and Generic 3)	Split

Database Item	Description	Table
I_ACDAUX_OUTTIME	Time during the collection interval that the positions spent dialing (Generic 2.2) and talking on AUXOUT calls with at least one split/skill ACD call on hold. (Generic 2.2 and Generic 3)	Split
I_ACDAUXINTIME	Time during the collection interval that positions were talking on AUXIN calls with at least one split/skill or direct agent ACD on hold. (Generic 2.2 and Generic 3)	Split
I_ACDOTHERTIME	Time during the collection interval the positions spent in the OTHER state (dialing an outgoing call [Generic 3], with a ringing personal call [Generic 3] or with calls on hold and with no other state selected) with at least one split/skill ACD call on hold. (Generic 2.2 and Generic 3)	Split
HOLDACDCALLS	The number of split/skill or direct agent ACD calls that were placed on hold at least once. (Generic 2, Generic 3, System 85 R2V4)	VDN
HOLDACDTIME	The time spent by split/skill or direct agent ACD callers on hold. (Generic 2, Generic 3, System 85 R2V4)	VDN

Hold Calls/Agent States

Personal Call Tracking offers the following additional data tracking capabilities:

- Data is now available for calls on hold, time for calls on hold, and calls abandoned from hold. Without personal call tracking, time for calls on hold was counted as talk time.

- CMS split and agent data now reflect calls made while another call is on hold.

- When an agent places a call on hold, the agent returns to his/her previous state before the call unless the previous state was AVAIL. If the agent was in the AVAIL state, the agent is placed in the OTHER state until the agent dials a valid number (if the number dialed in invalid, the agent remains in OTHER), reconnects with the held call, or the held call abandons. When the agent reconnects to the held call, the original agent state for the call displays.

The following example shows how R3V2 CMS tracks hold calls with the new database items.

	Agent answers ACD call	Agent holds call, dials supervisor	Agent talks to supervisor	Agent Reconnects to held ACD call	Call ends
S85/G2.1/G1	I_ACDTIME				
G2.2 (R3V1 CMS)	I_ACDTIME	I_AUXTIME	I_AUXOUTTIME	I_ACDTIME	
G3 (R3V1 CMS)	I_ACDTIME	I_OTHERTIME	IAUXOUTTIME	I_ACDTIME	
G2.2 (R3V2 CMS)	I_ACDTIME	I_AUXTIME, I_ACDAUX_OUTTIME	I_AUXOUTTIME, I_ACDAUX_OUTTIME	I_ACDTIME	
G3 (R3V2 CMS	I_ACDTIME	I_OTHERTIME, I_ACDOTHERTIME	I_AUXOUTTIME, I_ACDAUX_OUTTIME	I_ACDTIME	

Figure 2-1: Hold Tracking for Supervisor Assist Example

Agents do not have a **hold** state. Hold time is associated with a call placed on hold. Agent states reflect the current activity of the agent.

Hold time (HOLDTIME) is the time the call spent on hold. HOLDCALLS is the number of calls that were placed on hold at least once, and HOLDABNCALLS is the number of calls that abandoned while on hold.

I_OTHERTIME is the time during the collection interval that the agent was doing other work.

For Generic 3, this includes time while in the Auto-In or Manual-In mode during which the agent put a call on hold and performed no further action, the agent placed a call or activated a feature, or a personal call rang with no further activity.

- When an agent dials a valid extension, the agent's state changes to AUX OUT (if the agent was in AUX or OTHER) or to ACW OUT (if the agent was in ACW). See Table 2-2, "Personal Call Tracking Historical Database Items," for other items.

Abandoned Calls

VDN calls that route to extensions and are then abandoned are counted as abandoned calls for the VDN.

Transferred and Conferenced Calls

- Transferred and conferenced calls are tracked as held calls while the call(s) wait to be transferred or added to a conference.

- When an agent ends a conference call, the agent returns to the call state prior to setting up the conference.

- If an agent is talking, then places the ACD call on hold to transfer that call, and then completes the transfer, the agent then goes to the AVAIL state (Auto-In) or to ACW (Manual-In) following the transfer.

- Transferred or conferenced unmeasured split, trunk group, or VDN calls are now tracked. Prior to Personal Call Tracking, these calls were not tracked.

Audio Difficulty

You now get the trunk associated with audio difficulty for personal calls if the trunk group is measured. Prior to Personal Call Tracking, audio difficulty was restricted to ACD calls.

Call Records

You can now get detailed call history reporting from both internal and external call records. For example, you might have a caller that complained about being put on hold three times and then transferred. Call Records give you this information.

Internal call records reside on CMS. The standard CMS internal call records are limited to a maximum of 5000 records.

| Note | To protect the real-time processing on CMS, internal call records can only be collected if your call center's traffic is under 400 calls in 20 minutes. |

External call records is an optional external call record collection and export application which allows you to store and collect more information even if you have high traffic rates.

| Note | The Call Records report menu item will only appear on your Historical Reports menu, if you have internal call records. |

Historical Reports

CMS provides the following Call Records information.

- Data Collection

    Detailed information is now available for each call.

- New Call Record report

    With this report, you can get a history of calls handled by your call center.
    Most call record reporting will need to be done via custom reports tailored to your application. This standard report is to be used for customizing. The Call Record menu item will not appear if an external call record collection and reporting application is being used.

```
                                          Call Record Report
Start: mm/dd/yy hh:mm AM                                                    Printed: mm/dd/yy hh:mm AM
Stop:  mm/dd/yy hh:mm PM                                                    ACD: xxxxxxxxxxxxxxxxxx

           Seg   Start     Start    Calling     Dialed     Call   Disp  Split/  Ans    Talk   Hold   After                    Last
Callid     No.   Date      Time     Party       Number     Disp   Time  Skill   Agent  Time   Time   Call    Trs  Cnf  Ast     Call Work Code
xxxxxxxxxx xx    mm/dd/yy  hh:mm:ss xxxxxxxxx   xxxxxxxxx  xxxx   mm:ss xxx     xxxxx  mm:ss  mm:ss  mm:ss   x    x    x       xxxxxxxxxxxxxxxx
xxxxxxxxxx xx    mm/dd/yy  hh:mm:ss xxxxxxxxx   xxxxxxxxx  xxxx   mm:ss xxx     xxxxx  mm:ss  mm:ss  mm:ss   x    x    x       xxxxxxxxxxxxxxxx
xxxxxxxxxx xx    mm/dd/yy  hh:mm:ss xxxxxxxxx   xxxxxxxxx  xxxx   mm:ss xxx     xxxxx  mm:ss  mm:ss  mm:ss   x    x    x       xxxxxxxxxxxxxxxx
xxxxxxxxxx xx    mm/dd/yy  hh:mm:ss xxxxxxxxx   xxxxxxxxx  xxxx   mm:ss xxx     xxxxx  mm:ss  mm:ss  mm:ss   x    x    x       xxxxxxxxxxxxxxxx
```

Figure 2-2: Call Record Report Example

R3.0 to R3V2 Migration

When migrating your R3.0 CMS data to R3V2 CMS, you need to be aware of the following:

- Obsolete database items

  — I_AUXTIME in the **agent** table was removed because it is a duplicate of TI_AUXTIME (these values were identical). You will need to change any **agent** custom report references to I_AUXTIME to TI_AUXTIME.

  — Split/skill custom reports that use I_AUXTIME should **not** be modified to refer to TI_AUXTIME because TI_AUXTIME does not exist in the split/skill tables.

  — Custom reports with obsolete database items will be flagged, and the obsolete columns need to be removed or changed.

  — Dictionary calculations with obsolete database items in their formulas will be flagged, and these columns need to be removed.

  > **Note** If you have a custom report that will not run, check to see if any calculation is using an obsolete database item.

- Your INFORMIX data (not CMS data) is your responsibility to migrate.

- All conflicts with report, timetables, and shortcuts names will be reported in the customer migration log and conflicting names will have temporary new names. You will need to resolve these conflicts.

- All conflicts in the Dictionary and MainMenu addition items are discarded. These conflicts are reported in the customer migration log.

- In a multi-ACD configuration, if you try to migrate a CMS login ID to a target machine that already has that same login ID, the migrating login ID will **not** be migrated. However, any files (e.g., custom reports, timetables, shortcut, etc.) under those login IDs will be migrated and the ownership will be changed to *cms*. You must recreate the CMS user IDs in User Permissions: User Data window and then change ownership of the files to the appropriate CMS login ID.

Reports

Real-Time Reports

- New Queue/Agent Status report

  This report combines the Queue/Agent Summary report with the Agent report to show overall split/skill information, such as the number of calls waiting, oldest call, percent answered within service level, and the number of agents available, on ACD calls, staffed, with calls ringing, and on after call work. This report also shows what each agent in the split/skill is doing.

Historical Reports

The `Set dest` action list item has been removed from the action list and the information now appears on the input window for all historical reports (i.e., Reports, Dictionary, Exceptions, ACD Administration Configuration, and Forecasting subsystems).

This change lessens the confusion with Timetable tasks and running a report. Also, you can run up to 100 reports on a Timetable, even if you send the output to different destinations.

Agent Trace Report

You will no longer see extraneous OTHER activities with no time (CMS will filter these activities).

You will no longer get a misplaced summary line for AUX and ACW. The trace will, instead, be interspersed with AUX and ACW activities between calls, which better reflects what the agent was doing.

Timetables and Shortcuts

The Timetable/Shortcut subsystem has been enhanced and now provides the following:

- `Get contents` provides a window that lists all the tasks associated with a timetable/shortcut and allows you to enter the task number(s) that you want to copy, delete, global edit, or modify.

  You can also add new tasks with `Get contents`. The `Add` tasks action returns you to the CMS Main Menu to add tasks.

  The [Keep] SLK *Stop* is still used to stop adding to a timetable/shortcut.

  The `Global edit` action allows you to change the date, time, or printer for all tasks on a timetable. `Global edit` is not available for shortcuts.

  `Modify` brings up a window for each task to allow you to modify the task. You can modify the input values for the task, the action for the task, or both the input and action. It is not possible to change the ACD associated with a task using `Modify`. It is possible to change the "Current ACD" in Keep mode.

  You can also copy specific tasks within the same timetable/shortcut.

The [Keep] SLK no longer includes *Delete, Next*, and *Previous*.

Exceptions

The Agent Exceptions for time in state have been redefined so that the following agent exceptions can occur multiple times during an interval. The threshold counter is no longer cleared at the start of each data collection interval. Instead, it is cleared when the agent state causing the exception changes or when the agent logs off.

- Time available
- Time on inbound ACD call (min)
- Time on inbound ACD call (max)
- Time in after call work
- Time on inbound ACW call
- Time on outbound ACW call
- Time in AUX work
- Time on inbound AUX call
- Time on outbound AUX call
- Time on outbound ACD call (min)
- Time on outbound ACD call (max)
- Time ACD call spent on hold
- Time ACD call spends ringing
- Time on direct agent call
- Time call waited in direct agent queue
- Time on external outbound ACW call
- Time on external outbound AUX call

New Exception

Ringing call automatically redirected from agent

A new exception for the Redirection on No Answer feature that indicates an agent has been put into the AUX work mode automatically because the agent did not answer an ACD call that was ringing at the agent's station, and the switch attempted to re-queue the call automatically to a split/skill. This exception applies only to the Generic 3 Version 2 switch.

System Setup

Data Storage Allocation

With R3V2 CMS, the numbers in the `Number of Agent login/logout records` field on the Data Storage Allocation window is the number of records you want to store, not the number of days as in the R3.0 CMS.

Custom Reports

Custom Reports allow the design of custom call record reports. Most of the call record reporting you do will be done via custom reports designed to meet your call center's needs. This report menu item will not appear on the reports menu if you have an external call record application.

General Information

Audience

This chapter is written for customers who are upgrading from any field release of the Call Management System Release 3 Version 2 (R3V2 CMS) to the *CentreVu*™ Call Management System Release 3 Version 4 (*CentreVu* CMS R3V4).

Introduction

This chapter describes the differences between the R3V2 and R3V4 CMS (*CentreVu* CMS).

The chapter is organized in the following sections:

- Differences and Enhancements Overview
- Data, Database Items, and Calculations
- Reports
- Timetables and Shortcuts
- Dictionary
- Exceptions
- ACD Administration
- User Permissions
- System Setup
- Maintenance
- Custom Reports
- Forecast
- User Interface
- Miscellaneous.

For a detailed description of the changes made in different issues of the R3V2 CMS software, please refer to the *CMS R3V2 Change Description, Issue 7* (585-215-421) document.

Differences and Enhancements Overview

This section overviews the major differences in and enhancements to the *CentreVu* CMS R3V4 software in comparison to the R3V2 CMS.

CentreVu CMS Documents

The document set for *CentreVu* CMS is different than the R3V2 CMS document set. The *CentreVu* CMS documents available to you are:

- 585-215-800 — *CentreVu™ CMS R3V4 Administration*
- 585-215-801 — *CentreVu™ CMS R3V4 Reports*
- 585-215-802 — *CentreVu™ CMS R3V4 Custom Reports*
- 585-215-803 — *CentreVu™ CMS R3V4 Change Description*
- 585-215-804 — *CentreVu™ CMS External Call History Interface*
- 585-215-806 — *CentreVu™ CMS R3V4 Upgrades and Migrations*
- 585-215-807 — *CentreVu™ CMS R3V4 Sun[*] SPARCserver[†] Computers Installation and Maintenance*
- 585-215-808 — *CentreVu™ CMS R3V4 Sun® Connectivity Diagram*
- 585-215-812 — *CentreVu™ CMS Forecast.*

In addition to paper documents, the following *CentreVu* CMS documents available on CD-ROM (585-215-890):

- *CentreVu™ CMS Administration*
- *CentreVu™ CMS Reports*
- *CentreVu™ CMS Custom Reports*
- *CentreVu™ CMS External Call History*
- *CentreVu™ CMS Sun® SPARCserver™ Computers Upgrades and Migration*
- *CentreVu™ CMS Forecast.*

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*Sun is a registered trademark of Sun Microsystems, Inc.
†SPARCserver is a trademark of SPARC International, Inc.

Sun Platform

CentreVu CMS supports *Sun SPARCserver* 5, 10, and 20 computers running *Solaris*[*] 2.4. All new CMS installations will be on *Sun* computers.

Refer to the *CentreVu*™ *CMS R3V4 Sun*® *SPARCserver*™ *Computers Installation and Maintenance* (585-215-807) document for more information.

The *Sun* platform:

- Provides multiprocessor capabilities.

- Increases processor performance (approximately five times faster than the *INTEL*[†] platforms).

- Increases storage capacity (3-GB disk capacity which can increase to 24-GB disk capacity).

- Increases serial I/O capacity (up to 252 devices) which means you can have up to 252 terminals or any combination of terminals, printers, or modems.

- Improves real-time report refresh rate.

- Enhances system reliability using error correcting memory.

- Allows for cost-effective upgrades (for example, disk storage, memory, processor, etc.).

- Provides on-line *Solaris* help via *AnswerBook* software.

- Provides remote console functionality.

- Supports 2-GB internal or external disks.

- Uses *Solaris* 2.4 as the operating system with the *CentreVu* CMS software.

- Supports 150-MB, 2.5-GB, 5-GB, and 14-GB tape drives.

- Supports the Aurora SBus *Multiport*[‡] cards.

- Supports 8, 16, and 64 port Network Terminal Servers (NTS).

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*Solaris is a registered trademark of Sun Microsystems, Inc.
†INTEL is a registered trademark of Intel Corporation.
‡Multiport is a trademark of Aurora Technologies, Inc.

Intel Platform

*CentreV*u CMS supports the following *INTEL* platforms:

- 6386 WGS 25/S
- 6386 WGS 33/S
- *StarServer** S
- 3332.

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*StarServer is a registered trademark of NCR Corporation.

Supported Switch Capacities

CentreVu CMS supports the following switch capacities:.

Table 3-1: *CentreVu* **CMS Supported Switch Capacities**

Item	R2V4	G2.2/ EAS	G1.1	G3i/ G3V2	G3r	G3V2/ V3/V4	Total CMS
Agent Positions	1023	1023/ 5115	400	400	1023	5200	5200
Agents Logged In	1023	1023/ 1023	400	400	1023	5200	5200
Agent Trace Active	25	25	25	25	25	25	25
BHCC (ISDN system)	25000	25000	5700	7000	40000	40000	40000
Call records (internal)	5000	5000	5000	5000	5000	5000	5000
Call Work Codes	0	1999	0	1999	1999	1999	1999
Exception Records	2000	2000	2000	2000	2000	2000	2000
Login IDs	10000	10000	10000	10000	10000	10000	10000
Login/Logout Records	999999	999999	999999	999999	999999	999999	999999
Splits/Skills	60	60/600	99	99	99	255	600
Trunk Groups	255	255	99	99	255	666	666
Trunks (measured+unmeasured)	4000	4000	400	400	4000	4000	4000
VDNs (measured)	2000	2000	n/a	500	2000	2000	2000
Vectors	128	511	n/a	256	512	512	2048
Vector Steps	15	15	n/a	15	15	32	32
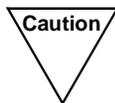
⚠️ **Caution** Even though *CentreVu* CMS supports these capacities, you will not be able to upgrade unless you have sufficient free space on your disk to accommodate all the data you want to collect. Your current disk space allocation may specify more items to be measured for longer lengths of time than you actually have space for on your disk. If you do not have enough disk space, you must purchase more disks, make the length of time data is stored shorter, or lower the number of entities measured before you can upgrade.

External Call History Interface

The External Call History Interface (ECHI) is now supported on the *INTEL* and *Sun* hardware platforms. Please refer to the *CentreVu™ CMS External Call History Interface* (585-215-804) document for information on using the ECHI feature.

Move Agents While Staffed

When running with a Generic 3 Version 4 switch, *CentreVu* CMS supports changing skills (with the Expert Agent Selection [EAS] feature) and moving agents between splits (without the EAS feature) without requiring the agents to log off.

You can access the Move Agents While Staffed feature from the ACD Administration subsystem. Refer to the "ACD Administration" section of this chapter and Chapter 8, "ACD Administration," in the *CentreVu™ CMS R3V4 Administration* (585-215-800) document for more information.

Vectoring

The following enhancements and additions have been made to the *CentreVu* CMS vectoring feature (when running with a G3V4 switch):

- **Multiple Music Sources** — allows you to change the "wait" vector step to hear a second audio/music message. For instance, if a caller is waiting in queue and has heard the first announcement, the vector can direct a second treatment to the caller.

  If you try to assign an audio/music source in a "wait" vector step and your switch does not have Multiple Vector Audio/Music Sources, you will see a feature not enabled on switch message.

- **ANI Routing** — is a new conditional that allows routing decisions based on caller identity.

- **ASA Routing** — is a new conditional that allows routing decisions depending on the switch-based rolling Average Speed of Answer (ASA) for a given split/skill or VDN.

- **EWT Routing** — is a new conditional that allows routing decisions based on the Expected Wait Time (EWT) of a call.

- **VDN Calls Routing** — is a new conditional that allows making routing decisions based on the number of active incoming trunk calls for a VDN.

- **II Digits Routing** —is a new conditional that allows making routing decisions based on Information Indicator digits provided with a call.

- **Enhanced comparator and thresholds** — allows "goto" and "route to number" commands use of the complete set of comparators; implements a "none" threshold for digits checking, and "active" or "latest" VDN thresholds for indirect VDN references.

- **Wildcard matching** — allows you to use + and ? for matching collected digits or ANI digits. Wildcard matching can only be used with the = or < > comparators.

- **"with coverage yes/no" parameter** — has been added to the "route to number" command to allow flexible routing control.

- **Abbreviated/pack vector steps** — enable vector steps to expanded to include additional commands and options.

- **Vector routing tables** — adds < >, >=, <=, = in table, not-in table comparators; tables administered on the switch that contain digit strings against which ANI digits and digits collected by Call Prompting can be tested.

- **Adding or deleting vector steps** — automatically modifies vector step numbers when you add or delete vector steps.

For more information on these vector enhancements, refer to the "ACD Administration" section of this chapter, Chapter 8, "ACD Administration," and the "Call Vectoring and Related Generic 3 Features" appendix in the *CentreVu*™ *CMS R3V4 Administration* (585-215-800) document.

Average Speed of Answer (ASA)

CentreVu CMS computes average speed of answer (ASA) and uses ASA in existing reports as it did in R3V2 CMS. However, the G3V4 switch provides a Rolling ASA. The Rolling ASA is reported in exceptions reports and is available for use in custom reports.

For information on ASA, refer to "Exceptions" section of this chapter and Chapter 7, "Exceptions," in the *CentreVu*™ *CMS R3V4 Administration* (585-215-800) document.

Expected Wait Time (EWT)

The Expected Wait Time (EWT) is the estimated time a call will wait if it were queued to a split/skill at a specific priority. EWT measures only the time it takes to deliver the call to an agent. It does not include ringing time.

EWT is shown in the real-time Split Status and Skill Status reports and exceptions reports. EWT thresholds can be administered in the Exceptions subsystem. If you have a pre-G3V4 switch, the EWT columns/fields are shown but always remain blank.

For more information on EWT, refer to the "Exceptions" section of this chapter and Chapter 7, "Exceptions," in the *CentreVu*™ *CMS R3V4 Administration* (585-215-800) document.

Phantom Abandon Call Timer

In international areas where central offices do not provide the switch with disconnect supervision, all calls with talk times that are less than an administrable threshold can be counted as abandoned calls. *CentreVu* CMS supports a phantom abandon call timer that can be administered to count calls with talk times less than 10 seconds as a phantom abandoned call.

The Phantom Abandon Call Timer can be set from 1 - 10 seconds. Any calls whose total talktime or connecttime is less than the set number of seconds are pegged as **PHANTOMABNS**, instead of **ACDCALLS**. The abandon time for phantom calls is the time:

- For splits: from the time the call queued until the agent or answering station hangs up.

- For VDNs: from the time the call encountered the VDN until the agent or answering station hangs up.

- For vectors: from the time the call entered the vector until the agent or answering station hangs up.

   When a call leaves a vector via a "route to split" command, the call is not pegged as an outflow, and can be pegged as a phantom abandon call if the call duration is shorter than the administered phantom abandon time.

The database item **PHANTOMABNS** records the total number of such calls. Also, these calls are counted as abandoned calls (**ABNCALLS**) rather than answered calls (**ACDCALLS**). The abandon time for these calls is equivalent to the time elapsed when the agent released the call.

When the phantom abandon call timer is not enabled, short ACD calls are not counted as phantom abandons, and the values of the **PHANTOMABNS** database items are 0.

Any call that has been put on HOLD, TRANSFERRED, or CONFERENCED is not recorded as a phantom abandon, even if it's duration is less than the setting of the phantom abandon call timer.

Data, Database Items, and Calculations

Data

No major changes have been made to the way data is handled in *CentreVu* CMS.

Database Items

For additional information on Database Items, please refer to Appendix A of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

The following database items have been added or changed:

ACTIVECALLS

Applies to the real-time VDN table.

Switch-generated count of the number of active calls in the VDN. This includes only incoming trunk calls directly to the VDN. It does not include internal calls to the VDN, transfers to the VDN, or calls that route to the VDN after having been through another VDN.

Available on Generic 3 Version 4 switches.

ASA

Applies to the real-time split/skill and VDN tables.

Switch-provided rolling average speed of answer for this VDN. This value is sent to CMS whenever it changes on the switch (when a call is answered).

Available on Generic 3 Version 4 switches.

EWTHIGH

Applies to the real-time split/skill table.

Switch-calculated expected wait time for calls queued at HIGH priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at HIGH priority until being served. Time spent ringing at the agent is not included in this estimate.

Available with Generic 3 Version 4 switches.

EWTLOW

Applies to the real-time split/skill table.

Switch-calculated expected wait time for calls queued at LOW priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at LOW priority until being served. Time spent ringing at the agent is not included in this estimate.

Available with Generic 3 Version 4 switches.

EWTMEDIUM   Applies to the real-time split/skill table.

Switch-calculated expected wait time for calls queued at MEDIUM priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at MEDIUM priority until being served. Time spent ringing at the agent is not included in this estimate.

Available on Generic 3 Version 4 switches.

EWTTOP   Applies to the real-time split/skill table.

Switch-calculated expected wait time for calls queued at TOP priority to this split/skill. The expected wait time is an estimate of how long a caller will wait in queue at TOP priority until being served. Time spent ringing at the agent is not included in this estimate.

Available on Generic 3 Version 4 switches.

MOVEPENDING   Applies to the real-time agent table.

Keeps track of whether agents have split/skill moves pending. When a move is requested for an agent who is currently logged in, then that move may remain pending until certain conditions have been met. *CentreVu* CMS is notified of a pending move of an agent when the request is made from CMS. (During "pumpup" *CentreVu* CMS is also notified of agents who have moves that are pending.)

Once set, the **MOVEPENDING** database item is cleared for an agent when the move is successfully completed.

Available on Generic 3 Version 4 and later switches.

ONACDAUXOUT   Applies to the real-time split/skill table.

Current number of **POSITIONS** that are on **AUXOUT** calls with one or more ACD calls on hold for this split/skill. **ONACDAUXOUT** is a subset of **ONAUXOUT**. This item was added to identify the number of agents in a split/skill who currently have an ACD call on hold and are on an outbound extension call.

On switches with the EAS feature and agents with multiple skills and using Multiple Call Handling (MCH), the last call that the agent put on hold was for this skill.

PENDINGSPLIT   Applies to the real-time agent table.

Split/skill to which the agent will be moved. The move is pending until the agent is idle. In the case of a change of as many as four skills in one request, **PENDINGSPLIT** is set to the first new skill for the agent. It is possible for **PENDINGSPLIT** to be blank or 0, even when **MOVEPENDING** is set. This can happen when the link to the switch comes up and a move is pending for an agent.

Available on Generic 3 Version 4 switches.

PHANTOMABNS   Applies to the real-time agent, split/skill, VDN, and vector tables.

Number of ACD calls with talk time less than the value of the phantom abandoned call timer.

Available on Generic 3 switches.

RETURNCALLS   Applies to the historical VDN tables.

Number of calls that reached this VDN via the VDN return destination feature.

Available on Generic 3 Version 3 switches.

TYPE   Applies to the real-time agent table.

For switches with the EAS feature purchased and enabled, **TYPE** is used to list the skill type ("p" for primary or "s" for secondary) of agent skills when the Find One and List All actions are specified for the ACD Administration: Multi-Agent Skill Change window.

Available on Generic 3 Version 4 switches with EAS.

VDISCCALLS   Applies to the historical VDN and vector tables.

Number of calls forced disconnected because the vector disconnect timer timed out or because the call reached the vector "stop" command without being queued.

Available on Generic 3 Version 2 and later Generic 3 switches.

Calculations

For additional information on Calculations, please refer to Appendix A of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

- The <**INT_AUXTIME**> calculation has been added. The calculation is used to display the stafftime in the Historical Reports Split/Skill Report daily report. The calculation definition is:

```
I_STAFFTIME - I_AVAILTIME - I_ACDTIME - I_ACWTIME
- I_OTHERTIME - I_RINGTIME - I_DA_ACDTIME -
I_DA_ACWTIME
```

Real-Time Reports

For additional information on the Real-Time Reports subsystem, please refer to Chapter 3 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document and Chapter 2 of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

Real-Time VDN Report

The VDN report has been updated to show the number of incoming trunk calls that are active for (being processed by) a VDN. The new column is `Active VDN Calls`. Figure 3-1 shows the updated VDN report.

If the *CentreVu* CMS is connected to a pre-G3V4 switch, or a G3V4 switch without vectoring, the `Active VDN Calls` column still appears, but the fields are always blank.

```
 03/20/94 08:30 AM               CentreVu(TM) CMS              Windows: 1 of 1


              Avg              Avg             Avg          VDN   VDN   Active
       Calls  Oldest  Speed  Calls  Aban    ACD   ACD   Busy/  Flow  Flow  VDN
VDN    Wait   Call    Answer Aban   Time    Calls Talk  Disc   In    Out   Calls

Billing 16    1:05    :40    0              40    4:01  0      0     0
Order    1    2:20    :27    4       :58    17    3:52  1      0     0      23
Compla  16     :55    :38    0              39    3:45  0      0     0
Legal    2    3:00    :20    2      1:50    50    2:28  0      1     0      20
Educat  20     :50    :36    0              37    4:46  0      0     0
```

New Active VDN Calls Column

Figure 3-1: VDN Report

Real-Time Split Status and Skill Status Reports

The Split Status and Skill Status reports have been updated to include expected wait time information. Figure 3-2 and Figure 3-3 show what the reports now look like.

If the *CentreVu* CMS is connected to a pre-G3V4 switch, or a G3V4 switch without vectoring, the Expected Wait Time heading still appears, but the field is always blank.

```
07/12/94 08:30 AM            CentreVu(TM) CMS           Windows: 1 of 1

          Split: S75 NORTH EAST

          Calls Waiting            1
          Oldest Call Waiting    :50
          Expected Wait Time (Pri):   Top      High     Medium     Low
                                    x:xx:xx   x:xx:xx   x:xx:xx   x:xx:xx
                                       :10      1:15     12:10     20:14

          Agent            State   Split(s)   Time      VDN

          THOMPSON SUE     ACD IN    19        9:49     10000
          LYNN ALLEN       AUX OUT   19        4:26     10002
          HAUSER STEVE     ACW OUT   19        1:26     10000
          BIRCH LYNNE      ACW       19        4:21     10000
          CARVER JOE       AUX                20:37     10001
```

New EWT Value

Figure 3-2: Split Status Report

```
03/20/94 08:30 AM            CentreVu(TM) CMS           Windows: 1 of 1

Skill:  Ordering

Calls Waiting                 25
Oldest Call Waiting         1:08
Expected Wait Time (Pri):    Top      High     Medium     Low
                           x:xx:xx   x:xx:xx   x:xx:xx   x:xx:xx
                              :10      1:15     12:10     20:14


Agent       --Login Skill(s)--    State      Skill    Time     VDN
JONES,M     p17  p16  p11  s10    ACD IN     p17      1:40    10000
GARCIA,J    p10  p11               ACD IN     p10      1:35    10001
MASTERS,K   p11                    ACD IN     p11      1:29    10000
TENNEYSON,A p17  p16  p11  s10    ACD IN     p17      1:23    10001
WATSON,T    p17  pll  p16  s11    ACD IN     p11      1:06    10000
```

New EWT Value

Figure 3-3: Skill Status Report

Historical Reports

For additional information on the Historical Reports subsystem, please refer to Chapter 4 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document and Chapter 3 of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

No changes were made to Historical Reports subsystem for the *CentreVu* CMS.

Timetables and Shortcuts

For additional information on Timetables and Shortcuts, please refer to Chapter 5 of the *CentreVu*™ *CMS R3V4 Administration* (585-215-800) document.

No changes were made to Timetables and Shortcuts for the *CentreVu* CMS.

Dictionary

For additional information on the Dictionary subsystem, please refer to Chapter 6 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document.

Updates to Include New Database Items

The Dictionary subsystem was updated to include the new *CentreVu* CMS database items, including:

- ACTIVECALLS
- ASA
- EWTHIGH
- EWTLOW
- EWTMEDIUM
- EWTTOP
- MOVEPENDING
- PENDINGSPLIT
- PHANTOMABNS
- RETURNCALLS
- TYPE
- VDISCCALLS.

For additional information on database items, please refer to Appendix A of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

Exceptions

For additional information on the Exceptions subsystem, please refer to Chapter 7 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document and Chapter 4 of the *CentreVu™ CMS R3V4 Reports* (585-215-801) document.

Agent Exception

Agent exceptions now track when:

- An agent enters an invalid call work code (CWC).

  The call work code exception has been added to the end of the Exceptions subsystem Administration: Agent Exceptions window, as shown in Figure 3-4.

```
05/27/93 12:30 AM              CentreVu(TM) CMS            Window: 1 of 6 ^

Exceptions: Administration: Agent Exceptions                         acd1

 Split(s)/Skill(s):_____        Add
          Time    Thres-                                        Delete
          Limit   hold        Exception Type                    Find one
 Active                                                         Modify
   n               ____  Number calls abandoned from direct    Next
                            agent queue                        Previous
   n                 0  Number calls outflowed from direct
                            agent queue
   n        0        0  Time on external outbound ACW calls
   n                 0  Number of external outbound ACW calls/agent
   n        0        0  Time on external outbound AUX calls
   n                 0  Number of external outbound AUX calls/agent
   n                    Agent logged out with active/held calls
   n                    Agent entered invalid call work code
```

New CWC Exception

Figure 3-4: Agent Exceptions Administration Window

When this exception is administered and an agent enters an invalid CWC (one that has not been administered), an entry is made in the Agent Exceptions Historical Report. An example of the report entry is shown in Figure 3-5.

- An agent could not be logged into a skill.

  When this happens, an entry is logged in the Agent Exceptions Historical Report. An example of the report entry is shown in Figure 3-5.

```
 09/20/95 08:30 AM              CentreVu(TM) CMS            Windows: 1 of 1


                            Agent Exceptions
 Date: 5/27/93                                    Printed: 05/28/93 09:30 PM
 Split/Skill: 1                                                        ACD 1
                                                      Time
 Time      Agent Name      LoginID   Exception          Limit     Threshold
 --------------------------------------------------------------------------------
 08:47AM   Klein, Cal      5641      Time on inbound ACD call (max)  300        2
 09:32AM   Birkby, Emma    5555      Time available                 300        1
 10:16AM   Birkby, Emma    5555      Time on inbound ACD call (min)  10         3
 11:35AM   Nguyen, Jenny   5234      Invalid call work code
 01:04PM   Klein, Cal      5641      Could not be logged in
```

New Unable to Login to Split/Skill Entry

New Invalid CWC Exception Entry

Figure 3-5: Agent Exceptions Report

Split/Skill Exceptions

Split/Skill Exceptions now track:

- Rolling Average Speed of Answer (ASA).

  These exceptions can be administered, even if you do not have the applicable switch features.

  The value in the `Average speed of answer (seconds)` exception field is calculated internally by CMS. However, the switch (Generic 3 Version 4 only) now sends the rolling ASA to *CentreVu* CMS via the ASA message. When CMS receives, for a split/skill, and ASA from the switch that exceeds the time limit specified in the Split/Skill Exception Administration, an occurrence is pegged. The Rolling ASA is triggered once per interval and cleared at the end of each interval.

  The Rolling ASA exception has been added to the end of the Exceptions subsystem Administration: Split/Skill Exceptions window, as shown in Figure 3-6.

  When the threshold for this exception is exceeded, an entry is made in the Split/Skill Exceptions Historical Report. An example of the report entry is shown in Figure 3-7.

- Expected Wait Time (EWT).

  These exceptions can be administered, even if you do not have the applicable switch features.

  EWT exceptions are triggered once per interval when the time limit exceeds the administered threshold, and cleared at the end of each interval.

  The EWT exceptions have been added to the end of the Exceptions subsystem Administration: Split/Skill Exceptions window, as shown in Figure 3-6.

  When the thresholds for the EWT exception are exceeded, entries are made in the Split/Skill Exception Historical Report. An example of the report entries is shown in Figure 3-7.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  05/27/93 08:30 AM          CentreVu(TM) CMS          Window: 1 of 6 ^    │
│ ┌───────────────────────────────────────────────────────────────────┐   │
│ │ Exceptions: Administration: Split/Skill Exceptions          acd1    │   │
│ │ ┌─────────────────────────────────────────────────┐ ┌───────────┐  │   │
│ │ │Split(s)/Skill(s):_____│ │ Add       │  │   │
│ │        Time   Thres-                                │ Delete    │  │   │
│ │  Active Limit hold      Exception Type              │ Find one  │  │   │
│ │    .     .     .      . . . . .                     │ Modify    │  │   │
│ │    .     .     .      . . . : .                     │ Next      │  │   │
│ │    .     .     .      . . . . .                     │ Previous  │  │   │
│ │   __n__             ____   Number calls transferred └───────────┘  │   │
│ │   __n__            __1__   Number calls offered while queue full    │   │
│ │    n     10        __1__   Expected Wait Time (pri Top) exceeds threshold│
│ │    n     20        __2__   Expected Wait Time (pri High) exceeds threshold│
│ │    n     40        __4__   Expected Wait Time (pri Medium) exceeds threshold│
│ │    n     50        __0__   Expected Wait Time (pri Low) exceeds threshold│
│ │    n     30        __4__   Rolling Average Speed of answer (seconds)  │   │
│ └───────────────────────────────────────────────────────────────────┘   │
└─────────────────────────────────────────────────────────────────────────┘
```

New Rolling ASA Exception

New EWT Exceptions

Figure 3-6: Split/Skill Exception Administration Window

```
┌─────────────────────────────────────────────────────────────────────────┐
│  09/20/95 08:30 AM          CentreVu(TM) CMS          Windows: 1 of 1     │
│ ┌───────────────────────────────────────────────────────────────────┐   │
│ │                                                                     │   │
│ │                      Split/Skill Exceptions                         │   │
│ │ Date:  4/27/93                         Printed: 04/28/93 09:30 PM    │   │
│ │                                            ACD 1                     │   │
│ │                                                    Time             │   │
│ │ Time      Split/Skill    Exception              Limit   Threshold   │   │
│ │ ─────────────────────────────────────────────────────────────────── │   │
│ │ 10:04AM  Catalog Sales  Average speed of answer    10       0       │   │
│ │ 10:09AN  Catalog Sales  Expected wait time (pri top)  10    1       │   │
│ │ 10:13AM  Customer Service Number calls waiting              10      │   │
│ │ 10:22AM  Catalog Sales  Expected wait time (pri high) 15    5       │   │
│ │ 10:28AM  Service        Expected wait time (pri medium) 30  10      │   │
│ │ 10:37AM  Calalog Sales  Expected wait time (pri low)  45    15      │   │
│ │ 10:45AM  Catalog Sales  Number calls abandoned             15       │   │
│ │ 10:53AM  Service        Rolling average speed of answer 20  10      │   │
│ └───────────────────────────────────────────────────────────────────┘   │
└─────────────────────────────────────────────────────────────────────────┘
```

New EWT Entries

New Rolling ASA Entry

Figure 3-7: Split/Skill Exceptions Report

VDN Exceptions

VDN Exceptions now track:

- Rolling Average Speed of Answer (ASA).

  The switch now sends the rolling ASA to *CentreVu* CMS via the ASA message. When CMS receives, for a VDN or split/skill, an ASA from the switch that exceeds the time limit specified in the VDN Exception Administration, an occurrence is pegged. The Rolling ASA is triggered once per interval and cleared at the end of each interval.

  The Rolling ASA exception has been added to the end of the Exceptions subsystem Administration: VDN Exceptions window, as shown in Figure 3-8.

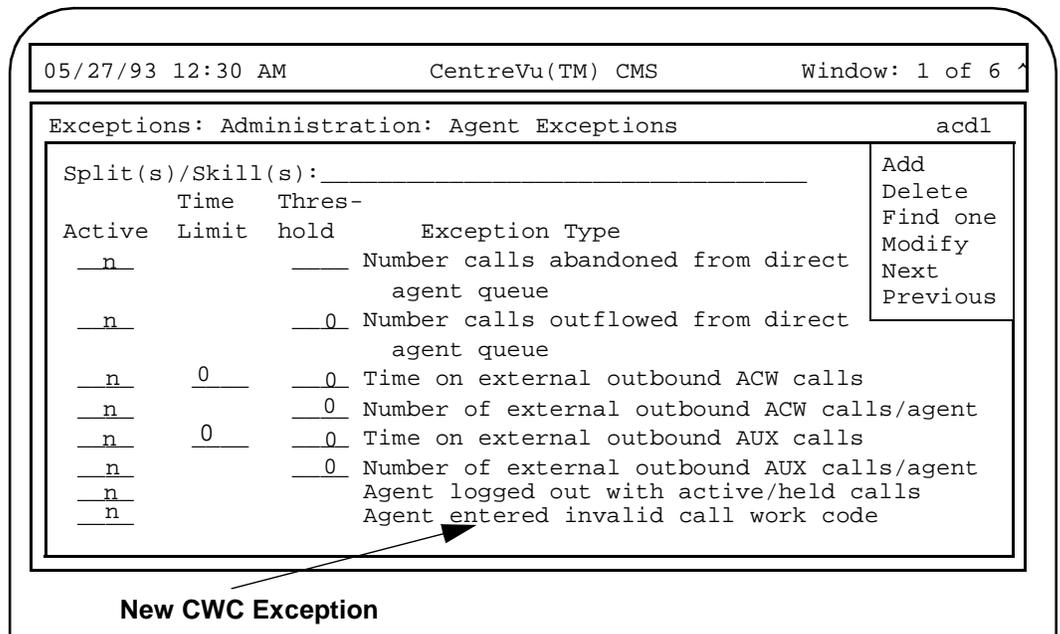 When the threshold for this exception is exceeded, an entry is made in the VDN Exceptions Historical Report. An example of the report entry is shown in Figure 3-9.

```
09/27/95 08:30 AM            CentreVu(TM) CMS            Window: 1 of 6 ^

 Exceptions:  Administration:  Agent Exceptions                    acd1

  VDN(s):TG45 to 47_____          Add
          Time   Thres-                                    Delete
                                                          Find one
  Active  Limit  hold      Exception Type                 Modify
                                                          Next
    .       .      .       . . . .                        Previous
    .       .      .       . . . .
    .       .      .       . . . .

   _n_             __7_ Number calls interflowed out of VDN
   _n_             __3_ Number calls handled by backup split
   _n_             _10_ Number unsuccessful lookahead interflow attempts
   _n_             __8_ Number unsuccessful adjunct routing attempts
   _n_     30__    __3_ Rolling Average Speed of Answer (seconds)
```

New Rolling ASA Exception

Figure 3-8: VDN Exceptions Administration Window

```
┌──────────────────────────────────────────────────────────────────────────┐
│  03/20/94 08:30 AM              CentreVu(TM) CMS              Windows: 1 of 1 │
└──────────────────────────────────────────────────────────────────────────┘


                              VDN Exceptions
   ACD: burbank
   Date: 04/27/93                                  Printed: 04/28/93 04:35 PM
                                                       Time
   Time      VDN              Exception                Limit      Threshold
   ----------------------------------------------------------------------------
   10:01AM   Catalog Sales    Number calls abandoned in vector  10         12
   10:02AM   Catalog Sales    Calls in ACD split queue          15          5
   10:06AM   Catalog Sales    Calls disconnected                30          3
   10:21AM   Service          Rolling average speed of answer   45         15
   10:33AM   Service          Rolling average speed of answer   20         10

                                                   New Rolling ASA Entry
```

Figure 3-9: VDN Exceptions Report

Real-Time Exceptions Log

The additions to Agent, Split/Skill and VDN exceptions administration result in additional entries to the Real-Time Exceptions Log. Figure 3-10 shows an example of each possible new entry.

```
┌──────────────────────────────────────────────────────────────────────────┐
│  05/27/93 12:30 PM           CentreVu(TM) CMS      EX     Window: 1 of 6 ^  │
├──────────────────────────────────────────────────────────────────────────┤
│   Exceptions: Real-Time Exception Log                           All ACDs   │
│  ┌────────────────────────────────────────────────────────────────────┐   │
│  │ 5/27 11:52AM ACD Denver Agent John Smith in split/skill Sales entered │   │
│  │              invalid call work code 1234.                             │   │
│  │ 5/27 11:53AM ACD Denver Split/Skill Sales: more than 5 calls are queued│  │
│  │              at top priority with an expected wait of more than 30 secs.│ │
│  │ 5/27 11:53AM ACD Denver Split/Skill Sales; The rolling average speed of│  │
│  │              answer is over 40 secs for more than 10 calls.           │   │
│  │ 5/27 11:54AM ACD Denver Catalog: the rolling average speed of answer is│  │
│  │              over 30 secs for more than 10 calls.                     │   │
│  │ 5/27 11:55AM ACD Denver: Agent Janet Scmidt could not be logged into  │   │
│  │              skill 3.                                                 │   │
│  │ 5/27 12:03PM ACD 123: Agent 4567 entered an invalid call work code.   │   │
│  │ 5/27 12:11PM ACD 123: The exp wait time at top priority for split/skill│  │
│  │              23 exceeded 20 secs. for more than 5 calls               │   │
│  │ 5/27 12:16PM ACD 123 Split/Skill 24: The rolling average speed of answer│ │
│  │              is over 20 secs for mrore than 5 calls.                  │   │
│  │ 5/27 12:22PM ACD 123: Agent 4555 could not be logged into skill 23.   │   │
│  └────────────────────────────────────────────────────────────────────┘   │
└──────────────────────────────────────────────────────────────────────────┘
```

Figure 3-10: Real-Time Exceptions Log

ACD Administration

For additional information on the ACD Administration subsystem, please refer to Chapter 8 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document.

Vectoring

Vector commands in the Vector Commands window are now shown in abbreviated (packed) format, regardless of the type of switch the *CentreVu* CMS is connected to.

Multi-Agent Skill Change Menu Option (G3V4 with EAS)

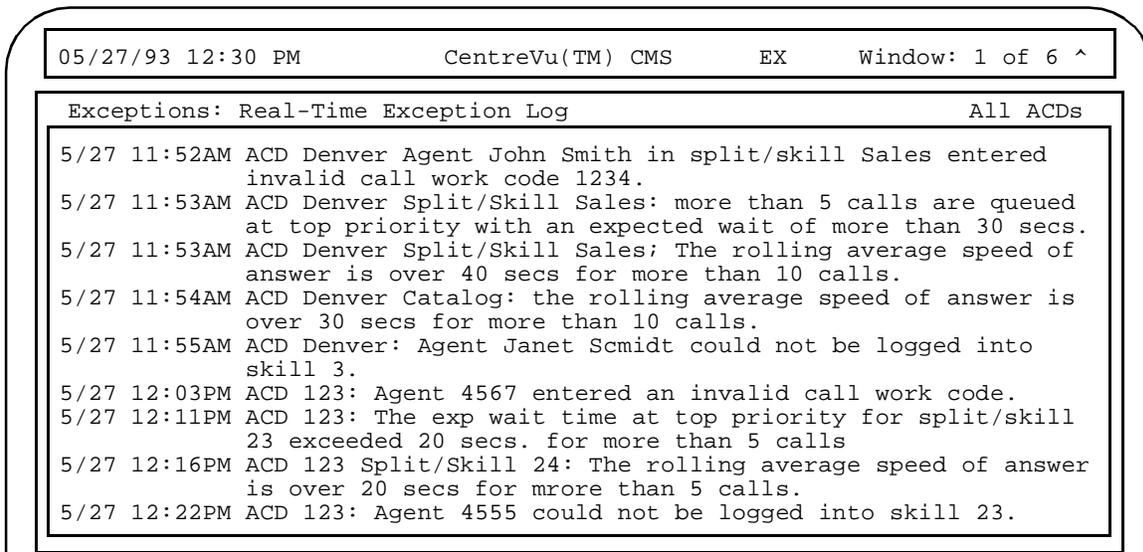The Multi-Agent Skill Change menu item has been added to the ACD Administration subsystem menu for *CentreVu* CMSs that are connected to Generic 3 Version 4 switches with EAS.

When the Multi-Agent Skill Change menu option is selected, the window shown in Figure 3-11 displays. It allows you to change one skill for up to 32 agents.

```
 09/18/95 08:30 AM          CentreVu(TM) CMS        Windows 1 of 1 ^

  ACD Administration: Multi-Agent Skill Change       acd1
                                                            Add
   Current skill: _____                       Delete
   New skill*: _____                         Find one
   New skill type*: _                                      List all
                                                            Modify
   Agent(s): _____                       Next
                                                            Previous

   *New skill, skill type not used for Find one or List all
```
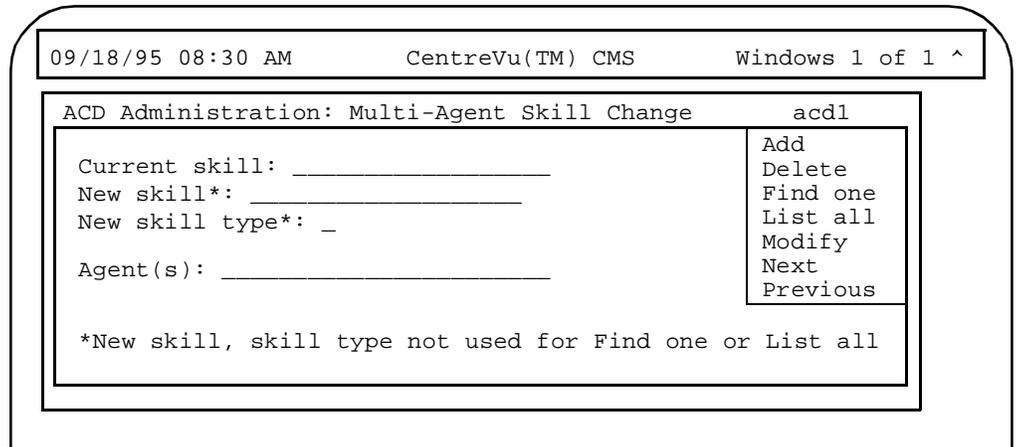
Figure 3-11: Multi-Agent Skill Change (G3V4 with EAS) Window

Move Extensions Between Splits (G3V4 Without EAS)

The Move Extensions Between Splits menu item has been updated for *CentreVu* CMSs that are connected to Generic 3 Version 4 switches without the EAS feature. It now allows up to 32 agent extensions to be moved between splits *without* requiring the agents to log off. This command can still be used to move unstaffed agents. Figure 3-12 shows the Move Extensions Between Splits input window.

```
┌─────────────────────────────────────────────────────────────────┐
│ 03/20/94 08:30 AM          CentreVu(TM) CMS        Windows 1 of 1 ^ │
│ ┌───────────────────────────────────────────────────────────────┐ │
│ │ ACD Administration: Move Extensions Between Splits        ACD1  │ │
│ │ ┌─────────────────────────────────────────────┐  ┌───────────┐ │ │
│ │ Split moving from (optional): __Custserv_____  │ Find one  │ │ │
│ │ Split moving to*:  __Sales_____             │ List all  │ │ │
│ │ Extensions:  _2050-2060;2062_____  │ Modify    │ │ │
│ │                                                   │ Next      │ │ │
│ │              _____     │ Previous  │ │ │
│ │ *"Split moving to" not used for Find one or List all └───────────┘ │ │
│ └───────────────────────────────────────────────────────────────┘ │
└─────────────────────────────────────────────────────────────────┘
```

Figure 3-12: Move Extensions Between Splits Window

User Permissions

For additional information on the User Permissions subsystem, please refer to Chapter 9 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document.

No changes have been made to the User Permissions subsystem for the *CentreVu* CMS.

System Setup

For additional information on the System Setup subsystem, please refer to Chapter 10 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document.

Switch Setup

The following fields have been added to the Switch Setup window:

- Purchased CMS release:
- CMS release and load:

> **Note** The schema for *CentreVu* CMS loads is r3v4xx.x, where xx.x designates the load name (for example, r3v4af.i).

- Phantom abandon call timer (seconds):

Figure 3-13 is an example of the window with the new fields.

```
03/20/93 08:30 AM              CentreVu(TM) CMS              Window 1 of 4 ^

 System Setup: Switch Setup

   ACDs: _____         Find one
                                       List all
   Switch type: DEFINITY               Next
   Switch release: G3V4                Previous

   Purchased CMS release: CentreVu CMS R3V4          ◄━━━━     New Fields
   CMS release and load: CentreVu CMS r3v4xx.x       ◄

   Phantom abandon call timer (seconds): 8      ◄

   Features:
     Vectoring
     Expert Agent Selection (EAS)
```
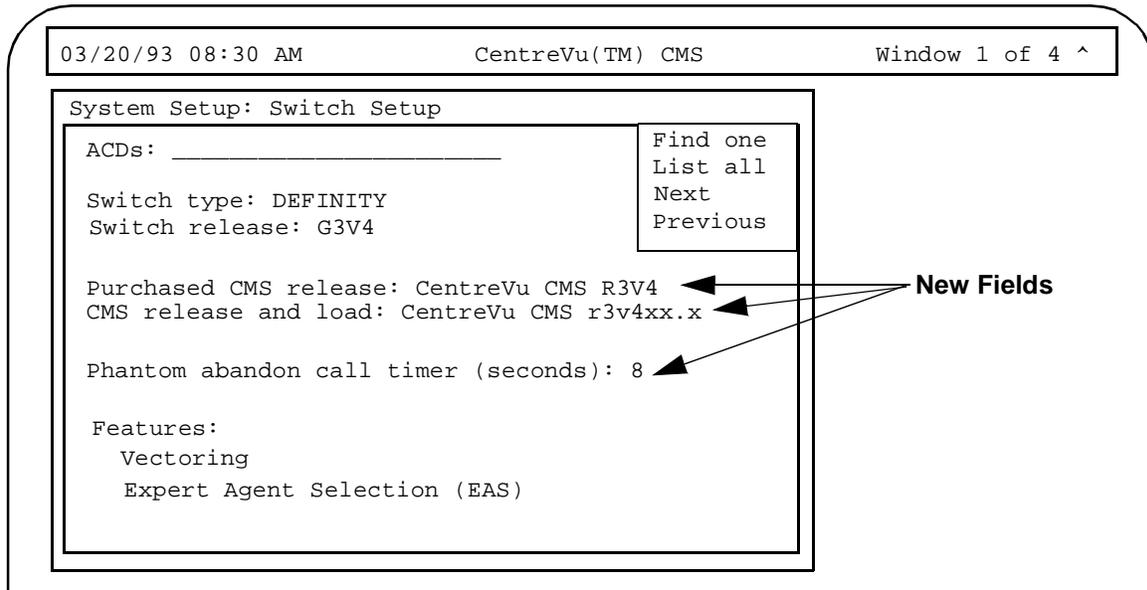
Figure 3-13: Switch Setup Window

Maintenance

For additional information on the Maintenance subsystem, please refer to Chapter 11 of the *CentreVu™ CMS R3V4 Administration* (585-215-800) document.

No changes have been made to the Maintenance subsystem for *CentreVu* CMS.

Custom Reports

For additional information on the Custom Reports subsystem, please refer to the *CentreVu™ CMS Custom Reports* (585-215-802) document.

No changes have been made to the Custom Reports capabilities for *CentreVu* CMS. However, custom reports created with *CentreVu* CMS (connected to a Generic 3 Version 4 switch) can include the *CentreVu* CMS capabilities described in this document.

Forecast

For additional information on the Forecast subsystem, please refer to the *CentreVu™ CMS Forecast* (585-215-811) document.

No changes have been made to the Forecast subsystem *CentreVu* CMS.

User Interface

For additional information on the user interface, please refer to Chapter 2 of the *CentreVu*™ *CMS R3V4 Administration* (585-215-800) document.

No changes have been made to the user interface in *CentreVu* CMS.

Miscellaneous

Migration Use Table 3-2 to determine if you need to migrate your R3V2 CMS data prior to installing *CentreVu* CMS. For instructions on migrating data, see the *CentreVu*™ *CMS Upgrades and Migration* (585-215-806) document.

Table 3-2: R3V2 CMS to *CentreVu* CMS R3V4 Migrations

R3V2 CMS Platform	*CentreVu* CMS Platform	Migrate?
INTEL (single ACD)	*INTEL* (single ACD)	no
INTEL (multi-ACD)	*INTEL* (multi-ACD)	yes
INTEL	*Sun*	yes
Sun (single ACD)	*Sun* (single ACD)	no
Sun (multi-ACD)	*Sun* (multi-ACD)	yes
INTEL =WGS 6386/25, WGS6386/33, *StarServer*, and 3332 computers		
Sun = *Sun SPARCserver* 5, 10, and 20 computers.		

General Information

Audience

This chapter is written for customers who are upgrading from any field release of the *CentreVu*™ Call Management System Release 3 Version 4 (CMS R3V4) to the *CentreVu*™ Call Management System Release 3 Version 5 (CMS R3V5).

Introduction

This chapter describes the differences between *CentreVu* CMS R3V4 and *CentreVu* CMS R3V5.

The chapter is organized as follows:

- Differences and Enhancements Overview
- Data, Database Items, and Calculations
- Real-Time and Historical Reports
- Dictionary
- Exceptions
- ACD Administration and Configuration Reports
- User Permissions
- System Setup
- Maintenance
- Custom Reports
- External Call History Interface
- Forecast
- Miscellaneous.

For a detailed description of the changes made in different issues (loads) of the R3V5 CMS software, please refer to the CMS readme file on the software installation media. See "The CMS_README File" on page 49.

Differences and Enhancements Overview

This section highlights the major differences in and enhancements to the *CentreVu* CMS R3V5 software in comparison to *CentreVu* CMS R3V4.

CentreVu CMS Documents

The document set for *CentreVu* CMS R3V5 is different than the R3V4 CMS document set. The following *R3V5* documents are available to you:

- 585-215-820 — *CentreVu™ CMS R3V5 Administration*
- 585-215-821 — *CentreVu™ CMS R3V5 Reports*
- 585-215-822 — *CentreVu™ CMS R3V5 Custom Reports*
- 585-215-823 — *CentreVu™ CMS R3V5 Change Description*
- 585-215-824 — *CentreVu™ CMS R3V5 External Call History*
- 585-215-825 — *CentreVu™ CMS R3V5 Forecast*
- 585-215-826 — *CentreVu™ CMS R3V5 Upgrades and Migrations*
- 585-215-827 — *CentreVu™ CMS R3V5 Sun[*] SPARCserver[†] Computers Installation and Maintenance*
- 585-215-828 — *CentreVu™ CMS R3V5 Sun Connectivity Diagram*

In addition to paper documents, the following *CentreVu* CMS documents are available on CD-ROM (585-215-891):

- *CentreVu™ CMS R3V5 Administration*
- *CentreVu™ CMS R3V5 Reports*
- *CentreVu™ CMS R3V5 Custom Reports*
- *CentreVu™ CMS R3V5 External Call History*
- *CentreVu™ CMS R3V5 Sun SPARCserver Computers Upgrades and Migration*
- *CentreVu™ CMS R3V5 Forecast*.

---

*Sun is a registered trademark of Sun Microsystems, Inc.
†SPARCserver is a trademark of SPARC International, Inc.

Sun Platform

CentreVu CMS supports *Sun SPARCserver* 5, 10, and 20 computers running *Solaris*[*] 2.4. All new CMS installations will be on *Sun* computers.

Refer to the *CentreVu*™ *CMS R3V5 Sun*® *SPARCserver*™ *Computers Installation and Maintenance* (585-215-827) document for more information.

The *Sun* platform does the following:

- Provides multiprocessor capabilities.

- Increases processor performance (approximately five times faster than the *INTEL*[†] platform).

- Increases storage capacity (3-GB disk capacity which can increase to 24-GB disk capacity).

- Increases serial I/O capacity (up to 252 devices) which means you can have up to 252 terminals or any combination of terminals, printers, or modems.

- Improves real-time report refresh rate.

- Enhances system reliability using error-correcting memory.

- Allows for cost-effective upgrades (for example, disk storage, memory, processor, etc.).

- Provides on-line *Solaris* help via *AnswerBook* software.

- Provides remote console functionality.

- Supports 2-GB internal or external disks.

- Uses *Solaris* 2.4 as the operating system with the *CentreVu* CMS software.

- Supports 150-MB, 2.5-GB, 5-GB, and 14-GB tape drives.

- Supports the Aurora SBus *Multiport*[‡] cards.

- Supports 8-, 16-, and 64-port Network Terminal Servers (NTS).

INTEL Platform

CentreVu CMS R3V5 supports the 3332 *INTEL*-based platform. For support of software in languages other than U.S. English, a *Sun SPARCserver* computer is required.

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*Solaris is a registered trademark of Sun Microsystems, Inc.
†INTEL is a registered trademark of Intel Corporation.
‡Multiport is a trademark of Aurora Technologies, Inc.

Supported Switch Capacities

CentreVu CMS supports the following switch capacities:.

Table 4-1: *CentreVu* **CMS Supported Switch Capacities**

Item	G2.2/ EAS	G3i	G3r	G3V2/ V3/V4	ECS Rel. 5	Total CMS Intel	Total CMS Sun
Agent Positions (agent-split/skill pairs)	1023/ 5115	400	1023	5200	10000	5200	10000
Agents Logged In	1023/ 1023	400	1023	5200	5200	5200	10000
Agent Trace Active	25	25	25	25	100	100	250
Agent Trace Records	500000	500000	500000	500000	500000	500000	500000
BHCC (ISDN system)	25000	7000	40000	40000	40000	40000	40000
Call records (internal)	5000	5000	5000	5000	5000	5000	5000
Call Work Codes	1999	1999	1999	1999	1999	1999	1999
Exception Records	2000	2000	2000	2000	2000	2000	2000
Login IDs	10000	10000	10000	10000	10000	10000	10000
Login/Logout Records	999999	999999	999999	999999	999999	999999	999999
Splits/Skills	60/600	99	99	255	600	1000	1000
Trunk Groups	255	99	255	665	665	665	665
Trunks (measured+unmeasured)	4000	400	4000	4000	4000	4000	4000
VDNs (measured)	2000	500	2000	2000	2000	2000	2000
Vectors	511	256	512	512	512	2048	2048
Vector Steps (per vector)	15	15	15	32	32	32	32
Splits/Skills per agent	na/5	4	4	4	20	20	20
Skill levels per agent	na/na	na	na	2	16	16	16
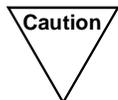
⚠ **Caution** Even though *CentreVu* CMS supports these capacities, you will not be able to upgrade unless you have sufficient free space on your CMS server's disk to accommodate all the data you want to collect. Your current disk space allocation may specify more measured items or longer lengths of time than you actually have disk space for. If you do not have enough disk space, you must purchase more disks, shorten the data storage time, or lower the number of entities measured before you can upgrade.

Vectoring

The following enhancements and additions have been made to the *CentreVu* CMS vectoring feature when it is running with the *DEFINITY*® Enterprise Communications Server (ECS) Release 5:

- **Collect Digits Vector Step** — In addition to accepting a number of digits to collect after an optional specified announcement, this vector step also accepts ced (customer entered digits) or cdpd (customer database provided digits) entries to support these Vectoring Caller Information Forwarding (CINFO) options. The collected digits are sent to the *CentreVu* CMS server.

For more information on these vector enhancements, refer to the "ACD Administration" chapter and the "Call Vectoring and Related ECS/G3 Features" appendix in the *CentreVu*™ *CMS R3V5 Administration* (585-215-820) document.

Reason Codes

Reason codes allow *CentreVu* CMS R3V5 tracking of the reasons for which ACD agents indicate they are going into AUX or logging out.

Reason codes appear on the following standard *CentreVu* CMS reports:

- Real-Time Skill Status
- Real-Time Agent
- Real-Time Agent Group
- Real-Time Queue/Agent Status
- Real-Time Skill AUX (new for *CentreVu* CMS R3V5 running with the *DEFINITY* ECS with the EAS feature)
- Historical Agent Login/Logout (Skill)
- Historical Agent Trace
- Historical Agent AUX (new for *CentreVu* R3V5 running with the *DEFINITY* ECS with the EAS feature)
- Historical Agent Group AUX (new for *CentreVu* R3V5 running with the *DEFINITY* ECS with the EAS feature).

See the descriptions of these reports in the *CentreVu*™ *CMS R3V5 Reports* (585-215-821) document. Reason codes are an option that can be activated for the *DEFINITY* ECS with the EAS feature. See the "Dictionary" chapter in the *CentreVu*™ *CMS R3V5 Administration* (585-215-820) document for information on administering names for reason codes.

Difference in AUXTIME Collection

CentreVu CMS R3V5 considers AUXTIME differently because of the implementation of AUX reason codes. When agents make (or receive) non-ACD calls while in the AUX work state, changing the work state to AUXOUT (or AUXIN) in one of the split/skills they are logged into, then AUXTIME is collected for the whole period during which they remain in AUX in **all** the splits/skills they are logged into. Previously, the time during which they were off-hook on the non-ACD call was considered AUXTIME in one split/skill, but OTHERTIME in all the other splits/skills.

Note that this change will not affect the value of TI_AUXTIME for agents, since this database item has always included AUXINTIME and AUXOUTTIME regardless of the split/skill of the "AUX call." In the agent database table, the change in AUXTIME collection affects only the I_AUXTIME and I_OTHERTIME items , which give a view of one agent's time relative to **one** split/skill. In the split/skill database table, the value of the I_AUXTIME item for all the agents in the split/skill will increase slightly and the value of the I_OTHERTIME item will decrease by a corresponding amount.

Expanded Agent Capabilities

Greatly expanded agent capabilities are available for switches with the EAS feature and the Expert Agent Selection Preference Handling Distribution (EAS-PHD) option activated.

For the *DEFINITY* ECS, agents may be logged in with as many as 20 skills, each with a skill level of between 1 and 16, where 1 is the most skilled (the highest level) and 16 is the least skilled (the lowest level).

For these assigned skill levels (including the concept of "Top Skill") to be significant, the new Call Handling Preference field must be administered as "skill level" rather than "greatest need." With "skill level" call distribution, the agent gets the highest priority, oldest call waiting for his or her highest-level skill ("top skill"), whereas with "greatest need" call distribution, the agent gets the highest priority, oldest call waiting for any of his or her skills, regardless of skill level.

It is advisable that all agents assigned to any particular skill have the same call handling preference administered for them: either skill level (if you want the agent who is most expert in that skill, sometimes referred to as the top agent, to take the call) or greatest need (if you want the next agent regardless of associated skill level to take the call).

A particular skill from an agent's list of assigned skills may be designated that agent's "Direct Agent Skill" using a new field on the Change Agent Skills window. If this field is blank, direct agent calls will be delivered to

the first-administered, highest-level skill assigned to the agent. If "greatest need" call handling preference has been selected, then direct agent calls are always handled first; if "skill level" has been selected, then calls are delivered in skill level order (direct agent calls would be first only if the direct agent skill was also specified as the agent's top skill).

For more information on increased capacities, which vary by switch, see Table 4-1.

For more information on EAS-PHD, refer to the "EAS" appendix in the *CentreVu™ CMS R3V5 Administration* (585-215-820) document.

Redirect on No Answer to a VDN

The Redirection on No Answer feature has been enhanced for the *DEFINITY* ECS to include the option of routing a ringing ACD call to an assigned VDN extension for vector processing, instead of to a split/skill.

If you have used the Redirection on No Answer feature and an auto-available split/skill port has "timed out" of service (for example, after a voice-response unit [VRU] fails), then the port must be readministered as a member of the auto-available split/skill in order to log it back in to accept calls. The best way to do this for the *DEFINITY* ECS or a G3V4 switch is to use the "move agents" capability. With the Multi-Agent Skill Change screen as many as 32 agents at a time can be moved temporarily to a dedicated, unused split/skill, and then moved back into the auto-available split/skill. This can be set up on a CMS timetable (or on a manually scheduled basis) to move the agents at a later time, for example when the VRU that failed is expected to be back in service.

Forced ACD Calls vs. Forced MCH Option

For the *DEFINITY* ECS, the Forced ACD Calls feature has been replaced by the Forced Multiple Call Handling (MCH) option. If you use the Forced MCH option, you will notice an overall increase in agent AUX time and decrease in available time compared with using the Forced ACD Calls feature. This is because there was no tracking of calls on bridged appearances for the Forced ACD Calls feature, but there is such tracking with the Forced MCH option. Agents talking on bridged appearances with the Forced ACD Calls feature enabled appeared as if they were available, whereas agents talking on bridged appearances with the Forced MCH option enabled are correctly tracked as being on AUXIN/AUXOUT calls.

Data, Database Items, and Calculations

Data

No major changes have been made to the way *CentreVu* CMS R3V5 or *CentreVu* Supervisor Version 5 handle data. However, new items have been added to many of the the database tables on the CMS server.

Database Items

For additional information on Database Items, please refer to Appendix A of the *CentreVu*™ *CMS R3V5 Reports* (585-215-821) document and on-line help for *CentreVu*™ Supervisor Version 5.

Top Skill and Top Agent

The new "top" items in the agent and split/skill database tables are useful only for the *DEFINITY* ECS with EAS and agents for whom Call Handling Preference has been set to "Skill Level." For any agent, the "Top Skill" is the agent's first-administered, highest-priority skill (and the one for which the agent with skill level distribution is most likely to receive a call). For any skill, the "Top Agents" are agents assigned that skill as their top skill.

The following database items have been added or changed:

ACD_RELEASE

Applies to the real-time and historical agent tables.

Number of ACD calls released by an agent.

> **Note** If the caller hangs up at the same time that the agent pushes the Release button, **ACD_RELEASE** will be incremented because the switch receives the agent release notification before the notification that the central office has dropped the trunk.

Available on the *DEFINITY* ECS and Generic 3 switches.

AGT_RELEASED

Applies to the agent trace and call record tables.

The yes value (y) is recorded by *CentreVu* CMS whenever an agent is the first to release an ACD call. Otherwise, a no value (n) is recorded.

> **Note** If the caller hangs up at the same time that the agent pushes the Release button, **AGT_RELEASED** will be yes because the switch receives the agent release notification before the notification that the central office has dropped the trunk.

Available on the *DEFINITY* ECS and Generic 3 switches.

ANSREASON Applies to the call record table.

The reason code (0-9) associated with the answering agent's mode, if the agent is in the AUX mode. For agents in AUX on switches other than the *DEFINITY* ECS, or without EAS and reason codes active, this is 0.

Available on all switches (significant for the *DEFINITY* ECS with EAS and reason codes active).

AUXREASON Applies to the real-time agent and historical agent trace tables.

The reason code associated with the agent's current state; it is blank if the agent is not in AUX. For agents in AUX on switches other than the *DEFINITY* ECS, or without EAS and reason codes active, this is 0.

Available on Generic 3 switches (significant for the *DEFINITY* ECS).

AWORKMODE Applies to the real-time agent table.

The current work mode for the agent. This is the same as **WORKMODE**, except when the agent is available in *some* but not *all* splits/skills. In this case, if the agent is available in **SPLIT**, then **AWORKMODE** is AVAIL. Otherwise, **AWORKMODE** is OTHER.

With the **AWORKMODE** item, you will not see agents available with calls in queue for the split/skill, since agents who are not available in the split/skill will never be shown as available on any reports using this item.

Available on the *DEFINITY* ECS and Generic 3 Version 4 switches.

CALLING_II Applies to the historical agent trace and call record tables.

The Information Indicator (II) digits associated with the call.

Available on the *DEFINITY* ECS and Generic 3 Version 4 switches.

CALLING_LOGID Applies to the real-time trunk table.

Login ID of agent placing the current call on a particular trunk. Null when the trunk is idle.

Available on the *DEFINITY* ECS.

DA_RELEASE Applies to the real-time and historical agent tables.

Number of Direct Agent ACD calls released by the agent before the caller released.

Available on the *DEFINITY* ECS and Generic 3 switches.

DA_SKILL

Applies to the real-time agent table.

The skill currently assigned as this agent's Direct Agent Skill.

Available on the *DEFINITY* ECS with the EAS feature.

DISPSKLEVEL

Applies to the call record table.

The skill level (1-16) associated with the skill for which the agent answered the call or, for calls that abandoned while ringing or in a direct agent queue, the level associated with the skill of the agent from whom the call abandoned.

Available on the *DEFINITY* ECS with the EAS feature.

HOLDACDTIME

Applies to the real-time and historical agent and VDN tables.

Time spent by ACD callers on hold.

Available on Generic 3 Version 3 and later switches.

I_ARRIVED

Applies to the real-time and historical split/skill and VDN tables.

Number of calls that were queued to the split/skill or arrived at the VDN during the collection interval.

Available on the *DEFINITY* ECS with the EAS feature.

I_AUXTIME

Applies to the real-time and historical agent tables.

Time during the interval that agents were in AUX for this split/skill.

Available on Generic 3 Version 2 and later Generic 3 switches.

I_AUXTIME0-9

Applies to the real-time and historical split/skill tables.

Time during the interval that agents were in AUX with each reason code (0-9) for this split/skill, including time on extension calls while in AUX. (AUX reason code 0 is for "system" AUX work on the *DEFINITY* ECS with EAS and reason codes active.) For switches without AUX reason codes active, **I_AUXTIME0** is the same as **I_AUXTIME**.

I_AUXTIME0 is available on all switches. **I_AUXTIME1-9** is available on the *DEFINITY* ECS with the EAS feature and reason codes active.

I_DA_ACDTIME

Applies to the real-time and historical split/skill tables.

Time that agents spent talking on Direct Agent ACD calls queued through this split/skill. This is a subset of **I_OTHERTIME**.

Available on the *DEFINITY* ECS and Generic 3 switches.

I_DA_ACWTIME

Applies to the real-time and historical split/skill tables.

Time that agents spent in after call work for Direct Agent ACD calls queued through this split/skill. This is a subset of **I_OTHERTIME**.

Available on the *DEFINITY* ECS and Generic 3 switches.

INAUX0-9

Applies to the real-time split/skill table.

The current number of agents that are in AUX work with each of the reason codes (0-9) for all splits/skills or on AUXIN/AUXOUT calls. For switches without EAS or prior to the *DEFINITY* ECS, **INAUX0** is the same as **INAUX**.

Available on the *DEFINITY* ECS with the EAS feature.

I_TAUXTIME

Applies to the real-time and historical split/skill tables.

Time that the top agents in this split/skill were in AUX mode. This includes time on AUXIN/AUXOUT calls that were received or made **without** an ACD call on hold. (Whereas, time on AUXIN/AUXOUT calls made or received **with** an ACD call on hold are tracked in **I_ACDAUXINTIME** and **I_ACDAUX_OUTTIME**.)

Available on all switches (significant for the *DEFINITY* ECS and G3V4 switches with EAS).

I_TAVAILTIME

Applies to the real-time and historical split/skill tables.

Time that the top agents in this split/skill were available to receive calls.

Available on all switches (significant for the *DEFINITY* ECS and G3V4 switches with EAS).

LASTDIGITS

Applies to the call record table.

The last set of collected digits sent to the *CentreVu* CMS by the switch as the result of a "collect" vector command. These digits may come from a "converse" vector command or by prompting the caller to enter them. The latter may be via the Call Prompting feature on the switch or via network-provided Caller Information Forwarding (CINFO), such as caller-entered digits (ced) or customer-database provided digits (cdpd).

Available on the *DEFINITY* ECS.

LEVEL

Applies to the real-time agent table.

The skill level (1-16 for the *DEFINITY* ECS with EAS-PHD, or 1 [Primary] to 2 [Secondary] for other switches with EAS) associated with any skill.

Available on all switches with the EAS feature.

LOGONSKILL6-20   Applies to the real-time agent and the historical agent login/logout tables.

Sixth through twentieth skills that the agent logged in with. The number of skills that may be assigned to an agent depends on the type of switch.

Available on the *DEFINITY* ECS with the EAS feature.

LOGOUTREASON   Applies to the historical agent login/logout and agent trace tables.

Reason code (0-9) associated with the agent's logout. For agents on switches other than the *DEFINITY* ECS, or switches without EAS and reason codes active, this is 0 whenever an agent logs out.

Available on Generic 3 switches with EAS (significant for the *DEFINITY* ECS with EAS).

MAXTOP   Applies to the real-time and historical split/skill tables.

Maximum number of top agents staffed in this split/skill during the collection interval.

Available on Generic 3 switches (significant for the *DEFINITY* ECS with EAS and skill-level distribution of calls).

ORIGREASON   Applies to the call record table.

Reason code (0-9) associated with the originating agent's mode, if the agent is in the AUX mode. For agents in AUX on switches other than the *DEFINITY* ECS, or without EAS and reason codes active, this is 0.

Available on all switches (significant on the *DEFINITY* ECS with the EAS feature and reason codes active).

OTHERCALLS   Applies to the real-time and historical split/skill tables.

Number of call queued to this split/skill that were not answered or abandoned, including forced busy, forced disconnected, outflowed, and dequeued calls.

Available on all switches.

OTHERTIME   Applies to the real-time and historical split/skill tables.

Duration of **OTHERCALLS**. Time these calls spent ringing (and before their disposition was known) while queued to this split/skill.

Available on the *DEFINITY* ECS.

PREFERENCE   Applies to the real-time agent table.

The Call Handling Preference administered for the agent. May be blank (for Generic 3 switches other than the *DEFINITY* ECS), or LVL (for "skill level" distribution) or NEED (for "greatest need").

Available on the *DEFINITY* ECS with the EAS feature.

SKLEVEL   Applies to the real-time agent and historical agent login/logout tables.

The skill level (1-16 for the ECS, where 1 is highest, or 1 [Primary] or 2 [Secondary] for other G3 switches with EAS) associated with the first skill that the agent logged into.

Available on the *DEFINITY* ECS and Generic 3 switches with EAS.

SKLEVEL2-20   Applies to the real-time agent and historical agent login/logout tables.

The skill level (1-16 for the ECS, where 1 is highest, or 1 [Primary] or 2 [Secondary] for other G3 switches with EAS) associated with the second through twentieth skill that the agent logged into. The number of skills that an agent may log into depends on the type of switch.

Available on the *DEFINITY* ECS and Generic 3 switches with EAS.

SLVLABNS   Applies to the real-time and historical split/skill and VDN tables.

Number of calls abandoned within **SERVICELEVEL**.

Available on the *DEFINITY* ECS.

SLVLOUTFLOWS   Applies to the real-time and historical split/skill and VDN tables.

Number of calls outflowed within **SERVICELEVEL**.

Available on the *DEFINITY* ECS.

TAGINRING   Applies to the real-time split/skill table.

Number of top agents logged into the skill who have ACD calls ringing and are not doing anything else.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TAVAILABLE   Applies to the real-time split/skill table.

Number of top agents logged into the skill who are available in the skill.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TDA_INACW Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in after call work associated with Direct Agent calls. This is a subset of **TOTHER**.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TDA_ONACD Applies to the real-time split/skill table.

Number of top agents logged into the skill who are talking on Direct Agent calls. This is a subset of **TOTHER**.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TI_AUXTIME0-9 Applies to the real-time and historical agent tables.

Time the agent spent in AUX with each of the reason codes 0-9. "TI_" time is stored only for the skill logged into the longest, so it needs to be summed across the skills that the agent may log into, in case the login order changes during the collection interval. For switches without AUX reason codes active, **TI_AUXTIME0** is the same as **TI_AUXTIME**.

TI_AUXTIME0 is available on all switches with EAS. **TI_AUXTIME1-9** is available on the *DEFINITY* ECS with the EAS feature and reason codes active and is significant when using skill level distribution.

TINACW Applies to the real-time split/skill table.

Number of top agents logged into a skill who are in after call work for ACD calls to that skill. This includes top agents on ACWIN/ACWOUT calls, as well as agents who are in ACW that is not associated with ACD calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TINAUX Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in AUX work mode. This includes agents on AUXIN/AUXOUT calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TINAUX0-9 Applies to the real-time split/skill table.

Number of top agents logged into a skill who are in the AUX work state for each of the AUX reason codes 0-9. (AUX reason code 0 is for

"system" AUX work when reason codes are active on the *DEFINITY* ECS with EAS.) This includes agents on AUXIN/AUXOUT calls from AUX with the appropriate reason code. For switches without EAS or prior to the *DEFINITY* ECS, **TINAUX0** is the same as **TINAUX**.

Available on all switches (significant for the *DEFINITY* ECS with the EAS feature and reason codes active and when using skill level distribution).

TONACD

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are talking on inbound and outbound ACD calls for the skill.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TONACDAUXOUT

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are on AUXOUT calls with an ACD call for the skill on hold.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TONACDOUT

Applies to the real-time split/skill table.

Number of top agents talking on outbound calls placed by an adjunct to this skill.

Available on all switches with ASAI (significant for the *DEFINITY* ECS and Generic 3 switches with EAS and when using skill level distribution).

TONACWIN

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in after call work and on inbound extension calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TONACWOUT

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in after call work and on outbound extension calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TONAUXIN

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in AUX work or AVAILABLE, or with an ACD or AUXIN/AUXOUT call on hold and on inbound extension calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TONAUXOUT

Applies to the real-time split/skill table.

Number of top agents logged into the skill who are in AUX work or AVAILABLE, or with an ACD or AUXIN/AUXOUT call on hold and on outbound extension calls.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TOPSKILL

Applies to the real-time agent table.

An agent's first-administered, highest-level (where 1 is highest and 16 is lowest) measured skill. The concepts of "top skill" or "top agent" in a skill are useful only if an agent's Call Handling Preference has been administered as "skill level" rather than "greatest need."

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

TOTHER

Applies to the real-time split/skill table.

The number of top agents doing other work. For Generic 3 switches, while in Auto-in or Manual-In mode: the agent put any call on hold and has performed no further action; the agent is on a direct agent call or in ACW for a direct agent call; the agent is dialing to place a call or to activate a feature; an extension call or a direct agent ACD call is ringing with no other activity. For Generic 3 switches with EAS and with multiple call handling (MCH), agents are available for other MCH skills.

Agents are logged into multiple splits/skills and doing work for a split/skill other than this one (on an ACD call, in ACW, or ACD calls ringing).

Agent **POSITIONS** will show up in **TOTHER** directly after the link to the switch comes up and directly after the agents log in before the *CentreVu* CMS is notified of the agent's work state.

The "top" items are only useful if an agent's Call Handling Preference has been administered as "skill level" rather than "greatest need." Note also that it is recommended that for any given skill, all agents have the same call handling preference administered to ensure the most consistent call distribution by level or need.

TOTHER includes **TDA_INACW** and **TDA_ONACD.**

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with EAS and when using skill level distribution).

TSTAFFED

Applies to the real-time split/skill table.

Current number of top agents that are staffed in this split/skill. **TSTAFFED = TAVAILABLE + TAGINRING + TONACD + TINACW + TINAUX + TOTHER**.

Available on all switches (significant for the *DEFINITY* ECS and Generic 3 switches with the EAS feature and when using skill level distribution).

WORKSKLEVEL

Applies to the real-time agent table.

The skill level associated with an agent's current (non-null) **WORKSKILL**.

Available on the *DEFINITY* ECS and Generic 3 switches with EAS.

WORKSPLIT6-20

Applies to the real-time agent table.

For agents available in multiple assigned splits/skills, the other splits/skills in which the agent is available. The number of skills in which an agent may be available depends on the type of switch.

Available on the *DEFINITY* ECS with the EAS feature.

Calculations

For additional information on Calculations, please refer to Appendix A of the *CentreVu™ CMS R3V5 Reports* (585-215-821) document.

- A new average positions staffed calculation has been added, <**AVG_TOP_STAFF**>. The calculation makes use of the top agent concept to avoid double-counting agents' time when they are staffed in multiple skills on G3 EAS switches. The calculation definition is as follows:

  ```
  TOTAL_I_ACDACW + TOTAL_I_ACDHOLD + TOP_AVAUXTIME /
  INTRVL * 60
  ```

- A new calculation has been added for the sum of interval-based time on ACD calls and in after call work, <**TOTAL_I_ACDACW**>. The calculation adds the ACD and ACW time for split/skill and direct agent calls, plus the (agent) ringing time for those calls. The calculation definition is as follows:

  ```
  I_ACDTIME + I_ACWTIME + I_DA_ACDTIME +
  I_DA_ACWTIME + I_RINGTIME
  ```

- A new calculation has been added for the sum of interval-based time agents spend with ACD calls on hold, <**TOTAL_I_ACDHOLD**>. The calculation sums the time agents spent with ACD calls on hold. The calculation definition is as follows:

  ```
  I_ACDOTHERTIME + I_ACDAUXINTIME + I_ACDAUX_OUTTIME
  ```

- A new top agent avail/aux time calculation has been added, <**TOP_AVAUXTIME**>. The calculation adds the time top agents spent in AUX work and available. The calculation definition is as follows:

  ```
  I_TAUXTIME + I_TAVAILTIME
  ```

- A new average positions staffed sum calculation also has been added, <**AVG_TOP_STAFF_SUM**>. The calculation makes use of the top agent concept to avoid double-counting agents time when they are staffed in multiple skills on G3 EAS switches. The calculation definition is as follows:

  ```
  TOT_I_ACDACW_SUM + TOT_I_ACDHOLD_SUM +
  TOP_AVAUXTIME_SUM / sum(INTRVL * 60)
  ```

- A new interval-based ACDACW time sum calculation also has been added, <**TOT_I_ACDACW_SUM**>. The calculation sums the ACD and ACW time for split/skill and direct agent calls, plus the (agent) ringing time for those calls. The calculation definition is as follows:

  ```
  sum(I_ACDTIME + I_ACWTIME + I_DA_ACDTIME +
  I_DA_ACWTIME + I_RINGTIME)
  ```

- A new interval-based ACD hold time sum calculation also has been added, <**TOT_I_ACDHOLD_SUM**>. The calculation sums the time agents spent with ACD calls on hold. The calculation definition is as follows:

```
sum(I_ACDOTHERTIME + I_ACDAUXINTIME +
I_ACDAUX_OUTTIME)
```

- A new top agent avail/aux time sum calculation also has been added, <**TOP_AVAUXTIME_SUM**>. The calculation sums the time top agents spent in AUX work and available. The calculation definition is as follows:

```
sum(I_TAUXTIME + I_TAVAILTIME)
```

Real-Time Reports

For additional information on the Real-Time Reports subsystem, please refer to Chapter 2 of the *CentreVu™ CMS R3V5 Reports* (585-215-821) document.

CentreVu CMS R3V5 adds several new reports for Top Agents in skills. These new reports will appear in menus only for the *DEFINITY* ECS and Generic 3 switches with the EAS feature purchased and enabled.

Several existing reports have been modified to handle the expanded agent capabilities, including the higher capacities for newer switches. Another modification is the new Split/Skill field. This field displays the split/skill associated with the call on which the agent is active or for which the agent is in after call work. When an agent is available, all the possible splits/skills for which that agent is available are not shown for a particular split/skill report.

Skill Status Report

The Skill Status report has been modified for the *DEFINITY* ECS with the EAS feature to remove the agent's login skills and add information on skill level. Figure 4-1 shows a sample of the updated report.

If the *CentreVu* CMS is connected to a Generic 3 Version 2, Version 3, or Version 4 switch, the R3V4 Skill Status Report still appears. See the *CentreVu CMS R3V4 Reports* (585-215-801) document for more information about this report.

```
Rpts: Real: Split/Skill: Skill Status                    g3v5_eas
         Skill: 22


Calls Waiting     0
Oldest Call Waiting    :00
Expected Wait Time (Pri):  Top       High     Medium        Low


Agent              Logid Reason      State    Skill/Lvl  Time VDN
1234                1234 Break        AUX             /   *****
1235                1235 Break        AUX             /   *****




Successful
```

Figure 4-1: Skill Status Report

Top Agent Status Report

The Top Agent Status report is new for G3 switches with EAS and resembles the new Skill Status Report, except that it only shows information for agents who have the specified skill as their "top skill," instead of all agents with that assigned skill. Figure 4-2 shows a sample of the new report.

```
Rpts: Real: Split/Skill: Top Agent Status        att_8200_maplewood
         Skill: 21

Calls Waiting     4
Oldest Call Waiting   1:48
Expected Wait Time (Pri):   Top        High      Medium        Low


Top Agent         Logid Reason      State    Skill/Lvl  Time VDN
2016              2016               RING       23/ 2    1:34
2017              2017               RING       21/ 1    1:16
2018              2018               RING       21/ 1     :17
2019              2019               RING       21/ 1    1:48
2020              2020               RING       21/ 1     :08



Successful
```

Figure 4-2: Top Agent Status Report

Skill AUX Report

The Skill AUX report is new for the ECS with EAS and shows, for one or more skills, the number of agents in AUX work with each associated AUX reason code. Also, the top half of the report includes calls waiting, agents staffed, and the total number of agents in AUX. If you need to show information only for agents in the AUX work state who have the specified skills as their "top skills," you could easily modify this report to make a custom version. Figure 4-3 shows a sample of the new report.

```
Rpts: Real: Split/Skill: Skill AUX Report                          g3v5_eas
Skills:             22       23       24       25       31       32       33
ACD: g3v5_eas

Calls Waiting        0        0        0        0        0        0        0
Agents Staffed       2        2        1        0        0        1        1
Total AUX Agents     2        2        1        0        0        1        1

AUX Reason
Lunch                2        2        1        0        0        1        1
Break                0        0        0        0        0        0        0
2                    0        0        0        0        0        0        0
3                    0        0        0        0        0        0        0
4                    0        0        0        0        0        0        0
5                    0        0        0        0        0        0        0
6                    0        0        0        0        0        0        0
7                    0        0        0        0        0        0        0
8                    0        0        0        0        0        0        0
9                    0        0        0        0        0        0        0
Successful                                                       18x83     >
```

Figure 4-3: Skill AUX Report

Skill Top Agent Report

The Skill Top Agent report is new for G3 switches with EAS and resembles the existing Real-Time Split/Skill Report, except that it shows counts of agents in each work state who have the specified skill as their "top skill," and separate counts of staffed backup agents assigned to the skill. Figure 4-4 shows a sample of the new report.

```
Rpts: Real: Split/Skill: Skill Top Agent Report                      G3V5_eas
Skills:                    20

Calls Waiting               0
Oldest Call Waiting        :00
Avg Speed of Answer

ACD Calls                   0
Avg ACD Talk Time
Abandoned Calls             0
Avg Time to Abandon

Top Agents: Available       0
            Ringing         0
            ACD Calls       0
            ACW             0
            Other           0
            AUX Work        0
            Staffed         0
Bkup Agents Staffed         0
Successful
```

Figure 4-4: Skill Top Agent Report

Agent Report

The Agent Report is modified in *CentreVu* CMS R3V5 to support the expanded agent capabilities, make use of reason codes, and add more information (such as the Login ID field). Figure 4-5 shows a sample of the updated report.

```
Rpts: Real: Agent Report                                         g3v5_eas
Split/Skill: 42
                                                Split/
Agent Name           Login ID  Extn  Reason     State   Skill   Time VDN
1042                     1042  50019            ACD  IN    44   *****




Successful
```

Figure 4-5: Agent Report

Agent Group Report

The Agent Group Report is modified in *CentreVu* CMS R3V5 to support the expanded agent capabilities, make use of reason codes, and add more information (such as the Login ID field). Figure 4-6 shows a sample of the updated report.

```
Rpts: Real: Agent Group Report                              NonameG3V5
Agent Group: split_52
                                                    Split/
Agent Name              Login ID  Extn  Reason   State  Skill   Time VDN
agent 32001                32001 32001           AVAIL          :17
32022                      32022 32022           AVAIL          :19
32023                      32023 32023           AVAIL          :14
32025                      32025 32025           ACD  IN   52   :02 VDN 3
32026                      32026 32026           AVAIL          :29
32027                      32027 32027           AVAIL          :24
32028                      32028 32028           AVAIL          :17
32031                      32031 32031           AVAIL          :10
32032                      32032 32032           ACD  IN   52   :02 VDN 3
32033                      32033 32033           AVAIL          :23    v
Successful                                                18x75
```

Figure 4-6: Agent Group Report

Queue/Agent Status Report

The Queue/Agent Status Report is modified (regardless of the switch release) to add information such as counts of agents in AUX and OTHER, the Login ID field, as well as calls answered and abandoned, and is further modified (for the ECS with EAS) to support the expanded agent capabilities and make use of reason codes. Figure 4-7 shows a sample of the updated report.

```
Rpts: Real: Queue/Agent Status                                    San Diego
Split/Skill:  East Coast Sales        Agents: Staffed        80
Calls Waiting:      3                          Available      0
Oldest Call Waiting:        :02                Ringing        1
Direct Agent Calls Wait:    0                  ACD Calls     26
% Ans Within    0 Secs:     0                  ACW            4
Calls Answered:    69                          AUX Work      12
Calls Abandoned:    2                          Other         37

                                                   Split/
Agent Name           Login ID  Extn  Reason    State   Skill   Time VDN
Patrick Beatty          2001   1010            ACD   IN   2     :56 1006
Marianne Literati       2002   1011            ACW        1     :13 1005
Dave Felder             2003   1012            ACD   IN   1    4:38 1005
Ernst Engelman          2004   1013            ACW        1     :22 1005
Alan Bland              2005   1014            ACD   IN   1     :18 1005
Tanaz Pakbaz            2006   1015 Lunch      AUX             :29         v
Successful                                                    90x75
```

Figure 4-7: Queue/Agent Status Report

Queue/Top Agent Status Report

The Queue/Top Agent Status report is new for Generic 3 switches with EAS and resembles the new Queue/Agent Status Report, but shows the number of top agents staffed, available, ringing, on ACD calls, in after call work, in AUX, and in OTHER, as well as the number of backup agents staffed. The number of calls answered and abandoned also appear on this report. Figure 4-8 shows a sample of the new report.

```
Rpts: Real: Queue/Top Agent Status                              San Diego
Skill: East Coast Sales        Top Agts: Staffed    20  Bkup Agts Staffed    60
Calls Waiting:      4                    Available    0
Oldest Call Waiting:        :08          Ringing      1
Direct Agent Calls Wait:    0            ACD Calls    5
% Ans Within    0 Secs:     0            ACW          0
Calls Answered:    130                   AUX Work     2
Calls Abandoned:     1                   Other       12


Top Agent Name          Login ID Extn  Reason      State    Skill/Lvl  Time VDN
Patrick Beatty            2001   1010               RING        1/ 1    :08
Marianne Literati         2002   1011               ACD  IN     3/ 2    :48 1007
Dave Felder               2003   1012               ACD  IN     1/ 1   1:32 1005
Ernst Engelman            2004   1013               ACD  IN     1/ 1   1:40 1005
Alan Bland                2005   1014               ACD  IN     2/ 2   1:26 1006
Tanaz Pakbaz              2006   1015               ACD  IN     2/ 2   3:21 1006 v
Successful                                                             30x77
```

Figure 4-8: Queue/Top Agent Status Report

Multi-ACD Top Agent Report

The Multi-ACD Top Agent report is new for Generic 3 switches with EAS and resembles the new Skill Top Agent Report, showing information for top and backup agents, but allowing you to specify skills from multiple ACDs. Figure 4-9 shows a sample of the new report.

```
Rpts: Real: Multi-ACD Top Agent Report                 att_8200_maplewood
Skills:                    25       Sk402   52       3
ACDs:                      att_82   BullG3  g3v4no   komodo

Calls Waiting               3        0       0       12
Oldest Call Waiting        2:59     :00     :00      :58
Avg Speed of Answer        1:52             :02      1:39

ACD Calls                  18        0      395       47
Avg ACD Talk Time          :08              :08      2:42
Abandoned Calls             0        0       0        45
Avg Time to Abandon                                  1:13

Top Agents: Available       2        2      13        0
            Ringing         3        0       0        0
            ACD Calls       0        0       3       11
            ACW             0        0       0        5
            Other           0        2       0        0
            AUX Work        0        0       0        4
            Staffed         5        4      16       20
Bkup Agents Staffed        10       18       0        0
Successful
```

Figure 4-9: Multi-ACD Top Agent Report

Historical Reports

For additional information on the Historical Reports subsystem, please refer to Chapter 3 of the *CentreVu™ CMS R3V5 Reports* (585-215-821) document.

Agent Summary Report

The Agent Summary report has been modified (regardless of the switch release) to add a column for the OTHER work state to the daily, weekly and monthly versions. The Agent Summary report shows, for a selected agent, the activities and performance of the agent for all splits or skills of which the agent is a member. It represents the totals over the specified time period for all splits or skills the agent was logged into. The report is available in interval, daily, weekly and monthly versions. Figure 4-11 shows a sample of the modified report.

```
Rpts: Hist: Agent: Summary: Daily                                    g3v5_eas
                                              Daily Agent Summary

Agent: 100

               Avg  Avg    Extn  Avg   Extn  Avg
          ACD  Talk After  In    Talk  Out   Talk -------------- Agent T
Date      Calls Time Call  Calls Time  Calls Time  ACD   ACW  Ring Other
-------------------------------------------------------------------------
Totals:
-------------------------------------------------------------------------






No records found                                           10x115   >
```

Figure 4-10: Agent Summary Report

Agent AUX Report

The Agent AUX report is new for the ECS with EAS and resembles the Agent Summary and Agent Attendance reports. The Agent AUX report shows, for an agent in AUX work, the staffed time, total AUX time, and the AUX time with each associated AUX reason code. The report is available in interval, daily, weekly and monthly versions. Figure 4-11 shows a sample of the new report.

```
Rpts: Hist: Agent: AUX: Interval                                San Diego
                                              Interval Agent AUX Report
Date:   9/22/96
Agent: Robert Steiner

                Total     Total
                Staffed   AUX     -------------------------------- Time in AUX
Time            Time      Time    Internet Lunch    Personal Library Stockroo
-----------------------------------------------------------------------------
Totals:         23:45:00  3:02:47   :16:58   :18:55   :19:30   :19:35   :18:08
-----------------------------------------------------------------------------
12:00-12:15AM    15:00     2:27       :00      :25     1:01      :00      :00
12:15-12:30AM    15:00     1:34       :00      :18      :00      :00      :15
12:30-12:45AM    15:00     1:21       :00      :25      :00      :22      :18
12:45- 1:00AM    15:00     1:39       :00      :15      :00      :41      :00
 1:00- 1:15AM    15:00     1:50       :00      :00      :00      :00     1:06
 1:15- 1:30AM    15:00     1:51       :00      :00      :00      :00      :00
 1:30- 1:45AM    15:00     2:15       :45      :00      :00      :00      :00
 1:45- 2:00AM    15:00     1:13       :00      :00      :57      :16      :00 v
Successful                                                        105x121  >
```

Figure 4-11: Agent AUX Report

Agent Login/ Logout Report

The Agent Login/Logout (Skill) report has been redesigned for the ECS with EAS and resembles the existing Login/Logout report, except that it adds logout reason code information and uses numeric skills (as many as 15 that the agent has logged in to) instead of names. Figure 4-12 shows a sample of the new report.

```
Rpts: Hist: Agent: Login/Logout (Skill)                           g3v5_eas
                                           Login/Logout with Skills
Login Date:  8/ 7/96
Skill: 32


                             Login    Logout  Logout   Logout ---------------
Agent                  Extn  Time     Time    Date     Reason 1   2   3   4
-----------------------------------------------------------------------------










No records found                                              7x120      >
```

Figure 4-12: Agent Login/Logout Report

Agent Trace Report

The Agent Trace Report has been modified (regardless of the switch release) to add formerly optional information, as well as new database items (for the ECS with EAS) showing whether the agent released the call and AUX and Logout reason codes. Figure 4-13 shows a sample of the updated report.

```
Rpts: Hist: Agent: Trace                                    att_8200_maplewood
                              Agent Trace
                                             Printed: 10/ 1/96 11:14 AM
Agent: 40                                     ACD: att_8200_maplewood


                        - Reason-              Split
Date      Time       Seq Log   AUX    State    Skill Dur   Hld Rec MCT Rls Cal




No records found                                              6x132      >
```

Figure 4-13: Agent Trace Report

Agent Group Summary Report

The Agent Group Summary report has been modified (regardless of the switch release) to add a column for the OTHER work state. The Agent Group Summary report summarizes the daily activities of every agent within a specific group. Agents in a group may share common characteristics, such as being newly hired or top performers, or they may simply be part of a more manageable subdivision of a split. You can use this report to compare individuals within a group. This report lists the totals for each agent in the group summed over all splits/skills that the agent was logged into during the time period covered in the report. The report is available in daily, weekly and monthly versions. Figure 4-14 shows a sample of the modified report.

```
Rpts: Hist: Agent: Group Summary: Daily                         g3v5_eas
                    y Group Summary
Date: 10/ 6/96                            Printed: 11/15/96  2:15 PM
Agent group: shift1                          ACD: g3v5_eas

                     Avg
                     Talk --------------- Total Agent Time --------------
Agent             s  Time   ACD    ACW    Ring  Other   AUX    Avail  Staff
---------------------------------------------------------------------------
Totals:           0         :00    :00    :00    :00   24:00    :00   24:00
---------------------------------------------------------------------------
a4001 ,.+'AbCdEfGhI 0        :00    :00    :00    :00   24:00    :00   24:00




Successful                                                11x114  <
```

Figure 4-14: Agent Group Summary Report

Agent Group AUX Report

The Agent Group AUX report is new for the ECS with EAS and resembles the Agent Group Summary and Agent Group Attendance reports. The Agent Group AUX report shows, for all agents in an agent group, the staffed time, total AUX time, and the AUX time with each associated AUX reason code. The report is available in daily, weekly and monthly versions. Figure 4-15 shows a sample of the new report.

```
Rpts: Hist: Agent: Group AUX: Daily                              BullG3V5pe
                                                    Daily Agent Group AUX R
Date:  9/28/96
Agent group: 50

                    Total    Total
             Agent  Time     AUX    -------------------------- Time in AUX
Agent        ID     Staffed  Time
----------------------------------------------------------------------------
Totals:
----------------------------------------------------------------------------




No records found                                            10x117    >
```

Figure 4-15: Agent Group AUX Report

Split/Skill Report

The Split/Skill Report has been modified to accept the expanded capacities (for the *DEFINITY* ECS with the feature EAS) and to use the new database item I_AUXTIME instead of the INT_AUXTIME calculation. Figure 4-16 shows a sample of the updated report.

```
Rpts: Hist: Split: Report: Daily                              San Diego
                                              Daily Split/Skill Report
Date:   9/30/96
Split/Skill: East Coast Sales

                      Avg   Avg
                 ACD  Talk  After ---------------------------- Agent Time -
Agent           Calls Time  Call    ACD       ACW      Ring     Other
------------------------------------------------------------------------------
Totals:         12776 3:12   :23  681:30:53 81:59:01 19:33:24 902:27:21 23
------------------------------------------------------------------------------
Patrick Beatty    155 3:12   :30    8:14:01  1:18:13   :14:27  11:16:11
Marianne Litera   167 3:08   :30    8:43:27  1:23:45   :16:11  10:36:50
Dave Felder       159 3:10   :30    8:22:36  1:20:41   :12:55  11:05:06
Ernst Engelman    164 3:15   :30    8:50:12  1:22:29   :14:13  10:30:38
Alan Blandy       150 3:22   :30    8:25:29  1:14:33   :13:26  11:13:40
Tanaz Pakbaz      148 3:15   :29    8:03:31  1:10:48   :14:14  11:33:48
John Hogan        168 3:09   :30    8:49:44  1:24:28   :16:03  10:33:23
Lydia Flores      155 3:13   :31    8:14:23  1:19:33   :13:40  11:14:10
Successful                                                    90x132    >
```

Figure 4-16: Split/Skill Report

Dictionary

For additional information on the Dictionary subsystem, refer to Chapter 4 of the *CentreVu™ CMS R3V5 Administration* (585-215-820) document.

New Database Items

The Dictionary subsystem was updated to include the new *CentreVu* CMS database items. For descriptions of these new items, see the "Data, Database Items, and Calculations" section of this document.

AUX and Logout Reason Codes

Two new items appear on the Dictionary menu: AUX Reason Codes and Logout Reason Codes. You must have read and write permission for the dictionary subsystem to add, delete, or modify the names (up to 20 characters in length) of Reason Codes. Other valid actions for reason codes are Find one, List all, Next, and Previous. You also may define a 50-character reason code description. Figure 4-17 and Figure 4-18 show samples of the two new windows.

```
Dictionary: AUX Reason Codes                           G3V5_eas
                                                      │ Add
                                                      │ Delete
AUX Reason Code name: _____            │ Find one
        AUX Reason Code: _                            │ List all
              Description: _____     │ Modify
                           _____     │ Next
                                                      │ Previous
```

Figure 4-17: AUX Reason Codes

```
Dictionary: Logout Reason Codes                        G3V5_eas
                                                      │ Add
                                                      │ Delete
Logout Reason Code name: _____         │ Find one
     Logout Reason Code: _                            │ List all
            Description: _____       │ Modify
                         _____       │ Next
                                                      │ Previous
```

Figure 4-18: Logout Reason Codes

Exceptions

For additional information on the Exceptions subsystem, please refer to Chapter 5 of the *CentreVu™ CMS R3V5 Administration* (585-215-820) document and Chapter 4 of the *CentreVu™ CMS R3V5 Reports* (585-215-821) document.

The following changes have been made to the Exceptions subsystem on *CentreVu* CMS R3V5 for the DEFINITY ECS with the EAS feature.

New Agent Exceptions

If the appropriate reason codes have been forced or requested on the switch, then *CentreVu* CMS R3V5 generates these new exceptions:

- Logout attempt without valid reason code
- AUX attempt without valid reason code.

If exceptions are active for more than one of an agent's assigned skills, and the agent does not enter a valid code when trying to log off or go into the AUX work state, then *CentreVu* CMS will generate one exception for each possible skill (as many as 20 for each invalid attempt).

Changes to Exceptions Windows

The new AUX Reason Codes (or the names administered for the codes in the Dictionary subsystem) appear on several Exceptions windows, including the following:

- Agent Exceptions Historical Report. In the input window you may select which time(s) in AUX to display on the report by reason code number. The report window displays a new column with the first six characters of the administered AUX reason code name(s), if any.

- Agent Exceptions Administration. In this window you may administer exceptions for time(s) in AUX by reason code number. You may also administer thresholds for the Logout and AUX attempt exceptions.

- Real-Time Exceptions Log. This window displays the administered AUX reason code name(s), if any, for "Time in AUX" exceptions.

Malicious Call Trace Report

The Malicious Call Trace Report for *CentreVu* CMS R3V5 has had a report field added: **II** (Information Indicator). This two-digit string is provided by the Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) and indicates the type of the caller's originating line, for example, a pay telephone, a hospital line, or a prison telephone. If the call does not provide these digits, then this column on the report is blank.

Figure 4-19 shows a sample of this report.

New II Digits Field

```
Exceptions: Historical Reports: Malicious Call Trace          BullG3V5pe
            us Call Trace Report

ACD: BullG3V5pe                        Printed: 10/10/96  1:17 PM

Date          LoginID  Trunk Group       Trunk    VDN    ANI/SID     II
-----------------------------------------------------------------------------




Scrolling                                                    6x121    <
```

Figure 4-19: Malicious Call Trace Report

ACD Administration

For additional information on the ACD Administration subsystem, refer to Chapter 6 of the *CentreVu*™ *CMS R3V5 Administration* (585-215-820) document.

Multi-Agent Skill Change Window (*DEFINITY* ECS with EAS)

The Multi-Agent Skill Change window has been modified for *CentreVu* CMSs that are connected to the *DEFINITY* ECS with EAS to support the expanded agent capabilities (for example, skills 1-600).

When the Multi-Agent Skill Change menu option is selected, the window shown in Figure 4-20 displays. It allows you to change one skill and its associated skill level (now one or two digits) for as many as 32 agents.
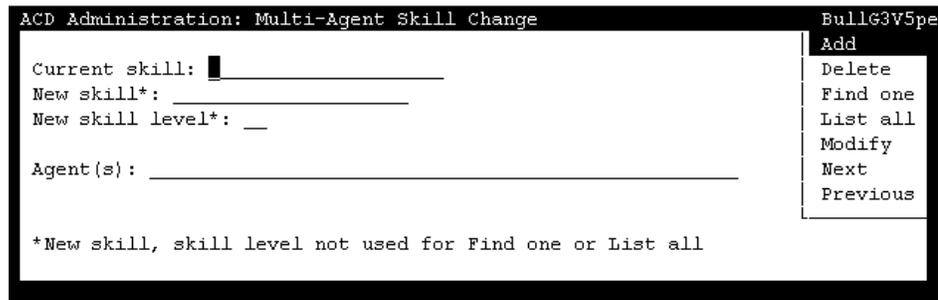
```
ACD Administration: Multi-Agent Skill Change              BullG3V5pe
                                                         | Add
  Current skill: █_____                     | Delete
  New skill*: _____                        | Find one
  New skill level*: __                                  | List all
                                                         | Modify
  Agent(s): _____| Next
                                                         | Previous

  *New skill, skill level not used for Find one or List all
```

Figure 4-20: Multi-Agent Skill Change Window

Change Agent Skills (*DEFINITY* ECS with EAS)

The Change Agent Skills window has been updated for *CentreVu* CMSs that are connected to the *DEFINITY* ECS with EAS. It now allows as many as 20 skills, each with a skill level of 1-16 (where 1 is the highest and 16 is the lowest skill level) to be modified for a particular agent.

This window also allows the selection of a Direct agent skill (from among assigned skills) and a Call handling preference (Skill level or Greatest need). If the Direct agent skill field is left blank, the first-administered, highest-level skill will be used by default. You must enter one of the agent's other assigned skills in this new field if you want to designate it as the agent's "Direct agent skill."

Note that assigning agents the Skill level preference is necessary to make reports that use the new "top" database items useful. Figure 4-21 shows the updated Change Agent Skills window.

```
ACD Administration: Change Agent Skills          BullG3V5pe
                                                 | Find one
                                                 | Modify
Agent: _____
Direct agent skill: _____

Call handling preference (Select one)
        <_> Skill level
        <_> Greatest need

Skill                      Level  Skill                      Level
 1:_____      __     11:_____     __
 2:_____      __     12:_____     __
 3:_____      __     13:_____     __
 4:_____      __     14:_____     __
 5:_____      __     15:_____     __
 6:_____      __     16:_____     __
 7:_____      __     17:_____     __
 8:_____      __     18:_____     __
 9:_____      __     19:_____     __
10:_____      __     20:_____     __
```

Figure 4-21: Change Agent Skills Window

Activate Agent Trace

There are new limits for the total number of agents traced by a *CentreVu* CMS server: 100 for Intel-based servers and 250 for Sun SPARCservers. Also, you will need to balance the number of simultaneous agent traces with other uses of your system's resources in order to maintain system performance. If you must trace many agents at a time, for example, you should make the refresh rates for running real-time reports much higher than the minimum or default refresh rates.

AUX Agent and List Agent Skills Configuration Reports

Two new ACD Administration Configuration Reports have been added for the ECS with the EAS feature. Use the AUX Agent Report Input window to run a report showing the AUX reason codes for agent(s) in a skill that you specify. This report is helpful for viewing which agents are in the AUX state and listing their reasons for being in AUX. Use the List Agent Skills Report Input window to run a report showing a list of agent(s) that you specify with their associated skill(s) and skill level(s). This report is helpful for verifying logged-in agents' skill and skill level assignments.

Figure 4-22 and Figure 4-23 show samples of these two new reports.

```
ACD Admin: Conf Report: AUX Agent Report         BullG3V5pe

                AUX Agent Configuration Report
  Skill: Sk401                 Printed: 10/10/96  1:00 PM

  Agent                    Login ID AUX reason
  Agent 54002                 54002    lunch4 r4eason code4
  Agent 54001                 54001    lunch4 r4eason code4
  Agent 54008                 54008    lunch4 r4eason code4




Successful
```

Figure 4-22: AUX Agent Report

```
ACD Admin: Conf Report: List Agent Skills                BullG3V5pe

                      List Agent Skills Configuration Report

                          Dir
  Agent              Login Top Agt Pref Skills/Levels
  Agent 54001        54001 428 402 LVL   428/1   401/2   403/2    53/2   408/2   4
                                         406/6   407/7   409/9   410/10 411/11  4
  Agent 54002        54002 402 402 LVL   402/1   401/1   403/2   404/3   405/5   4
                                         411/11 412/12 413/13 414/14 415/15  4
  Agent 54006        54006 404 401 LVL   404/1   401/2   403/2   405/5   406/6   4
                                         412/12 413/13 414/14 415/15 420/13  4
  Agent 54008        54008 401 401 LVL   401/2   403/2   404/3   405/5   406/6   4
                                         412/12 413/13 414/14 415/15 416/8   4




Successful                                                    14x110    >
```

Figure 4-23: List Agent Skills Report

User Permissions

For additional information on the User Permissions subsystem, refer to Chapter 7 of the *CentreVu*™ *CMS R3V5 Administration* (585-215-820) document.

Feature Access

The change made to the User Permissions subsystem affecting *CentreVu* Supervisor users is that the Feature Access permissions for "Custom Reports" are now called "Custom/Designer Reports." The Read and Write check boxes for this feature affect both *CentreVu* CMS Custom Reports (as before) and the reports created or modified with the Report Designer (for *CentreVu* Supervisor Version 5 report designer users only).

No other major changes have been made to the User Permissions subsystem for the *CentreVu* CMS R3V5.

System Setup

For additional information on the System Setup subsystem, refer to Chapter 8 of the *CentreVu™ CMS R3V5 Administration* (585-215-820) document.

Data Storage Allocation

The changes made to the System Setup subsystem support the expanded agent capabilities for the *CentreVu* CMS R3V5 with EAS or the EAS-PHD option. For example, Data Storage Allocation allows as many as 600 splits/skills to be administered for the *DEFINITY* ECS and as many as 1000 splits/skills across as many as four ACDs when you have also purchased *CentreVu* CMS R3V5.

Also in the Data Storage Allocation area of the System Setup subsystem, the limit on the total number of Agent Trace Records is now 500,000.

If you have purchased and are running *CentreVu* CMS R3V5 on the *Sun SPARCserver*[*] platform and you have installed the Solstice DiskSuite[†] software package, Data Storage Allocation supports as many as 10,000 split/skill members and 10,000 agents logged in per shift.

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*SPARCserver is a trademark of SPARC International, Inc.
†Solstice and Sun are trademarks or registered trademarks of Sun Microsystems, Inc.

Maintenance

For additional information on the Maintenance subsystem, refer to Chapter 9 of the *CentreVu*™ *CMS R3V5 Administration* (585-215-820) document.

The changes made to the Maintenance subsystem support the expanded agent capabilities for the *CentreVu* CMS R3V5 with EAS or the EAS-PHD option. For example, the ACD Status window allows as many as 600 splits/skills and 10,000 split/skill members for the ECS. The `Maximum skill members` field has been deleted, since it always contained the same value as the `Skill members in use` field, and the `Skill members in use` field has been expanded to contain five characters.

Custom Reports

For additional information on the Custom Reports subsystem, refer to the *CentreVu™ CMS R3V5 Custom Reports* (585-215-822) document.

Custom reports created with *CentreVu* CMS R3V5 (connected to the *DEFINITY* ECS) can include the enhanced *CentreVu* CMS capabilities and new database items described in this document.

Non-graphical custom reports created with *CentreVu* CMS R3V5 also can be run from within *CentreVu* Supervisor. You may also use the Report Designer to customize any existing non-graphical CMS custom report. Once modified with Report Designer, the custom report can only be run within *CentreVu* Supervisor and modified with Report Designer. To create or change CMS custom reports that can continue to be viewed or changed by CMS terminal users (using Screen Painter), you must access the CMS server using the *CentreVu* Terminal emulation software on your PC or through a terminal.

External Call History Interface

The External Call History Interface (ECHI) is an optional *CentreVu* CMS feature which allows you to transfer the *CentreVu* CMS R3V5 call record files (data files containing call history information) to another computer for processing.

Note For *CentreVu* CMS R3V5, new items have been added to the call record database table. You must verify that all external processing applications that use any call record data can accommodate these changes. If you are upgrading to *CentreVu* CMS R3V5, any existing applications associated with ECHI may have to be rewritten because of the new call record database items added in this version.

The ECHI feature is especially useful for high-volume call centers, for which the total amount of call record data to be processed and stored may exceed the capacities of a CMS server's internal call history feature.

Note You must ensure that the version field (which identifies the CMS version) is correct in any external processing applications.

For additional information on the External Call History Interface, refer to the *CentreVu*™ *CMS R3V5 External Call History Interface* (585-215-824) document.

Forecast

For additional information on the Forecast subsystem, refer to the *CentreVu™ CMS R3V5 Forecast* (585-215-825) document.

Information has been added to the document about how the *CentreVu* CMS R3V5 concepts of "top skill" and "top agent" (see page 8) affect the assessment of time that agents spend in skills, and hence the forecast of the number of agents that would be required to handle a given volume of calls.

No other major changes have been made to the Forecast subsystem for *CentreVu* CMS R3V5.

Miscellaneous

Upgrading to CMS R3V5 as a Bug Fix

This *CentreVu* Call Management System software load is a bug fix load and provides all the functionality of your current CMS software release. However, you may see items displayed in the software that relate to new Call Center features such as Expert Agent Selection in the R3V4 Call Management System or Reason Codes in R3V5 Call Management System available on the *DEFINITY* Enterprise Communications Server (ECS). If you would like any of these new feature enhancements, please contact your Lucent Account Executive to purchase a switch or a *CentreVu* CMS upgrade.

The CMS_README File

CentreVu CMS provides a CMS_README file to explain the differences between the *CentreVu* CMS software loads. You can view or print this file before you upgrade the CMS.

From the Sun Platform:

The CMS_README file is located on the CD-ROM that contains the *CentreVu* CMS software. Follow these steps to view or print the file:

1. Insert the CMS CD-ROM into the CD-ROM drive. (You must use the CD-ROM caddy if you have an external CD-ROM drive.)

2. Log in as *root*.

3. Enter one of these commands:

   - `pg /cdrom/cdrom0/CMS_README` to view the file, or

   - `lp -d <destination> /cdrom/cdrom0/CMS_README` to print the file where `<destination>` is the *UNIX* system printer name.

From the INTEL Platform:

The CMS_README file is located on the cartridge tape that contains the *CentreVu* CMS software. Follow these steps to view or print the file:

1. Log in as *root*.

2. Enter the `installpkg` command.

3. When prompted, select the cartridge tape option.

4. The program requests that the tape be inserted into the tape drive. Insert the CMS software cartridge tape into the tape drive, wait for the tape drive to reposition, and then press `Return`.

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 "README for *CentreVu* CMS" package, and press Return.

8. Press Esc to indicate that the selection has been made. Press Return. Press Return again in response to the REMINDER! message.

   The program indicates that it is installing the README file into */usr/lib/CMS_README*.

9. Enter one of these commands:

   - pg /usr/lib/CMS_README to view the file, or

   - lp -d <destination> /usr/lib/CMS_README to print the file where <destination> is the *UNIX* printer name.

Preupgrade Procedures

Because of changes in the CMS database, all *CentreVu* CMS users upgrading to R3V5 must install and run the Preupgrade tool before beginning their installation of *CenterVu* CMS R3V5. The tool will determine whether or not you can safely upgrade to Version 5 without losing data because of lack of space, in addition to preserving your CMS configuration information. For instructions on installing and running Preupgrade, see the *CentreVu™ CMS R3V5 Upgrades and Migration* (585-215-826) document.

Data Migration

Because of changes in the CMS database, all *CentreVu* CMS users must migrate their data when they are upgrading to *CentreVu* CMS R3V5.

First, you should do a full backup of all your CMS data. Then, you should complete the new installation of *CentreVu* CMS R3V5. For instructions, see the *CentreVu™ CMS R3V5 Sun SPARCserver Computers Installation/Maintenance* (585-215-827) documents. And finally, you should get your data back by performing the migration process. For instructions on migrating data, see the *CentreVu™ CMS R3V5 Upgrades and Migration* (585-215-826) document.

Note that Agent AUX Time (used for example on the Daily Split/Skill Report) is **not** migrated from R3V4 to R3V5 because a new database item, I_AUXTIME has been added. (See "I_AUXTIME" on page 10.)

Using DiskSuite

The Solstice DiskSuite software package allows the disks of a Sun *SPARCserver* system to be managed as if they were a single file system. Multiple disk partitions can be logically combined to create a single large partition. Using the Solstice DiskSuite software package allows CMS databases to span multiple disks, and therefore to grow quite large.

Solstice DiskSuite software is included in all new *CentreVu* CMS R3V5 installations. Refer to the *CentreVu*™ *CMS R3V5 Sun*[*] *SPARCserver*[†] *Computers Installation and Maintenance* document for more information on the Solstice DiskSuite software.

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†SPARCserver is a trademark of SPARC International, Inc.