



Lucent Call Center Release 8

Change Description

585-210-925
Comcode 108501941
Issue 1
December 1999

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Answered by the called station

Answered by the attendant

Routed to a recorded announcement that can be administered by the CPE user

This equipment returns answer-supervision signals on all DID calls forwarded back to the public switched telephone network. Permissible exceptions include when a call is unanswered, a busy tone is received, and a reorder tone is received

Canadian Department of Communications (DOC)

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This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European Union Declaration of Conformity

The "CE" mark affixed to the DEFINITY® equipment described in this book indicates that the equipment conforms to the following European Union (EU) Directives:

Electromagnetic Compatibility (89/336/EEC)

Low Voltage (73/23/EEC)

Telecommunications Terminal Equipment (TTE) i-CTR3 BRI and i-CTR4 PRI

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Acknowledgment

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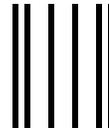
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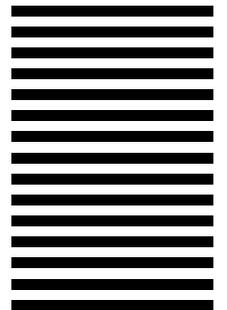
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Preface — About This Document

Overview

The *Lucent Call Center Release 8 Change Description* (585-210-925) document is written for call center customers who are upgrading from a Lucent Call Center Release 6 to a Lucent Call Center Release 8.

You will use this document to understand how upgrading from a Lucent Call Center Release 6 to a Lucent Call Center Release 8 can impact your call center. This upgrade can include upgrading:

- From a DEFINITY ECS R6 or R7 to a DEFINITY ECS R8
- From a *CentreVu* CMS R3V6 to a *CentreVu* CMS R3V8
- From *CentreVu* Supervisor V6 to *CentreVu* Supervisor V8
- From *CentreVu* Explorer to *CentreVu* Explorer II
- From *CentreVu* Visual Vectors V1 to *CentreVu* Visual Vectors V8.

The previous editions of this document (such as the Lucent Call Center Release 6 Change Description [585-215-853]) covered the differences between each major version of CMS. If you need information about changes involving older releases of *CentreVu* CMS (such as R3V5 or R3V4), please refer to the older change description documents.

Organization of Document

This document is organized in two chapters. The following table gives a brief description of each chapter in this book.

	Title	Contents
Chapter 1	DEFINITY Enterprise Communications Server Release 8 Call Center Enhancements	DEFINITY ECS R8 Capacities, ASAI/CTI Enhancements, <i>CentreVu</i> Advocate Enhancements on the DEFINITY ECS, ATM Network Support, IP Trunk Measurements, Callmaster V
Chapter 2	<i>CentreVu</i> Call Management System Release 3 Version 8 and Related Client/Server Enhancements	<i>CentreVu</i> CMS Capacities for R3V8, <i>CentreVu</i> CMS Database Items, <i>CentreVu</i> CMS Supervisor Reports, <i>CentreVu</i> CMS R3V8/ <i>CentreVu</i> Supervisor V8 Serviceability Enhancements, <i>CentreVu</i> CMS R3V8/ <i>CentreVu</i> Supervisor V8 ATM Support, <i>CentreVu</i> CMS R3V8 Upgrade to Solaris7, Error Messages, <i>CentreVu</i> Explorer II, and <i>CentreVu</i> Visual Vectors V8,

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Related Documents

The following documents include information related to the Lucent Call Center Release 8.

NOTE:

The Lucent Call Center Release 8 Documentation CD-ROM (585-210-926, Issue 1) includes the on-line version of most of the documents listed in this section.

CentreVu CMS and *CentreVu* Supervisor Documents

- *CentreVu* Call Center Little Instruction Book for Basic Administration, 585-210-935, Issue 1, Comcode 108502253
- *CentreVu* Call Center Little Instruction Book for Advanced Administration, 585-210-936, Issue 1, Comcode 108502261
- *CentreVu* Call Management System Release 3 Version 8 Administration, 585-210-910, Issue 1, Comcode 108501743
- *CentreVu* Call Management System Database Items, 585-210-939, Issue 1, Comcode 108502345
- *CentreVu* Call Management System Release 3 Version 8 External Call History Interface, 585-210-912, Issue 1, Comcode 108501784
- *CentreVu* Call Management System Release 3 Version 8 Upgrades and Migrations, 585-210-913, Issue 1, Comcode 108501834
- *CentreVu* Call Management System Release 3 Version 8 Software Installation and Setup, 585-210-941, Issue 1, Comcode 108502360
- *CentreVu* Call Management System Release 3 Version 8 Maintenance and Troubleshooting, 585-210-919, Issue 1, Comcode 108501917
- *CentreVu* Call Management System Switch Connections and Administration, 585-25-876, Issue 2, Comcode 10850958
- *CentreVu* Advocate Release 8 User Guide, 585-210-927, Issue 1, 108502162
- *CentreVu* Supervisor Version 8 Installation and Getting Started, 585-210-928, Issue 1, 108502170

- *CentreVu Supervisor Version 8 Reports*, 585-210-929, Issue 1, Comcode 108502188
- *CentreVu Report Designer Version 8 User Guide*, 585-210-930, Issue 1, Comcode 108502196
- *CentreVu Call Management System Forecast*, 585-215-825, Issue 1, Comcode 107876203
- *CentreVu Call Management System Custom Reports*, 585-215-822, Issue 2, Comcode 108501867

CentreVu Visual Vectors Documents

- *CentreVu Visual Vectors Version 8 User Guide*, 585-210-932, Issue 1, Comcode 108502220
- *CentreVu Visual Vectors Version 8 Installation and Getting Started*, 585-210-933, Issue 1, Comcode 108502238

CentreVu Explorer Documents

- *CentreVu Explorer II User Guide*, 585-218-200, Issue 1, Comcode 108456617
- *CentreVu Explorer II Installation for Windows NT*, 585-218-201, Issue 1, Comcode 108456625

Call Center Documents

These documents are issued for DEFINITY ECS Call Center applications. The intended audience is DEFINITY ECS administrators.

- *DEFINITY Enterprise Communications Server Release 8 Call Vectoring/EAS Guide*, 585-230-521, Issue 4, Comcode 108596545
- *DEFINITY Enterprise Communications Server Release 8 Guide to ACD Call Centers*, 555-233-503, Issue 2, Comcode 108596354
- *DEFINITY Enterprise Communications Server Basic Call Management System (BCMS) Operations*, 555-230-706, Issue 2, Comcode 108485087

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1-800-248-1111
- DEFINITY Helpline
1-800-225-7585
- Lucent Technologies Toll Fraud Intervention
1-800-643-2353
- Lucent Technologies National Customer Care Center Support Line
1-800-242-2121
- Lucent Technologies Corporate Security
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DEFINITY Enterprise Communications Server Release 8 Call Center Enhancements

1

Overview

This chapter describes the call center-related enhancements made to DEFINITY[®] Enterprise Communications Server (ECS) for Release 8 (R8). See the *DEFINITY[®] ECS Release 8 What's New (555-233-752)* book for a description of all of the changes and enhancements made to the DEFINITY ECS for this release.

The sections of this chapter are organized in the following order:

- DEFINITY ECS R8 Capacities
- ASAI/CTI Enhancements
- *CentreVu* Advocate Enhancements
- ATM Network Support
- IP Trunk Measurements
- *Callmaster V*
- DEFINITY ECS R8 Compatibility Matrix.

For a detailed description of the changes made in different issues (loads) of DEFINITY software, please refer to the readme file on the software installation media.

DEFINITY ECS R8 Capacities

Several of the DEFINITY ECS capacities have been increased in this release. The following table shows all of the DEFINITY ECS R8 capacities that are specific to call center, whether or not the capacity changed from the previous release to this release. The remaining sections of this chapter discuss specific capacity increases, as appropriate.

Table 1-1. DEFINITY ECS R8 Call Center Capacities

Item	R8csi	R8si	R8r
Automatic Call Distribution (ACD)			
Announcements per Split	2	2	2
Announcements per System	128	128	1000
Splits	99	99	999
ACD Members per Split	200	200	1500
Maximum Administered ACD members ¹	1000*	1000	10000
Maximum ACD Agents (per system) When Each Logs Into: ²			
1 Split	500	500	5200
2 Splits	500	500	5000
3 Splits	333	333	3333
4 Splits	250	250	2500
Logged-in Splits per Agent ³			
No CMS	4	4	4
R3V5 or newer CMS	4	4	4
Queue Slots per Group ⁴	200	200	999
Queue Slots per System ⁵	1500	1500	25000
Call Vectoring			
Maximum Skills a to which a Call Can Simultaneously Queue	3	3	3
Priority Levels	4	4	4
Recorded Announcements/Audio Sources for Vector Delay	128	128	1000
Steps per Vector	32	32	32
Vector Directory Numbers (VDNs)	512	512	20000 ⁶
CMS Measured VDNs ⁷	512	512	20000

Continued on next page

Table 1-1. DEFINITY ECS R8 Call Center Capacities — Continued

Item	R8csi	R8si	R8r
Vectors per System	256	256	999
Number of Collected Digits for Call Prompting or CINFO	16	16	16
Number of Dial-Ahead Digits for Call Prompting	24	24	24
Vector Routing Tables	10	10	100
BSR Application-Location Pairs ⁸	1000	1000	1000
Expert Agent Selection (EAS)			
Skill Groups	99	99	999
VDN Skill Preferences	3	3	3
Maximum Skills to which a Call Can Simultaneously Queue	3	3	3
Maximum Administered Agent Login IDs ⁹	1500	1500	10000
Maximum Staffed Agent Login IDs ¹⁰	500*	500	5200
Max Administered ACD Members (Login ID-skill pairs) ¹¹	6000	6000	65000
Maximum Staffed ACD Members	1000*	1000	10000
Maximum Skills per Agent			
No CMS	20	20	20
R3V5 or newer CMS	20	20	20
Skill levels (preferences) per Agent Skill	16	16	16
Maximum logged in EAS Agents (per system) When Each Has: ¹²			
1 Skill	500*	500	5200
2 Skills	500*	500	5000
4 Skills	250	250	2500
10 Skills	100	100	1000
20 Skills	50	50	500
Trunks and Trunk Groups			
DS1 Circuit Packs	30*	30	166
Queue Slots for Trunks	198	198	1332
Measured Trunks in System	400*	400	4000

Continued on next page

Table 1-1. DEFINITY ECS R8 Call Center Capacities — Continued

Item	R8csi	R8si	R8r
Trunk Group Hourly Measurements	25	25	75
Trunk Groups in the System	99	99	666
Trunk Members in Trunk Groups	99	99	256
Basic Call Management System (BCMS)			
Measured Agents or Login IDs	400	400	2000
Measured Agents per Split	200	200	999
Measured Splits	99	99	600
Measured Trunk Groups	32	32	32
Measured VDNs	99	99	512
Maximum Agents Displayed by Monitor BCMS Split Command ¹³	100	100	100
Maximum BCMS Terminals	3	3	4
Maximum Active Maintenance Commands for System	1	1	5
Maximum Simultaneous BCMS Terminals in Monitor Mode ¹⁴	1	1	3
Reporting Periods			
Intervals	25	25	25
Days	7	7	7

- Also called administered agent-split pairs. Member capacity is used by ACD agents, Auto-Available Splits (AAS) ports (e.g., VRUs), non-ACD hunt groups (hunting groups with or without queues, Message Center Service, INTUITY/AUDIX, Remote AUDIX, etc.).
- The number of agents that can log into the same split/skill is limited by the maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered and, with non-EAS, the additional splits assigned
- An agent can be assigned more splits during administration but only this number can be simultaneously logged into.
- Queue slots are shared across non-ACD, ACD (splits/skills) and AAS hunt groups.
- See Note 4.
- VDNs are counted as part of the miscellaneous extensions capacity. The total of VDNs, hunt groups, announcements, LDNs, TEGs, PCOL groups, access endpoints, administered TSCs and Code Calling IDs extensions and common shared extensions cannot exceed 20,317 for DEFINITY G3r. In addition, the total of stations (station extensions including ACD agent physical set extensions, Logical Agent IDs, and AWOH) assigned and the VDNs assigned can not exceed 25,000 for DEFINITY G3r. Also, the total of all extensions assigned for any purpose cannot exceed 36,065 for DEFINITY G3r.
- With *CentreVu* CMS R3V8 (and earlier) when more than 2,000 VDNs are activated, permission checking is made inactive for viewing and modifying individual VDNs. All other permission checking continues for other entities, such as vectors. The 2-GB file size limit imposed by Informix SE (Standard Database Engine) limits the number of intervals of historical VDN data that can be collected for large numbers of VDNs. The limits can be determined using: Days=8,158/V where V=number VDNs (in thousands) and I=number of collection intervals in a day (I=60h/i where h=collection hours per day and i=interval period in minutes).

8. BSR application numbers and location numbers are limited to a range of 1 to 255 (i.e., each is limited to 255).
 9. Total of the administered Login ID skill-pair members (total of the agent skills and AAS ports). This limit can be reached only if 4 skills or less are assigned per Login ID due to the ACD Members Administered (Login ID-skill pair) limits. The following shows this (for DEFINITY R6.3.3 or newer).

Max. Login IDs With:	csi/si	r
• 1 to 4 Skills Each	1,500	10,000
• 10 Skills Each	600	6,500
• 20 Skills Each	300	3,250
 10. The number of agents that can log into the same split/skill is limited by the maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered and, with non-EAS, the additional splits assigned.
 11. Total of the administered Login ID-skill pair members (for agents and AAS ports).
 12. The number of agents that can log into the same skill is limited by the Maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered.
 13. The Monitor Split command will only display status for the first 100 agents logged into the split regardless of how many additional agents log into the split.
 14. BCMS monitoring, being a maintenance command, is limited by the active maintenance commands limit, reduced by 2 in the "r" system configuration (since 2 active command slots are reserved for the INADS and SAT logins respectively).
- * Software capacity limit cannot be achieved due to hardware capacity limits for this platform.

ASAI/CTI Enhancements

Adjunct/Switch Application Interface (ASAI) and Computer Telephony Integration (CTI) enhancements in the Lucent Call Center Release 8 include:

- Capacity Increases for ASAI
- Pending Work Mode
- Trunk ID Numbers
- UUI Increase.

Each of these enhancements is briefly described in the following sections. See the *DEFINITY® ECS R8 ASAI Overview* document (555-230-225, Issue 3) for additional details on each of these enhancements.

Capacity Increases for ASAI

This information applies to ASAI Link Version 4 and later. The capacities for Adjunct route requests and split/skill third-party domain controls have increased. These increases allow more ASAI applications to better perform ACD Split/Skill monitoring and adjunct routing requests with the DEFINITY system This improves multiple CTI applications support.

The increased capacities are shown in the tables below.

Table 1-2. DEFINITY ECS R8csi Capacities Associated with ASAI

Feature	New Limit	Old Limit
Adjunct Route Request Increases		
System-wide Active Associations	500	126
Active Associations per ASAI Link	500	126
Active Adjunct Control Associations	800	300
Third-Party Domain Control of ACD Split/Skill Extension Domains		
Limits per Split/Skill Extension Domain	4	1
System-wide Limits	300	99

Table 1-3. DEFINITY ECS R8si Capacities Associated with ASAI

Feature	New Limit	Old Limit
Adjunct Route Request Increases		
System-wide Active Associations	500	126
Active Associations per ASAI Link	500	126
Active Adjunct Control Associations	7,000	3,000
Third-Party Domain Control of ACD Split/Skill Extension Domains		
Limits per Split/Skill Extension Domain	4	1
System-wide Limits	300	99

Table 1-4. DEFINITY ECS R8r Capacities Associated with ASAI

Feature	New Limit	Old Limit
Adjunct Route Request Increases		
System-wide Active Associations	4,000	126
Active Associations per ASAI Link	4,000	126
Active Adjunct Control Associations	7,000	3,000
Third-Party Domain Control of ACD Split/Skill Extension Domains		
Limits per Split/Skill Extension Domain	8	1
System-wide Limits	2,000	600

Pending Work Mode

ASAI applications can now request a change to an agent’s work mode to AUX or ACW while the agent is still on an ACD call and/or has ACD calls on hold. The request to change work mode results in the agent being in a pending work mode state. The change takes place only after active or held ACD calls are released. Previously, this type of request would result in a “user busy” message.

This new function allows call blending applications to reserve an inbound agent by requesting to change the work mode of that agent while the agent is still on a call. This work mode change prevents the delivery of additional calls to the agent, resulting in the ability of the application to launch an outbound call for the agent as soon as the agent completes the current ACD call or any ACD calls on hold.

Trunk ID Numbers

ASAI can now provide trunk group numbers and trunk member numbers to adjunct applications for both inbound and outbound calls. Applications that record data at the trunk side of the connection instead of the station side can use this feature to trigger recording devices. These trunk numbers are also used in the Call Offered, Alerting and Connected event reports.

Before this release, the trunk group number and trunk member number were included in event reports under the following conditions:

- For only inbound calls
- When the Calling Party Number (CPN) is not available.

With this release, the trunk group and member numbers are included in event reports under the following conditions:

- For both inbound and outbound calls
- Even when the CPN is available.

UUI Increase

User-to-User Information (UUI) capacity increases from 32 bytes to 96 bytes. UUI data received over the PRI trunk can be up to 128 bytes in length. DEFINITY sends a maximum of 96 bytes over the ASAI link. This enhancement is available only with ASAI Link Version 4.

This enhancement allows more call-associated data to be passed to applications.

CentreVu Advocate Enhancements

CentreVu Advocate enhancements to the DEFINITY ECS R8 software include:

- *CentreVu* Advocate Agent Counting
- Improved Least Occupied Agent
- Reserve Agent Time in Queue Activation
- Call Selection Override per Skill.

For a list of changes made to *CentreVu* Advocate reports, refer to the reports section in Chapter 2 of this document.

Complete details on the reports that are related to *CentreVu* Advocate are located in the *CentreVu*[®] *Supervisor V8 Reports* (585-210-929) document.

Refer to the *CentreVu*[®] *Advocate Release 8 User Guide* (585-210-927) for additional detail about the *CentreVu* Advocate feature.

CentreVu Advocate Agent Counting

The *CentreVu* Advocate Agent Counting feature counts the number of *CentreVu* Advocate agents logged in to a call center. This feature counts agents assigned any *CentreVu* Advocate feature except Predicted Wait Time. The total number of logged-in Advocate agents counts toward the total number of logged-in ACD agents.

For example, if a call center purchases software capacity for 100 ACD agents and 25 *CentreVu* Advocate agents, then the call center can have a maximum of 25 *CentreVu* Advocate agents logged in and 75 non-*CentreVu* Advocate ACD agents logged in at the same time.

Improved Least Occupied Agent

Prior to the DEFINITY ECS R8, if an agent logged into a skill at the start of a shift or after being in the AUX work state, then that agent's occupancy was low. That agent was then bombarded with calls while agents already logged in maintained their current incoming call level. Effective with the DEFINITY ECS R8, agents who log into a skill or return from the AUX state are assigned an occupancy similar to existing agents in that skill. The assigned occupancy is an average of similar agents' occupancy levels. As a result, the incoming agent's call receipt flow is similar to that of the agents who have been in the skill for a period of time.

Reserve Agent Time in Queue Activation

Prior to the DEFINITY ECS R8, reserve agents were activated for a skill only if that skill's expected wait time (EWT) rose above pre-determined thresholds. However, under low traffic conditions, a call could be in queue longer than this threshold because no new calls had arrived to change the EWT for the skill and trigger an over threshold event.

Effective with the DEFINITY ECS R8, reserve agents can be activated if a call's time in queue exceeds the administered Service Level Supervisor threshold. This enhancement means that priority queuing may no longer be required to obtain a higher percentage answered within service level target on small volume (less than one call per minute) skills.

Reserve agents are dropped off of the skill only when both of the following conditions are met:

- The EWT for the skill drops below both administered thresholds
- The head call's time in queue no longer exceeds the Service Level Supervisor threshold.

Call Selection Override per Skill

Prior to the DEFINITY ECS R8, Call Selection Override (CSO) was administered only on a call center-wide basis. Effective with the DEFINITY ECS R8, call selection override can be administered on a per-skill basis.

When CSO is on, agents receive calls based on their assigned call handling preference as long as the skills are in an under-threshold state. Once a standard or reserve skill goes into an over-threshold state, agents with this skill who become available are diverted from their primary tasks and start receiving calls from the skill that is over-threshold.

This enhancement to CSO allows administrators to target the benefits of overriding agent skills to specific skills instead of having to apply it to the whole call center.

ATM Network Support

Asynchronous Transfer Mode (ATM) network support enhancements for the DEFINITY ECS R8 include:

- ACD Capacity Increases
- Site Statistics and Location IDs
- ATM Trunk Measurements

These enhancements support the combining of multiple call centers into a single large call center.

See the *DEFINITY® ECS R8 Administration for Network Connectivity* (555-233-501, Issue 2) and the *DEFINITY® ECS R8 System Description* (555-230-211, Issue 5) for details about the ATM Network support.

ACD Capacity Increases

Increases to the ACD capacities for the DEFINITY ECS R8r provide economical and efficient ways of tying together geographically dispersed sites into a single, seamless call center. These capacity increases are for increased applications; they do not increase traffic capacities and are available even if ATM is not used.

The increases are listed in the following table.

Table 1-5. New DEFINITY ECS R8r ACD Capacities

Feature	New Limit	Old Limit
Measured Vector Directory Numbers (VDNs)	20,000 ¹	8,000
Hunt Groups	999	600
Members per Group	1500	999
Queue Slots	25,000	15,000
Vectors	999	512
Recorded Announcements/Audio Sources	1,000	256

1. Limited by other extension assignments on the DEFINITY ECS and the *CentreVu* CMS interval and daily reporting (due to Informix database file size limits).

Site Statistics and Location IDs

Site statistics allows the use of multiple Location IDs from the DEFINITY ECS R8 to view agents on Expansion Port Networks (EPNs) as a group. Since Location IDs can be associated with trunks, trunks can also be tracked by site. The Location ID is used in reports. For more information about the Location ID and the reports that use it, refer to the reports section in Chapter 2 of this document.

This feature is supported in both the Expert Agent Selection (EAS) and non-EAS call centers.

Automatic Daylight Savings time changes for the switch clock (on PPN) is provided to the *CentreVu* CMS when the CMS is connected to a DEFINITY ECS R7.1 or newer.

ATM Trunk Measurements

The DEFINITY ECS R8 allows measurement of ATM trunks by expanding the circuit field in CMS messages to handle an increase in numbering from 32 to 256. This enhancement can be used to build multi-site call centers that can be monitored by one CMS and uses ATM networks that are already in use.

IP Trunk Measurements

The DEFINITY ECS R8 allows support of and measurement of IP trunks. This measurement is supported by the enhancements listed below.

- Sending an external IP trunk number identifier (Port ID) from DEFINITY to CMS.
- Conversion of the internal trunk IP number from DEFINITY UID view to CMS ITN view.
- Sending the IP trunk member Location ID from DEFINITY to CMS.

See the *DEFINITY® ECS R8 System Description* (555-230-211, Issue 5) for additional details about IP trunk measurements.

Callmaster V

The *Callmaster® V* is the call center edition of the 6416D+DCP telephone. The enhancements are listed below.

- Meets European requirements for international applications
- Headset jacks replace handset
- Addition of Recorder interface
- Removal of microphone for the built-in speaker phone
- Native administration support on the DEFINITY as a 607A station type.

See the *Callmaster® V Telephone User Guide* (555-233-735) reference for details about the Callmaster V.

DEFINITY ECS R8 Software Compatibility Matrix

Refer to the “CentreVu Software Compatibility Matrix” section at the end of the *CentreVu CMS R3V8 and Related Client/Server Enhancements* chapter for information on the versions of the DEFINITY ECS software packages that are compatible with the *CentreVu* software products.

CentreVu CMS R3V8 and Related Client/Server Enhancements

2

Overview

This chapter describes the enhancements included in *CentreVu* Call Management System (CMS) Release 3 Version 8 (R3V8), *CentreVu* Supervisor Version 8 (V8), *CentreVu* Visual Vectors Version 8 (V8), and *CentreVu* Explorer II.

Introduction

The sections of this chapter include:

- *CentreVu* CMS Capacities for R3V8
- *CentreVu* CMS R3V8 Database Item Additions
- *CentreVu* Supervisor V8 New Reports
- Error Messages
- *CentreVu* CMS R3V8/Supervisor V8 Serviceability Enhancements
- *CentreVu* CMS R3V8/Supervisor V8 ATM Support
- *CentreVu* CMS R3V8 Upgrade to *Solaris*®¹⁷
- *CentreVu* Explorer II Enhancements
- *CentreVu* Visual Vectors V8 Enhancements.

For a detailed description of the changes made in different issues (loads) of the *CentreVu* CMS R3V8 software, refer to the readme file on the software installation media.

1. Solaris is a trademark of Sun Microsystems, Inc.

CentreVu CMS Capacities for R3V8

The following table compares the maximum capacities of data that the *CentreVu* CMS R3V6 and R3V8 can accept. Changes in capacities from previous releases are discussed throughout this chapter.

Item	CMS R3V6	CMS R3V8
Automatic Call Distribution (ACD)		
Maximum Number of ACDs (multi-ACD configuration)	8	8
Maximum Staffed ACD members	10000	10000
Maximum administered Agent Login IDs	10000	10000
Maximum Splits	1000	1000
Maximum ACD Agents (per system) When Each Logs Into: ¹		
1 Split	10000	10000
2 Splits	5000	5000
3 Splits	3333	3333
4 Splits	2500	2500
Call Vectoring		
Steps per Vector	32	32
Vector Directory Numbers (VDNs)	8000	20000
CMS Measured VDNs ²	see footnote	see footnote
Vectors per CMS	4096	7992
Expert Agent Selection (EAS)		
Skill Groups	1000	1000
Maximum Skills	1000	1000
Maximum Administered Agent Login IDs ³	10000	10000
Maximum Staffed Agent Login IDs ⁴	10000	10000
Maximum Skills per Agent	20	20
Skill levels (preferences) per Agent Skill	16	16
Maximum logged in EAS Agents (per system) When Each Has: ⁵		
1 Skill	10000	10000
2 Skills	5000	5000
4 Skills	2500	2500

Item	CMS R3V6	CMS R3V8
10 Skills	1000	1000
20 Skills	500	500
Trunks and Trunk Groups		
Measured and Unmeasured Trunks in System	4000	4000
Trunk Groups in the System	666	666
Other Capacities		
Agent Traces Active	250	250
Agent Trace Records	500000	500000
BHCC	40000	40000
Call Records (internal)	NA	5000

- The number of agents that can log into the same split/skill is limited by the maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered and, with non-EAS, the additional splits assigned
- With *CentreVu* CMS R3V8 (and earlier) when more than 2,000 VDNs are activated, permission checking is made inactive for viewing and modifying individual VDNs. All other permission checking continues for other entities, such as vectors. The 2-GB file size limit imposed by Informix SE (Standard Database Engine) limits the number of intervals and therefore, days of historical VDN data that can be collected for large numbers of VDNs. The limits can be determined using: $Days=8,158/V$ where V=number VDNs (in thousands and I=number of collection intervals in a day ($I=60h/i$ where h=collection hours per day and i=interval period in minutes).
- Total of the administered Login ID skill-pair members (total of the agent skills and AAS ports). This limit can be reached only if 4 skills or less are assigned per Login ID due to the ACD Members Administered (skill-pair) limits. The following shows this.

Max. Login IDs With:	csi/si	r
• 1 to 4 Skills Each	1,500	10,000
• 10 Skills Each	600	6,500
• 20 Skills Each	300	3,250
- The number of agents that can log into the same split/skill is limited by the maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered and, with non-EAS, the additional splits assigned.
- The number of agents that can log into the same skill is limited by the Maximum Members per Group limits. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered.

CentreVu CMS R3V8 Database Item Additions

This section overviews the changes made to the database. The items covered include:

- Location ID
- AGDURATION
- BACKUPCALLS
- Greatest Need Database Items.

For detailed information on the *CentreVu* CMS R3V8 database items, refer to the *CentreVu[®] Call Management System Database Items* (585-210-939) document.

Location ID

Location ID is a new Dictionary feature. The Location ID is a number associated with one port network on a DEFINITY® R7.1 or later. Any hardware residing on a port network is assigned the port network's Location ID and identified by that ID number. The hardware tracked with this number includes the voice terminals agents use and trunks.

The Location ID can be used for agents and trunks. The Location ID assigned to voice terminal can be used to track individual agents. The Location ID assigned to trunks can be used to track trunks by location. VDNs, hunt groups, and vectors do not have Location IDs associated with them because they operate independently of locations.

The Location ID is used by the following reports:

- Real-time Agent Status by Location Report
- Historical Split/Skill by Location Report
- Real-time Split/Skill by Location Report.

Report Designer and Report Wizard allow users to select Location ID as a single or multi-user input for newly created custom reports as well as modified existing reports.

AGDURATION

This new database item is defined as the elapsed time since the last agent WORKMODE change or DIRECTION change for any split/skill.

For example, if the agent goes from AUX to AUXOUT, DIRECTION changes from NULL to OUT. When the DIRECTION changes to OUT, then AGDURATION is reset to zero to reflect the time the agent has been in the AUXOUT state. This will allow reports to show the time since the last agent state change and/or direction change for any split/skill.

The database item AGDURATION is related to the database item AGTIME. The difference is that AGTIME is **not** reset to zero when the DIRECTION changes to OUT. AGTIME continues without resetting. AGTIME does not reflect the time the agent was in the AUXOUT state. AGTIME has been defined this way since *CentreVu* CMS Release 3 Version 4 (R3V4).

Before *CentreVu* CMS R3V4; AGTIME behaved the same way that AGDURATION now does. Before *CentreVu* CMS R3V4; AGTIME did reset to zero when the DIRECTION changed to OUT and it did reflect the time the agent was in the AUXOUT state.

AGDURATION was added to accommodate customers who preferred the older definition of AGTIME.

The table below gives some very general and basic direction on when to use AGTIME and when to use AGDURATION.

Table 2-1. When to Use AGTIME and AGDURATION

Use AGTIME if...	Use AGDURATION if...
You need the definition of AGTIME in <i>CentreVu</i> CMS R3V8 to be consistent with its definition in <i>CentreVu</i> CMS R3V4, V5 and V6.	You want to use a database item that has the same definition as AGTIME did before <i>CentreVu</i> CMS R3V4.
You want a database item that measures the elapsed time since the last agent WORKMODE change for any split/skills.	You want a database item that measures the elapsed time since the last agent WORKMODE or DIRECTION change for any split/skills.
You do not want the database item to show the amount of time the agent spent on an AUXOUT call.	You do want the database item to show the amount of time the agent spent on an AUXOUT call.

AGDURATION is available for use in custom report development.

The four Real-time Agent reports that show AGTIME are:

- Agent Report
- Agent Group Report
- Agent Information Report (Non-EAS)
- Agent Graphical Information Report (EAS).

BACKUPCALLS

BACKUPCALLS was modified to make it easier to track the number of calls answered by agents with Reserve-1 and Reserve-2 levels. In *CentreVu* CMS R3V8, BACKUPCALLS peg calls answered by Advocate agents with a skill level or Reserve 1 or 2.

In previous versions Queue to Main Calls answered by these reserve agents were pegged as “Answered in Main.” This made it difficult to distinguish between calls that were “Answered in Main” by agents with a primary skill from agents with a reserve skill.

In *CentreVu* CMS R3V8, BACKUPCALLS is now defined as the number of ACD calls that were delivered to a split/skill by a vector command other than “Queue to” and the number of ACDCALLS that were delivered to the split/skill by a “Queue to” vector command answered by an agent that has either reserve 1 or 2 skill levels. Calls delivered by “Messaging split/skill”, “Check”, “Route to” and “Redirection On No Answer” are also counted as backup calls.

This database item is modified in the Split, VDN, Vector, and Trunk Group tables.

Greatest Need Database Items

New database items were added to correspond with the existing Greatest Need Real-time database items. The new database items are:

- GNINAUX0-9
- GNONACDAUXOUT
- GNONACDOUT
- GNONACWIN
- GNONACWOUT
- GNONAUXIN
- GNONAUXOUT
- GNDA_INACW
- GNDA_ONACD.

No new reports reflect these database items. Only custom reports use these database items.

CentreVu Supervisor V8 New Reports

This section lists the changes made to reports. The items covered include:

- *CentreVu* Advocate Reports
- Reports that use the Location ID
- Real-Time Multi-ACD Report.

For more detailed information on the changes to reports, see *CentreVu*[®] *CMS Supervisor Version 8 Reports* (585-210-929) and *CentreVu*[®] *Advocate Release 8 User Guide* (585-210-927) documents.

CentreVu Advocate Reports

The *CentreVu* Advocate reports that were available as custom reports in the previous release are now available via *CentreVu* Supervisor as standard reports. In some cases, these reports have been modified to run more successfully and more accurately report data. This set of *CentreVu* Advocate reports is available for all DEFINITY ECSs that support the Advocate feature, but you must be running *CentreVu* CMS R3V8 and Supervisor V8 for the reports to be available as standard reports.

The reports that were modified to be supported as standard reports are:

- Historical VDN Multi-ACD Flow Daily, Weekly, and Monthly reports
- Historical VDN Interval, Daily, Weekly and Monthly reports
- Historical Agent Summary Interval, Daily, Weekly, and Monthly reports
- Historical Agent Group Daily, Weekly, and Monthly reports.

With *CentreVu* CMS R3V8 and the DEFINITY ECS R8, four new *CentreVu* Advocate reports are also available. These reports use new calculations, which are embedded in the reports and are not in the CMS database. As a result, the new reports and calculations are available only with *CentreVu* Supervisor V8.

The new reports are:

- Historical Split/Skill Graphical ASA Daily Report
- Historical VDN Graphical Busy/Abandon/Disconnect Comparison Report
- Historical System Graphical Maximum Delay Report
- Historical Split/Skill Graphical Multi-ACD Service Level Daily Report.

Reports that Support Location ID

Several drill-down and exception reports were added or modified to support the Location ID.

Drill-Down Reports

Three new drill-down reports were added, including:

- Real-time Agent Status by Location Report
- Historical Split/Skill by Location Report
- Real-time Split/Skill by Location Report.

The following drill-down reports were modified to use a Location ID associated with an agent:

- Historical Agent Split/Skill Daily, Weekly and Monthly reports
- Historical Split/Skill Daily, Weekly, and Monthly reports.

The following drill-down reports were modified to include the Location ID:

- Work State Report
- Top Agent Work State Report
- Reserve1 AUX Work State Report
- Reserve2 AUX Work State Report.

Exception Reports

Three new exception reports were added, including:

- Agent Exceptions by Location Report
- Malicious Call Trace by Location Report
- Trunk Group Exceptions by Location Report.

Real-Time Multi-ACD Report

The real-time Multi-ACD report has been modified to include expected wait time (EWT) fields.

Error Messages

The table below outlines the *CentreVu* product error messages that are new in this release.

Table 2-2. Error Messages

Platform	Error Message	Meaning
<i>CentreVu</i> Supervisor	This version of <i>CentreVu</i> Supervisor is not compatible with the software on your <i>CentreVu</i> CMS server. Please upgrade your PC with the appropriate version of <i>CentreVu</i> Supervisor. Contact your <i>CentreVu</i> CMS system administrator.	This results from selecting a server that has software other than <i>CentreVu</i> CMS R3V6 or R3V8. <i>CentreVu</i> Supervisor V8 can access data from <i>CentreVu</i> CMS R3V6 or <i>CentreVu</i> CMS R3V8. <i>CentreVu</i> Supervisor V8 can access both data and ACDs from <i>CentreVu</i> CMS R3V8; however, Supervisor V6 cannot access <i>CentreVu</i> CMS R3V8.
<i>CentreVu</i> Visual Vectors Client	The user database (<Full path of the database>) is corrupt. Do you wish to replace it with a new database and continue?	Since Visual Vectors 1.0 does not understand Version 8.0 databases and cannot convert the client database; it will display this error message at startup. If you upgrade the server to V8, you must upgrade the client.
External Call History	ERROR: ECH buffer is at or above minimum threshold at <current%> percent full. ALARM: ECH buffer is at or above maximum threshold at <current%> percent full.	This is a "minor" alarm. When the ECH buffer reaches the minimum threshold for being filled, this error message is sent to elog and Alarm log. This error does not, by default, contact INADS, but can be administered to do so. This is a "major" alarm. Once the ECH buffer reaches the maximum threshold, this alarm message is sent to elog and Alarm log. This error does, by default, contact INADS. It can be administered not to contact INADS.

CentreVu CMS R3V8 Serviceability Enhancements

This section describes the serviceability enhancements made to *CentreVu* CMS R3V8. This set of enhancements reduces the possibility of a single point of failure and helps reduce data loss. The enhancements covered in this section are listed below.

- Historical Agent Events
- Data Collection During Backups and Restores
- Full Maintenance Backup and Restore Changes
- Data Collection During Migrations
- External Call History On/Off
- Alarm Enhancements.

For additional information about the backup and restore procedures in *CentreVu* CMS R3V8, refer to the *CentreVu*[®] *CMS R3V8 Administration* (585-210-910) and the *CentreVu*[®] *CMS R3V8 Maintenance and Troubleshooting* (585-210-919) documents.

Historical Agent Events

Historical agent events make the agent login/logout, agent trace data, and exception data into historical tables to allow backup and restore of that information to be possible while the link is active. Before *CentreVu* CMS R3V8, the link had to be taken down to back up this information. The link's downtime resulted in data loss. The ability to keep the link active while performing these routine maintenance activities minimizes data loss.

Data Collection During Backups and Restores

In previous versions, the data collection function had to be turned off in order to perform a cmsadm backup or a maintenance restore. *CentreVu* CMS R3V8 can backup and restore while the data collection remains on. This new ability helps minimize data loss.

Maintenance backups have also been slightly modified to support backing up data from one CMS server and restoring the data on another CMS server. However, once a cmsadm backup is started, logins through the ASCII interface, through *CentreVu* Supervisor, and through *CentreVu* Visual Vectors are blocked. A maintenance restore of CMS System Administration data or ACD Administration data requires *CentreVu* CMS to be in single-user mode.

Full Maintenance Backup and Restore Changes

Changes were made to the full maintenance backup and restore that include modification to what is and is not stored as part of the backup/restore of CMS System Administration data, Local Administration data, ACD-Specific Administration data, and Historical data. The following table shows what is included in backup/restore for each of these data types.

⇒ NOTE:

The term “CMS System Administration data” has replaced the term “System Administration data” from previous *CentreVu* CMS releases.

Table 2-3. Data Included in Backup/Restore

Local System Administration Data	CMS System Administration Data	ACD-Specific Administration Data	Historical Data
dcadmin	custobjects	aar_agents	ag_actv
dcalloc	db/ext	acd_shifts	agex
print_admin	db/gem/c_custom	acds	d_secs
/usr/lib/pbx/Aname	db/gem/h_custom	ag_ex_adm	dagent
/user/lib/pbx/Sname	db/gem/r_cusotm	agroups	dcwc
/user/lib/pbx/Pname	dbitems	arch_stat	dsplit
	cmstbls	dbstatus	dtkgrp
	features	sp_ex_adm	dtrunk
	h_custom	split_pro	dvdn
	main_menu	splits	dvector
	menu_add	synonyms	call_rec
	menu	tg_ex_adm	fullex
	pbx/master	tgroups	hagent
	pbx/simpbx	workcodes	haglog
	r_custom	vdn_pro	hcwc
	scwininfo	vdn_x_adm	hsplit
	sys_info	vdns	htkgrp
	user_colors	vec_x_adm	hsplit
	user_defval	vectors	hvdn
	users		hvector
	cow_reports/designer		linkex
	db/journal/shortcut		m_secs
	db/journal/timetable		magent
	ttsched		mcwc
	ttstasks		mctex
	ttsc		mctex

Continued on next page

Table 2-3. Data Included in Backup/Restore — Continued

Local System Administration Data	CMS System Administration Data	ACD-Specific Administration Data	Historical Data
	ttsc		msplit
			mtkgrp
			mtrunk
			mvdn
			mvector
			spex
			tgex
			vdnex
			vecex
			w_secs
			wagent
			wcwc
			wsplit
			wvvn
			wvector

Data Collection During Migrations

Non-disruptive migration is the ability to perform any of the *CentreVu* CMS Release 3 migrations with data collection turned on during the entire migration. This new ability helps minimize data loss.

External Call History On/Off

The administration of External Call History (ECH) is modified on the *CentreVu* CMS R3V8 to enable the ECH to be turned on and off. This administration is completed via the cmsadm menu. Turning ECH on and off does not disrupt data collection.

When ECH is turned on, the *CentreVu* CMS R3V8 server collects call record data, buffers the data, and sends the call record data to an external computer. When ECH is turned off, the *CentreVu* CMS R3V8 server collects, buffers, and then discards the call record data.

Alarm Enhancements

Two enhancements have been made to the alarms that are sent to the Technical Service Center (TSC) or the Centers of Excellence (COE) to assist in Lucent's ability to support *CentreVu* CMS R3V8 customers. The changes, manual alarm clear and ECH alarms, are outlined below.

Manual Alarm Clear

The TSC or the COE can now manually clear any of the alarms that are received from a CMS. These alarms include ACD link alarms, archiving alarms, disk alarms, and ECH alarms. This suite of alarms provides full coverage of data collection failures and ensures that Lucent Services is notified immediately of data collection failures. When data collection failures occur, Lucent Services can proactively correct the failure before a second failure occurs and causes the customer to lose data.

ECH Alarm

New External Call History (ECH) alarms that trigger when the call record data is nearing or exceeding the ECH buffer capacity are sent to the TSC or the COE. The ECH alarms are triggered when the parameters outlined in the Error Messages section of this chapter are met.

ATM Support

CentreVu CMS R3V8, *CentreVu* Supervisor V8, and *CentreVu* Visual Vectors V8 include enhancements to take advantage of the DEFINITY ECS R8 ATM networking features. This section covers the enhancements to the *CentreVu* products that have resulted from the ATM networking capability:

- ACD Capacity Increases
- Site Statistics
- ATM Trunk Measurements.

ACD Capacity Increases

ACD increases provide economical and efficient ways of tying together geographically dispersed sites into a single, seamless call center. These increases give *CentreVu* CMS R3V8, *CentreVu* Supervisor V8, and *CentreVu* Visual Vectors V8 the ability to support the new DEFINITY ECS ACD capacity increases and the related changes to split/skill, vector, and agent ranges in vector commands. These increases let ACDs handle enterprise-wide needs in addition to location-specific needs.

As with the previous release, one *CentreVu* CMS R3V8 server can support up to eight ACDs with the following VDN and vector capacities:

- 20,000 Vector Directory Numbers (VDNs) over up to eight ACDs (this number is limited by Informix database file size limits for *CentreVu* CMS interval reporting)
- 7,992 Vectors (with a maximum of 999 per ACD).

Site Statistics

Site statistics allows the use of the new multiple location Location IDs from the DEFINITY ECS R8 to view agents on Expansion Port Networks (EPNs) identified by the same Location ID as a group. Since Location IDs can be associated with trunks, trunks can also be tracked by site. The Location ID is used in reports.

CentreVu CMS R3V8 receives the Location ID associated with an agent's physical location from the DEFINITY ECS. This gives *CentreVu* Supervisor the ability to report on all of the agents who are located at a particular site.

For more information about the use of the Location ID in *CentreVu* Supervisor reports, see the reports section of this chapter.

ATM Trunk Measurements

CentreVu CMS R3V8 allows measurement of ATM trunks by expanding the circuit field in the CMS messages to handle an increase in numbering from 32 to 256.

CentreVu CMS R3V8 Use of Solaris 7

CentreVu CMS R3V6 used Solaris 2.5.1. *CentreVu* CMS R3V8 uses Solaris 7. This change occurred because Sun is discontinuing Solaris 2.5.1.

See the *CentreVu*[®] *CMS R3V8 Installation and Setup* (585-210-941) document for details around the installation of *CentreVu* CMS with Solaris 7.

CentreVu Explorer II Enhancements

CentreVu Explorer II has the following enhancements.

- Enhanced query capability:
 - Creation of ad hoc (provisional) queries
 - Conditional queries (and/or, and <, >, =, <>, >=, <=, grouping)
 - Ability to save queries
 - Time of day and day of week queries contain enhanced query features
- Includes data export capability to other applications
- Supports multiple CMSs
- Removes the 500-row limitation on queries
- Migrates *CentreVu* CMS Data Dictionary synonyms to the *Explorer* database.

See the *CentreVu*[®] *Explorer II User Guide* (585-218-200) for details around the *Explorer II* product and its use.

CentreVu Visual Vectors V8 Enhancements

CentreVu CMS R3V8 is compatible with *CentreVu* Visual Vectors Version 8 (V8) instead of *CentreVu* Visual Vectors Version 1 (V1). No features, error messages or maintenance procedures were added to *CentreVu* Visual Vectors V8. However, *CentreVu* Visual Vectors V8 does make use of capacity increases, including:

- 1,000 Vectors

 **NOTE:**

Any one switch can have up to 999 vectors and CMS can measure 1000 vectors. Therefore, *CentreVu* Visual Vectors V8 is only able to reach up to vector number 999 on any switch.

- 1,500 Agents
- 999 Skill IDs.

See the *CentreVu*[®] *Visual Vectors V8 User Guide* (585-210-932) for details about the Visual Vectors product and its use.

CentreVu Software Compatibility Matrix

The following matrix shows the versions of the *CentreVu* software packages that are compatible with one another.

Table 2-4. Lucent Complex Call Center Release 8 Software Compatibility Matrix

Complex Call Center Release 8 Software Version	DEFINITY	CMS	Supervisor	Visual Vectors	Explorer
DEFINITY R8.X	NA	R3V5 or greater	Based on CMS	Based on CMS	Based on CMS
CMS R3V8	G3V2, G3V3, G3V4, R5.0, R6.X, R7.1, R8.X	NA	V8	V8	II
Supervisor V8	G3V2, G3V3, G3V4, R5.0, R6.X, R7.1, R8.X	R3V6, R3V8	NA	V8 ¹	NA
Visual Vectors V8	R6.3, R7.1, R8.X	R3V6 (load AS.G or greater), R3V8	V6 or later	NA	NA
Explorer II	Based on CMS	R3V6, R3V8	NA	NA	NA

1. You can start/access the *CentreVu* Visual Vectors application from a button within the *CentreVu* Supervisor interface.

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