



# **Avaya Contact Center 2.0 and Call Management System (CMS)**

Release 12

Change Description

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

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

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

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

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

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- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

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- Installation documents
- System administration documents
- Security documents
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- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
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November 2003

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

<http://www.avaya.com>

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

#### Comments

To comment on this document, send e-mail to [crminfodev@avaya.com](mailto:crminfodev@avaya.com).

#### Acknowledgment

This document was written by the CRM Information Development group.

# Avaya Contact Center 2.0 and CMS Release 12 Change Description

## Contents

<b>Preface</b> . . . . .	<b>7</b>
Purpose of this document . . . . .	7
Intended users of this document . . . . .	7
About Avaya CMS . . . . .	8
Which documents do I use? . . . . .	8
Product name changes . . . . .	10
Safety labels . . . . .	10
Reasons for reissuing this document . . . . .	11
Availability . . . . .	12
Related documentation . . . . .	13
Software documents . . . . .	13
Administration documents . . . . .	13
Avaya CMS upgrade documents . . . . .	14
Base load upgrades . . . . .	14
Platform upgrades and data migration . . . . .	14
Avaya Call Management System Upgrade Express (CUE) . . . . .	14
Hardware documents . . . . .	15
Communication Manager documents . . . . .	15
Documentation Web sites . . . . .	16
Support . . . . .	17
<b>Chapter 1: Supported hardware and software</b> . . . . .	<b>19</b>
Impacted documentation . . . . .	20
CMS hardware . . . . .	21
Supported hardware platforms . . . . .	21
Non supported hardware platforms . . . . .	21
Serial connectivity . . . . .	21
CMS and LAN backup software . . . . .	22
Supported CMS software . . . . .	22
LAN backup software . . . . .	23
Supervisor and Network Reporting software . . . . .	24
Service packs and patches . . . . .	24
Supported platforms . . . . .	24
Nonsupported platforms . . . . .	24
Switch hardware and software . . . . .	25
Supported switches . . . . .	25

## Contents

Supported connections to the switch . . . . .	25
<b>Chapter 2: Solaris security changes . . . . .</b>	<b>27</b>
Impacted documentation . . . . .	28
Network services changes . . . . .	29
Operating system configuration changes . . . . .	31
Customer security recommendations . . . . .	32
<b>Chapter 3: External Call History changes . . . . .</b>	<b>33</b>
Overview . . . . .	34
Impacted documentation . . . . .	35
File header changes . . . . .	36
R12 call record enhancements . . . . .	37
Call record field descriptions . . . . .	38
auth_display changes . . . . .	39
pkg_install changes . . . . .	40
Changing the call record format . . . . .	41
<b>Chapter 4: Avaya CMS R12 enhancements . . . . .</b>	<b>45</b>
SSH enhancements . . . . .	46
Impacted documentation . . . . .	46
Description of SSH . . . . .	46
Using SSH . . . . .	47
SSH configuration. . . . .	47
SSH tools . . . . .	47
Capacity increases . . . . .	48
Impacted documentation . . . . .	48
Overview of capacity increases . . . . .	48
Supported only on S8700 and S8500 . . . . .	48
SLM . . . . .	49
MAO . . . . .	50
Adding ACDs to ACD Groups . . . . .	50
<b>Chapter 5: Database items and table additions . . . . .</b>	<b>51</b>
Database changes for capacity increases . . . . .	52
LOGONSKILL21 through LOGONSKILL60 (real-time) . . . . .	52
SKLEVEL21 through SKLEVEL60 . . . . .	52
SKPERCENT21 through SKPERCENT60 . . . . .	52
WORKSPLIT21 through WORKSPLIT60 (real-time) . . . . .	53
Database changes for SLM . . . . .	54
I_AUTORESERVETIME. . . . .	54
I_BEHINDTIME. . . . .	54
TARGETABNS . . . . .	54
TARGETACDCALLS . . . . .	54
TARGETOUTFLOWS . . . . .	55

TARGETPCTCHG . . . . .	55
TARGETPERCENT . . . . .	55
TARGETSECCHG . . . . .	55
TARGETSECONDS . . . . .	55
Calculations for SLM . . . . .	56
ART (Actual Relative to Target) . . . . .	56
PERCENT_SK_AVAIL . . . . .	56
<b>Chapter 6: Report changes . . . . .</b>	<b>57</b>
SLM report changes . . . . .	58
ART reports . . . . .	58
Things to know about these reports . . . . .	58
ART real-time report . . . . .	58
Report example . . . . .	59
ART historical reports . . . . .	59
Daily report . . . . .	59
Interval report . . . . .	60
Report example . . . . .	61
ART integrated report . . . . .	61
BEHIND and AUTORSV skill states . . . . .	61
PERCENT_SK_AVAIL calculation . . . . .	62
New Avaya Business Advocate reports . . . . .	63
Impacted documentation . . . . .	63
Description of reports . . . . .	63
Best Service Routing reports . . . . .	66
Impacted documentation . . . . .	66
Description of reports . . . . .	66
<b>Chapter 7: Avaya CMS R12 CUE changes . . . . .</b>	<b>69</b>
Overview . . . . .	70
Impacted documentation . . . . .	71
Supported CMS loads for CUE upgrades . . . . .	72
<b>Chapter 8: Avaya Communication Manager enhancements . . . . .</b>	<b>73</b>
Impacted documentation . . . . .	73
Variables in Vectors . . . . .	74
Send ASAI UUI data to CMS . . . . .	74
NCR ETSI-ECT . . . . .	75
Local treatment for remotely queued IP and ISDN calls . . . . .	75
SLM and MAO . . . . .	76
Capacity increases . . . . .	76
<b>Index . . . . .</b>	<b>77</b>

## **Contents**



# Preface

This section includes the following topics:

- [Purpose of this document](#) on page 7
- [Intended users of this document](#) on page 7
- [About Avaya CMS](#) on page 8
- [Which documents do I use?](#) on page 8
- [Product name changes](#) on page 10
- [Safety labels](#) on page 10
- [Reasons for reissuing this document](#) on page 11
- [Availability](#) on page 12
- [Related documentation](#) on page 13

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## Purpose of this document

The purpose of this document is to describe the new or changed features in Release 12, and help you understand how upgrading from an Avaya CMS Release R3V11 to an Avaya CMS Release 12 can impact your contact center. This document includes information on Avaya Communication Manager 2.0, CMS R12, and CMS Supervisor R12 upgrades.

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## Intended users of this document

This document is written for new contact center customers or existing customers who are upgrading from an Avaya CMS Release 11 to an Avaya CMS Release 12.

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## About Avaya CMS

Avaya Call Management System (CMS) is a software application that is offered in association with the Automatic Call Distribution (ACD) feature in Avaya switches. The CMS application provides monitoring and recording of ACD calls and agents handling these calls, and the use of Vector Directory Numbers (VDNs) for these calls to measure contact center performance.

This document provides the new features and enhancements for the following Avaya Customer Interaction Suite solutions.

Solution	Product
Contact Management solution	Call Center Software 2.0
Operational Effectiveness solution	Call Management System (CMS) R12 and CMS Supervisor R12

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## Which documents do I use?

Some documents are updated for Release 12 and others are not.

- For documents *not* updated, use the R3V11 documents and this change description.
- For updated documents, use this change description as an overview, but see the Release 12 version for details.

**Note:**

For document numbers, see [Related documentation](#) on page 13.

Document	Updated or new for R12?
<i>Avaya Business Advocate - R11 User Guide</i>	No
<i>Avaya Call Center Little Instruction Book for Advanced Administration</i>	No
<i>Avaya Call Center Little Instruction Book for Basic Administration</i>	No
<i>Avaya CMS - Open Database Connectivity</i>	No
<i>Avaya CMS Custom Reports</i>	No

Which documents do I use?

<b>Document</b>	<b>Updated or new for R12?</b>
<i>Avaya CMS Database Items and Calculations</i>	Yes
<i>Avaya CMS Forecast</i>	No
<i>Avaya CMS LAN Backup User Guide</i>	Yes
<i>Avaya CMS R12 Baseload Upgrades</i>	Yes
<i>Avaya CMS R12 Change Description</i>	Yes
<i>Avaya CMS R12 CUE Customer Requirements</i>	New
<i>Avaya CMS R12 Software Installation, Maintenance and Troubleshooting</i>	Yes
<i>Avaya CMS R12 Sun Blade 100/150 Workstation CUE</i>	Yes
<i>Avaya CMS R12 Sun Blade 100/150 Workstation Mirrored System CUE</i>	Yes
<i>Avaya CMS R12 Sun Enterprise 3500 Computer CUE</i>	New
<i>Avaya CMS R12 Sun Enterprise 3500 Computer Mirrored System CUE</i>	Yes
<i>Avaya CMS R12 Sun Fire V880 Computer CUE</i>	Yes
<i>Avaya CMS R3V11 Database Items and Calculations</i>	No
<i>Avaya CMS R3V11 External Call History Interface</i>	No
<i>Avaya CMS R3V11 High Availability Installation, Maintenance and Connectivity</i>	No
<i>Avaya CMS R3V11 High Availability User Guide</i>	No
<i>Avaya CMS R3V11 LAN Backup User Guide</i>	No
<i>Avaya CMS R3V11 Platform Upgrade and Data Migration</i>	No
<i>Avaya CMS R3V11 Administration</i>	No
<i>Avaya CMS Sun Blade 100/150 Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya CMS Sun Enterprise 3500 Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya CMS Sun Fire V880 Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya CMS Supervisor R11 Report Designer User Guide</i>	No

Document	Updated or new for R12?
<i>Avaya CMS Supervisor R12 Installation and Getting Started</i>	Yes
<i>Avaya CMS Supervisor Reports</i>	Yes
<i>Avaya CMS Switch Connections, Administration, and Troubleshooting</i>	No
<i>Avaya CMS Terminals, Printers, and Modems</i>	No
<i>Avaya Communication Manager Contact Center Guide to Call Vectoring and EAS 2.0</i>	Yes
<i>Avaya Communication Manager Guide to ACD Contact Center 2.0</i>	Yes
<i>Avaya Visual Vectors Installation and Getting Started</i>	No
<i>Avaya Visual Vectors User Guide</i>	No

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## Product name changes

As a result of rebranding, some Avaya product names have changed with Release 12. The changes are described in the following table.

New product, portfolio, or family name	Former name
Avaya Communication Manager	Avaya MultiVantage™ Software

---

## Safety labels

If you see any of the following safety labels in this document, take careful note of the information presented.

 **CAUTION:**

Caution statements call attention to situations that can result in harm to software, loss of data, or an interruption in service.

 **WARNING:**

Warning statements call attention to situations that can result in harm to hardware or equipment.

 **DANGER:**

Danger statements call attention to situations that can result in harm to personnel.

 **SECURITY ALERT:**

Security alert statements call attention to situations that can increase the potential for unauthorized use of a telecommunications system.

---

## Reasons for reissuing this document

This is the first issue of this document.

## Availability

Copies of this document are available from one or both of the following sources:

**Note:**

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- The Avaya Publications Center, which you can contact by:

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Haverhill, MA 01835 USA  
Attention: Avaya Account Manager

**E-mail:**

[totalware@gwsmail.com](mailto:totalware@gwsmail.com)

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## Related documentation

You might find the following Avaya CMS documentation useful. This section includes the following topics:

- [Software documents](#) on page 13
- [Administration documents](#) on page 13
- [Avaya CMS upgrade documents](#) on page 14
- [Hardware documents](#) on page 15
- [Communication Manager documents](#) on page 15
- [Documentation Web sites](#) on page 16

---

## Software documents

For more information about Avaya CMS software, see:

- *Avaya Call Management System R12 Software Installation, Maintenance, and Troubleshooting*, 585-215-117
- *Avaya CMS Open Database Connectivity*, 585-780-701
- *Avaya Call Management System R12 LAN Backup User Guide*, 585-215-721
- *Avaya CMS R3V11 External Call History Interface*, 585-780-700
- *Avaya CMS Custom Reports*, 585-215-822
- *Avaya CMS Forecast*, 585-215-825
- *Avaya Visual Vectors Version 11 Installation and Getting Started*, 585-210-706
- *Avaya Visual Vectors Version 11 User Guide*, 585-210-709

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## Administration documents

For more information about Avaya CMS administration, see:

- *Avaya Call Management System Release 3 Version 11 Administration*, 585-215-515
- *Avaya Call Management System Database Items and Calculations*, 07-300011
- *Avaya CMS Supervisor Release 12 Reports*, 07-300012
- *Avaya CMS Supervisor Release 12 Installation and Getting Started*, 07-300009

---

## Avaya CMS upgrade documents

There are several upgrade paths supported with Avaya CMS. There is a document designed to support each upgrade. None of the following upgrade documents are available from the publications center.

This section includes the following topics:

- [Base load upgrades](#) on page 14
- [Platform upgrades and data migration](#) on page 14
- [Avaya Call Management System Upgrade Express \(CUE\)](#) on page 14

### Base load upgrades

Use a base load upgrade when upgrading CMS to the latest load of the same version (for example, R3V9 ak.g to R3V9 al.k). A specific set of instructions is written for the upgrade and is shipped to the customer site with the CMS software CD-ROM as part of a Quality Protection Plan Change Notice (QPPCN).

For more information about base load upgrades, see:

- *Avaya CMS R12 Base Load Upgrades*

### Platform upgrades and data migration

Use a platform upgrade when upgrading to a new hardware platform (for example, upgrading from a SPARCserver 5 to a Sun Blade 150). The new hardware platform is shipped from the Avaya factory with the latest CMS load. Therefore, as part of the upgrade you will have the latest CMS load (for example, R3V9 to R12 or the latest load of the same CMS version). For R12, a specific set of instructions is written for the upgrade and is shipped to the customer site with the new hardware.

For more information about platform upgrades and data migration, see:

- *Avaya Call Management System Release 3 Version 11 Platform Upgrade and Data Migration*

### Avaya Call Management System Upgrade Express (CUE)

Use CUE in the following conditions:

- CMS is being upgraded from an earlier version (for example R3V6) to the latest version (for example, R12).
- The hardware platform is not changing.

A specific set of upgrade instructions is written for the upgrade and is shipped to the customer site with the CUE kit.

For more information about CUE upgrades, see:

- *Avaya Call Management System (CMS) Release 12 CMS Upgrade Express (CUE) Customer Requirements, 07-300010*
- *Avaya Call Management System Release 12 Sun Blade 100 Workstation CMS Upgrade Express*
- *Avaya Call Management System Release 12 Sun Blade 100 Workstation Mirrored System CMS Upgrade Express*
- *Avaya Call Management System Release 12 Sun Enterprise 3500 Computer CMS Upgrade Express*
- *Avaya Call Management System Release 12 Sun Enterprise 3500 Computer Mirrored System CMS Upgrade Express*
- *Avaya Call Management System Release 12 Sun Fire V880 Computer CMS Upgrade Express*

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## Hardware documents

For more information about Avaya CMS hardware, see:

- *Avaya Call Management System Sun Fire V880 Computer Hardware Installation, Maintenance, and Troubleshooting, 585-215-116*
- *Avaya Call Management System Sun Fire V880 Computer Connectivity Diagram, 585-215-612*
- *Avaya Call Management System Sun Blade 100/150 Computer Hardware Installation, Maintenance, and Troubleshooting, 585-310-783*
- *Call Management System Sun Blade 100/150 Computer Connectivity Diagram, 585-310-782*
- *Avaya Call Management System Sun Enterprise 3500 Computer Hardware Installation, Maintenance, and Troubleshooting, 585-215-873*
- *Call Management System Sun Enterprise 3500 Computer Connectivity Diagram, 585-215-877*
- *Avaya Call Management System Terminals, Printers, and Modems, 585-215-874*

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## Communication Manager documents

For more information about Avaya CMS communication servers, see:

- *Avaya Call Management System Switch Connections, Administration, and Troubleshooting, 585-215-876*

## Preface

- *Avaya Communication Manager Call Center Guide to Call Vectoring and Expert Agent Selection (EAS) R2.0 Guide, 555-245-783*
- *Avaya Communication Manager Guide to ACD Call Center R2.0, 555-245-784*

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## Documentation Web sites

For product documentation for all Avaya products and related documentation, go to <http://www.avayadocs.com>. Additional information about new software or hardware updates will be contained in future issues of this book. New issues of this book will be placed on the Web site when available.

Use the following Web sites to view related support documentation:

- Information about Avaya products and service  
<http://www.avaya.com>
- Sun hardware documentation  
<http://docs.sun.com>
- Okidata printer documentation  
<http://www.okidata.com>
- Informix documentation  
<http://www.informix.com>
- Tivoli Storage Manager documentation  
<http://www.tivoli.com>

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# Support

## **Contacting Avaya technical support**

Avaya provides support telephone numbers for you to report problems or ask questions about your product.

For United States support:

1- 800- 242-2121

For international support:

See the [1-800 Support Directory](#) listings on the Avaya Web site.

## **Escalating a technical support issue**

Avaya Global Services Escalation Management provides the means to escalate urgent service issues. For more information, see the [Escalation Management](#) listings on the Avaya Web site.

## **Preface**



# Chapter 1: Supported hardware and software

This section describes the supported hardware and software for Avaya Call Center Management (CMS) Release 12.

This section includes the following topics:

- [Impacted documentation](#) on page 20
- [CMS hardware](#) on page 21
- [CMS and LAN backup software](#) on page 22
- [Supervisor and Network Reporting software](#) on page 24
- [Switch hardware and software](#) on page 25

---

## Impacted documentation

The following documents are impacted by the Avaya CMS R12 supported hardware and software.

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

<b>Document</b>	<b>Updated for R12?</b>
<i>Avaya Call Management System (CMS) Sun Blade 100/150 Workstation Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya Call Management System (CMS) Sun Enterprise 3500 Computer Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya Call Management System (CMS) Sun Fire V880 Computer Hardware Installation, Maintenance, and Troubleshooting</i>	No
<i>Avaya Call Management System Release 12 LAN Backup User Guide</i>	Yes
<i>Avaya Call Management System Release 12 Software Installation, Maintenance, and Troubleshooting</i>	Yes
<i>Avaya Call Management System Switch Connections, Administration, and Troubleshooting</i>	No
<i>Avaya Call Management System Terminals, Printers, and Modems</i>	No
<i>Avaya CMS R3V11 High Availability Connectivity, Upgrade and Administration</i>	No
<i>Avaya CMS R3V11 High Availability User Guide</i>	No

---

## CMS hardware

This section includes the following topics:

- [Supported hardware platforms](#) on page 21
- [Non supported hardware platforms](#) on page 21
- [Serial connectivity](#) on page 21

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## Supported hardware platforms

The following hardware platforms are supported for Avaya CMS R12:

- Sun Fire V880 - updated from a dual 900 MHz CPU to a dual 1.2 GHz CPU
- Sun Blade 150 - updated from a 40 GB to an 80 GB internal disk drive
- Sun Blade 100
- Sun Enterprise 3500

---

## Non supported hardware platforms

CMS R12 does not support the Sun Enterprise 3000 or the Sun Ultra 5 platforms. If you have one of these platforms, you must upgrade to either a Sun Fire V880 or Sun Blade 150.

### **See also:**

To upgrade to a new platform and migrate your CMS data, see the procedures in *Avaya Call Management System (CMS) Release 3 Version 11 Platform Upgrade and Data Migration*

---

## Serial connectivity

Avaya CMS R12 only supports serial connections to an NTS. No other serial connections are supported.

## CMS and LAN backup software

This section includes the following topics:

- [Supported CMS software](#) on page 22
- [LAN backup software](#) on page 23

---

## Supported CMS software



### Important:

CMS backups are no longer service affecting.

Avaya CMS R12 supports the following software:

- Solaris 9
- Software Supplement for the Solaris 9 Operating Environment, which contains:
  - Sun Online Validation Test Suite (VTS)
  - Sun Remote System Control (RSC) software (optional)
  - Sun Fire V880 backplane firmware upgrade package (required for Sun Fire V880 platforms)
- CMS Hardware Drivers CD-ROM (optional)
- Annex Communication Server R10.0(B) Annex Host Tools (required only for systems using Network Terminal Servers)
- Informix SQL version 7.32.UC1 (optional)
- Informix IDS 9.40.UC1G2
- Informix Client SDK 2.70
- Informix Int'l Language Supplement (ILS) version 3.20
- Call Management System R12 Supplemental Services
- Avaya CMS R12 CD-ROM, also contains:
  - Sun Solaris patches
  - CMS patches (if necessary)
  - Avaya security script
- OPENLINK Open Database Connectivity version 4.2 (optional)
- Avaya Visual Vectors Server Software CD-ROM (optional)

**Note:**

Volume Manager replaces DiskSuite in Solaris 9. Volume Manager is automatically installed with the Solaris 9 operating system.

---

## LAN backup software

Tivoli Storage Manager (TSM) Version 5.2.0 is supported with Avaya CMS R12.

**See also:**

For more information about the TSM installation, see *Avaya Call Management System Release 12 LAN Backup User Guide*.

## Supervisor and Network Reporting software

This section includes the following topics:

- [Service packs and patches](#) on page 24
- [Supported platforms](#) on page 24
- [Nonsupported platforms](#) on page 24

---

### Service packs and patches

To ensure compatibility and security, you must install the latest service packs and security patches for your supported Microsoft operating system prior to installing Avaya CMS R12 Supervisor and Network Reporting.

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### Supported platforms

The following platforms are supported for Supervisor and Network Reporting:

- Windows NT 4.0
- Windows 2000
- Windows XP Professional
- Windows XP Home
- Windows Millennium Edition
- Windows 98

---

### Nonsupported platforms

Windows XP Tablet PC Edition and Windows 95 are not supported.

---

## Switch hardware and software

This section includes the following topics:

- [Supported switches](#) on page 25
- [Supported connections to the switch](#) on page 25

---

### Supported switches

The following switch releases are supported for Avaya CMS R12:

- Definity R8
- Definity R9/R10
- Avaya Communication Manager R1 (may display as Avaya MultiVantage R1 on some screens)
- Avaya Communication Manager R2

---

### Supported connections to the switch

Avaya CMS R12 only supports TCP/IP connections to the switch. X.25 connections are not supported. When using the *Avaya CMS Switch Connections, Administration, and Troubleshooting* document, use only the information that documents TCP/IP over a LAN. Do not use the information about X.25.

## Supported hardware and software



## Chapter 2: Solaris security changes

This section describes the changes that were made to the Solaris 9 operating system configuration for Avaya Call Management System (CMS) Release 12.

This section includes the following topics:

- [Impacted documentation](#) on page 28
- [Network services changes](#) on page 29
- [Operating system configuration changes](#) on page 31
- [Customer security recommendations](#) on page 32

## Impacted documentation

The following documents are impacted by the Solaris security changes.

**Note:**

For the document number, see [Related documentation](#) on page 13.

<b>Document</b>	<b>Updated for R12?</b>
<i>Avaya Call Management System Release 12 Software Installation, Maintenance, and Troubleshooting</i>	Yes

---

## Network services changes

The network services that are not used by CMS R12 are disabled. Network services that are part of Professional Services Organization (PSO) offers are still enabled.

The disabled services are:

- Cache File System
- CDE Calendar
- CDE Desktop Subprocess Control Daemon (CDE is enabled, remote CDE is not)
- Chargen
- Daytime
- Discard
- Echo (network echo)
- Finger
- FTP (inbound)
- Kerberos V5 Warning Message Daemon
- Name
- NFS Server
- NFS Client
- NIS Client
- OCF (Smart card) Daemon
- Printer (Network printing services, local printing is enabled)
- Rexec
- Rsh
- Rlogin
- Rexec
- Metastat Remote Services
- Sadmind (distributed sys admin agent)
- Sendmail (inbound)
- Spray
- Sun Font Server
- Sun ToolTalk Database Server
- Talk

## **Solaris security changes**

- Uucp Network services
- Time Service
- Wall

---

# Operating system configuration changes

The CMS R12 installation now requires you to run the Avaya security script. The security script makes the following operating system configuration changes:

- Root logins are only permitted at the console and over modem connections.
- The following users can access **cron**:
  - root
  - sys
  - lp
  - adm
  - cmssvc
- The following users can access **at**:
  - root
  - sys
  - cmssvc
- The umask for system daemons is 022
- The system stack is non-executable
- It is more difficult to determine TCP sequence numbers
- Remote Common Desktop Environment (CDE) sessions are disabled
- Users can access the CMS R12 system using Secure SHell (SSH). SSH is a secure replacement for telnet that encrypts data before it is sent over the network. Avaya CMS R12 supports SSH connections from terminals and Avaya CMS R12 Supervisor.
- Secure FTP (SFTP) is replacing FTP. Inbound FTP connections are no longer available on CMS R12 servers. If you need to use inbound FTP, use SFTP instead. SFTP encrypts data sent over the network and is included as part of the SSH package.

## Customer security recommendations

Avaya has provided customers with security recommendations that customers can use to make their CMS R12 system more secure. These security recommendations will not guarantee complete system security, but they will make the CMS R12 system less susceptible to illegal system access.

**See also:**

For more information, see the customer security recommendations in *Avaya Call Management System Release 12 Software Installation, Maintenance, and Troubleshooting*.



## Chapter 3: External Call History changes

This section includes the following topics:

- [Overview](#) on page 34
- [Impacted documentation](#) on page 35
- [File header changes](#) on page 36
- [R12 call record enhancements](#) on page 37
- [Call record field descriptions](#) on page 38
- [auth\\_display changes](#) on page 39
- [pkg\\_install changes](#) on page 40
- [Changing the call record format](#) on page 41

## Overview

The External Call History Interface (ECHI) software for Avaya Call Management System (CMS) Release 12 allows you to choose either the standard call record format or the extended record format. You can choose to use the standard call record format if you have a reporting application that supports only the R3V11 call record format and still upgrade your CMS system to R12. If your reporting application supports the R12 record format, you can use the R12 extended call record enhancements.

---

## Impacted documentation

The following documents are impacted by the ECHI changes.

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

<b>Document</b>	<b>Updated for R12?</b>
<i>Avaya Call Management System Release 12 Software Installation, Maintenance, and Troubleshooting</i>	Yes
<i>Avaya Call Management System Release 3 Version 11 External Call History Interface</i>	No

## File header changes

If you use the standard call record format, the **VERSION** field will contain an 11 for every file header.

If you use the extended call record format, the **VERSION** field will contain a 12 for every file header.

---

# R12 call record enhancements

The extended call record enhancements will not be available for use if you choose to use the standard call record format. The extended call record includes:

- The first nine VDNs and the last VDN associated with a call segment.

The existing **FIRSTVDN** data item contains the first VDN and **DISPVDN** contains the final VDN. The following data items contain VDNs 2 through 9:

- **VDN2**
- **VDN3**
- **VDN4**
- **VDN5**
- **VDN6**
- **VDN7**
- **VDN8**
- **VDN9**

**VDN2** through **VDN9** are populated only when a call touches more than one measured VDN. Data items that are not populated are NULL. **DISPVDN** is usually populated with the same values as the last VDN populated. If the last VDN populated was **VDN9**, then **DISPVDN** will include the same values as **VDN9**. The exception to this rule is when there are 10 or more VDNs associated with a call.

- The time a call spends in queue for a call segment

**QUEUETIME** is the time from when a call first queues to a skill until it starts ringing at an agent. If a call consists of multiple segments, the queue time includes the time associated with that segment. The default is 0 if there is no queue time. **QUEUETIME** is stored for all Avaya CMS R12 supported switch releases.

- The time a call spends ringing at an agent station for a call segment

**RINGTIME** includes all ring time. This is the time a call spends ringing at an agent position and is independent of the final disposition of the call and ring time associated with RONA. If a call consists of multiple segments, each segment contains its associated ring time. The default is 0 if there is no ring time. **RINGTIME** is stored for all Avaya CMS R12 supported switch releases.

- The last ASAI user-to-user information associated with a call segment

If an **ASAIUUI** is not sent, then this field will be NULL. The default length is 0 if a UUI is not provided by the switch.

- The length of the UUI information in bytes

The field name is **UUI\_LEN**.

---

## Call record field descriptions

The following table contains the call record field description information.

Field name	Type	Maximum length	Field location in the call record
<b>VDN2 through VDN9</b>	char	8 bytes	Found at the end of the call record in numeric order.
<b>QUEUETIME</b>	integer	4 bytes	Found after <b>ORIGHOLDTIME</b>
<b>RINGTIME</b>	integer	4 bytes	Found after <b>QUEUETIME</b>
<b>ASAIUII</b>	unsigned char	96 bytes	Found after <b>VDN9</b>
<b>UUI_LEN</b>	short integer	2 bytes	Found after <b>OBS_LOCID</b>

---

## auth\_display changes

When you use the `auth_display` option, the system can display the following ECHI authorizations.

<b>Authorization</b>	<b>Description</b>
Installed	The ECHI package has been installed.
On	The ECHI package has been turned on.
Off	The ECHI package has been turned off.
Standard	The ECHI package is using the standard record format.
Extended	The ECHI package is using the extended record format.
Authorized	The ECHI package has been authorized but not installed.
Not authorized	The ECHI package has not been authorized.

## pkg\_install changes

The Avaya CMS R12 ECHI software installation includes the option to use the extended record format. After you enter the number of call segments to buffer for your ACDs, the system displays the following message:

```
Use the extended ECH record format (y/n):(default: n)
```

You must choose to use the extended ECH record format or the R3V11 standard record format. If you select **n**, you will use standard record format. If you select **y**, you will use extended record format.

**Note:**

You can also use the `run_pkg` option to change the ECH record format at a later time.

**See also:**

For more information, see [Changing the call record format](#) on page 41.

---

# Changing the call record format

To change the current call record format:

**Note:**

If you do not need to preserve the buffered call record data you can start this procedure at Step 10.

1. Enter:

**cmsadm**

The system displays the **CMSADM** menu.

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

The system displays a list of the installed CMS R12 features.

3. Enter the number associated with the `external call history` option.

The system displays one of the following messages depending on the current state of the ECHI software:

- If ECHI is on, the system displays the following message:

```
External Call History is on. Do you wish to turn it off? (y/n)
```

- If ECHI is off, the system displays the following message:

```
External Call History is off. Do you wish to turn it on? (y/n)
```

4. Choose one of the following actions:

- If External Call History is currently *on*, select: **y**
- If External Call History is currently *off*, perform the following procedure:
  - Select: **n**

The system displays the following message:

```
You are using the xxxxxxxx record format.
Do you wish to change the format to the xxxxxxxxx ECH record
format? (y/n):(default: n)
```

- Select: **n**

5. Enter:

**cmsadm**

The system displays the **CMSADM** menu.

## External Call History changes

6. Enter the number associated with the `run_pkg` option.

The system displays a list of the installed CMS R12 features.

7. Enter the number associated with the `external call history` option.

The system displays the following message:

```
External Call History is off. Do you wish to turn it on? (y/n)
```

8. Turn ECHI on by selecting: **y**

The system displays the following message:

```
Do you wish to transmit the full buffer of call records (y/n)
```

9. Enter: **y**

10. Choose one of the following actions:

- If External Call History is currently *on*, select: **y**
- If External Call History is currently *off*, perform the following procedure:
  - i. Select: **n**

The system displays the following message:

```
You are using the xxxxxxxx record format.  
Do you wish to change the format to the xxxxxxxxx ECH record  
format? (y/n):(default: n)
```

ii. Select: **n**

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

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

13. Enter:

**cmsadm**

The system displays the **CMSADM** menu.

14. Enter the number associated with the `run_pkg` option.

The system displays a list of the installed CMS R12 features.

15. Enter the number associated with the `external call history` option.

The system displays the following message:

```
External Call History is on. Do you wish to turn it off? (y/n)
```

16. Select: **y**

17. Enter:

**cmsadm**

The system displays the **CMSADM** menu.

18. Enter the number associated with the `run_pkg` option.

The system displays a list of the installed CMS R12 features.

19. Enter the number associated with the `external call history` option.

The system displays the following message:

```
External Call History is off. Do you wish to turn it on? (y/n)
```

20. Select: **n**

The system displays the following message:

```
You are using the xxxxxxxx record format.  
Do you wish to change the format to the xxxxxxxxx ECH record  
format? (y/n):(default: n)
```

21. Enter **y** to change the current External Call History record format.

 **Important:**

The system might display a message prompting to delete buffer files. If you delete the buffer files some data will be lost. If you want to change the call record format, you must select **y**.

The system displays the following message:

```
External Call History uses the xxxxxxxxx record format now.
```

22. Turn on CMS R12.

At this point, you can upgrade your external reporting packages. ECHI is collecting records in the new format, but not sending data.

23. Turn on ECHI.

## **External Call History changes**



## Chapter 4: Avaya CMS R12 enhancements

This section describes the Avaya Call Management System (CMS) Release 12 enhancements and includes the following topics:

- [SSH enhancements](#) on page 46
- [Capacity increases](#) on page 48
- [SLM](#) on page 49
- [MAO](#) on page 50
- [Adding ACDs to ACD Groups](#) on page 50

**Note:**

Visual Vectors has not been enhanced to support the R12 features.

## SSH enhancements

This section includes the following topics:

- [Impacted documentation](#) on page 46
- [Description of SSH](#) on page 46
- [Using SSH](#) on page 47
- [SSH configuration](#) on page 47
- [SSH tools](#) on page 47

---

## Impacted documentation

The following documents are impacted by Secure SHell (SSH).

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

Document	Updated for R12?
<i>Avaya CMS Release 3 Version 11 Administration</i>	No
Network Reporting online user guide	No

---

## Description of SSH

Secure SHell (SSH) is a protocol that encrypts the packets sent between a client workstation and a host server, making the transmission of login information and other sensitive data more secure. This is helpful if you must use Avaya CMS Supervisor or Network Reporting to connect to an Avaya CMS server over a public or unsecure network.

In order to provide more security for R12 CMS Supervisor or Network Reporting, a user can connect to CMS using the SSH protocol instead of using telnet.

---

## Using SSH

To use SSH, you will define the communication method in the Server Properties window of Avaya CMS Supervisor. Select the SSH option to use this feature.

---

## SSH configuration

Avaya CMS Supervisor and Network Reporting can use SSH for all of their communications and operations with the Avaya CMS server. By default, the Secure Shell feature is enabled on the Avaya CMS server. No additional configuration is required. The implementation of the Secure Shell feature in Avaya CMS Supervisor uses 1024-bit encryption.

---

## SSH tools

The following tools have been provided in the installation directory to allow you the ability of directly interacting with the Avaya CMS server:

- PuTTY.EXE - This program creates a telnet session with the Avaya CMS server through Secure Shell. Using this program, you can use the Avaya CMS ASCII interface. Use this tool instead of Terminal Emulator if you need to access the server directly while using SSH.
- PSFTP.EXE - This program creates an FTP (File Transfer Protocol) session with the Avaya CMS server through Secure Shell. Since standard FTP ability on the server is now disabled, you should use this program to conduct all file transfer operations.
- PSCP.EXE - This program can be used to copy files through a Secure Shell connection with the Avaya CMS server.

## Capacity increases

This section includes the following topics:

- [Impacted documentation](#) on page 48
- [Overview of capacity increases](#) on page 48

---

### Impacted documentation

The report screens have not changed even though the user can enter greater capacity values. There is no impact on CMS documentation.

---

### Overview of capacity increases

The capacity increases for R12 include the following:

- Increased skills per system
- Increased skills per ACD
- Increased skills per agent
- Increased number of Location IDs

**See also:**

For the capacity values, see *System Capacities Table for Avaya Communication Manager on Avaya Media Servers*, 555-245-601.

### Supported only on S8700 and S8500

Both Communication Manager 2.0 and CMS R12 support the capacity increases, but Communication Manager 2.0 supports these increases only on the S8700 and S8500 Media Servers.

---

## SLM

Service Level Maximizer (SLM) is an Avaya Communication Manager Call Vectoring feature introduced in Release 2.0. SLM is particularly useful in contact centers whose operations are based on explicit service level contracts.

Use SLM to set specific target call service levels for a set of skills so that your service levels more closely match the value that you associate with different call types.

**See also:**

For more information, see *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

## MAO

To balance call distribution more equitably among agents and avoid "agent burnout" issues, SLM uses a new Maximum Agent Occupancy (MAO) parameter that is applied to all agents on the system. MAO is included in the Call Center Elite package with SLM.

When an agent who exceeds the specified MAO attempts to become available, they are automatically placed in AUX mode, either under the default Reason Code 9, or another Reason Code number that you associate with MAO idle time. When the occupancy for such *pending* agents drops below the MAO, they are released from AUX mode.

### See also:

For more information, see any of the following:

- For CMS database items that are related to Maximum Agent Occupancy (MAO), see *Avaya CMS Database Items and Calculations* .
- For more information about MAO, see Service Level Maximizer in *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

---

## Adding ACDs to ACD Groups

You can add only one ACD group at a time through Avaya CMS Supervisor. After creating the ACD Group, you must exit the ACD Groups window and perform the entire procedure again to add another ACD group. Alternatively, you can use Terminal Emulator to add ACD groups without this limitation.



## Chapter 5: Database items and table additions

This section provides the changes to the database items in CMS Release 12.

This section contains the following topics:

- [Database changes for capacity increases](#) on page 52
- [Database changes for SLM](#) on page 54
- [Calculations for SLM](#) on page 56

## Database changes for capacity increases

The database items in this section have been added to support the increase in skills per agent from 20 to 60 for CMS R12. These new database items are available for those contact centers equipped with Avaya Media Servers using Avaya Communication Manager 2.0 with the Expert Agent Selection (EAS) feature.

---

### LOGONSKILL21 through LOGONSKILL60 (real-time)

The LOGONSKILL21 through LOGONSKILL60 items appear in the following database tables:

- Agent tables - This item stores the twenty-first through sixtieth skills to which the agent logged in. The number of skills per agent depends on the release of the Avaya communication server and the associated capacities.
- Agent login/logout tables - This item stores the twenty-first through sixtieth skills to which the agent logged in. The number of skills per agent depends on the release of the Avaya communication server and the associated capacities.

---

### SKLEVEL21 through SKLEVEL60

The SKLEVEL21 through SKLEVEL60 items appear in the following database tables:

- Agent tables - This item is an indication of the skill level for an agent, which is 1 through 16 for a normal skill, or reserve level, which is 1 or 2 for a reserve skill. SKLEVEL21 through SKLEVEL60 apply to LOGONSKILL21 through LOGONSKILL60, respectively.
- Agent login/logout tables - This item is an indication of the skill level for an agent, which is 1 through 16 for a normal skill, or reserve level, which is 1 or 2 for a reserve skill. SKLEVEL21 through SKLEVEL60 apply to LOGONSKILL21 through LOGONSKILL60, respectively.

---

### SKPERCENT21 through SKPERCENT60

The SKPERCENT21 through SKPERCENT60 items appear in the following database tables:

- Agent tables - This item stores the percentage of time that is allocated for the agent to spend in LOGONSKILL21 through LOGONSKILL60.

- Agent login/logout tables - This item stores the percentage of time that is allocated for the agent to spend in LOGONSKILL21 through LOGONSKILL60.

---

## **WORKSPLIT21 through WORKSPLIT60 (real-time)**

The WORKSPLIT21 through WORKSPLIT60 items appear in the Agent tables.

This item stores the numbers of splits/skills other than WORKSPLIT in which the agent is available. WORKSPLIT21 through WORKSPLIT60 apply to agents who are logged into more than one split/skill.

## Database changes for SLM

The database items described in this section have been added to CMS to support the Service Level Maximizer (SLM) feature. These database items will only contain valid data if you are using an Avaya Media Server with Avaya Communication Manager 2.0.

---

### I\_AUTORESERVETIME

The I\_AUTORESERVETIME item appears in the split/skill tables.

This item stores the time during the collection interval that at least one agent was auto-reserved for this skill.

---

### I\_BEHINDTIME

The I\_BEHINDTIME item appears in the split/skill tables.

This item stores the amount of time that a skill has the potential of not meeting the assigned target service level percentage and no agents were auto-reserved.

---

### TARGETABNS

THE TARGETABNS item appears in the split/skill tables.

This item represents the number of abandoned calls that occurred within the administered target service level (TARGETSECONDS). This information is recorded for all splits.

---

### TARGETACDCALLS

The TARGETACDCALLS item appears in the split/skill tables.

This item represents the number of ACD calls that were answered within the administered target service level (TARGETSECONDS). This information is recorded for all splits.

---

## TARGETOUTFLOWS

The TARGETOUTFLOWS item appears in the split/skill tables.

This item represents the number of calls that outflowed within the administered target service level (TARGETSECONDS). This information is recorded for all splits.

---

## TARGETPCTCHG

The TARGETPCTCHG items appears in the split/skill tables.

This item indicates if the target service level percentage was modified.

---

## TARGETPERCENT

The TARGETPERCENT item appears in the split/skill tables.

This item stores the percentage of the target service level that is specified on the Avaya communication server for a selected split/skill. The archiving process that transforms data for larger time intervals, such as daily to weekly, will record the maximum value of TARGETPERCENT.

---

## TARGETSECCHG

The TARGETSECCHG item appears in the split/skill tables.

This item indicates if the number of seconds specified for the target service level was modified.

---

## TARGETSECONDS

The TARGETSECONDS item appears in the split/skill tables.

This item stores the number of seconds specified on the Avaya communication server for the split/skill target service level. The archiving process that transforms data for larger time intervals, such as daily to weekly, will record the maximum value of TARGETSECONDS.

---

## Calculations for SLM

This section describes the new calculations that have been added to support the SLM feature for CMS R12. These calculations are available only if you are using an Avaya Media Server with Avaya Communication Manager 2.0.

---

### ART (Actual Relative to Target)

**Calculation**  $(100 * \text{TARGETACDCALLS} / \text{CALLSOFFERED}) - \text{TARGETPERCENT}$

**Description** This calculation determines the actual service level as compared to the target service level percentage.

---

### PERCENT\_SK\_AVAIL

**Calculation**  $100 * (\text{sum}(\text{I\_AVAILTIME}) / \text{sum}(\text{TI\_AVAILTIME})) / (\text{sum}(\text{I\_STAFFTIME}) / \text{sum}(\text{TI\_STAFFTIME}))$

**Description** This calculation indicates the amount of time that an agent was available in all assigned skills. If an agent was assigned to the auto-reserve state for a skill, this number would be less than 100. For example, "83%" in this calculation indicates that the agent was available in all skills for 83% of the specified interval. In this calculation, a high number indicates that the auto-reserve state was rarely used while a low number indicates that the agent was almost entirely occupied with the auto-reserved skill.



## Chapter 6: Report changes

This section includes the following topics:

- [SLM report changes](#) on page 58
- [New Avaya Business Advocate reports](#) on page 63
- [Best Service Routing reports](#) on page 66

## SLM report changes

Avaya Supervisor Release 12 introduces new reports, calculations, and skill states to support the Service Level Maximizer feature.

This section contains the following topics:

- [ART reports](#) on page 58
- [BEHIND and AUTORSV skill states](#) on page 61
- [PERCENT\\_SK\\_AVAIL calculation](#) on page 62

---

## ART reports

The Actual Relative to Target (ART) reports provide graphical representations of how splits or skills are performing as compared to specified target service levels on an Avaya Media Server with Avaya Communication Manager 2.0. All of these reports rely on the calculation, Actual Relative to Target.

This section contains the following topics:

- [ART real-time report](#) on page 58
- [ART historical reports](#) on page 59
- [ART integrated report](#) on page 61

## Things to know about these reports

Read and understand the following items before using these reports:

- These reports are available for those contact center environments that are using an Avaya Media Server with Avaya Communication Manager 2.0.
- For information on the various input fields for these reports, see *Avaya CMS Supervisor Release 12 Reports*.

---

## ART real-time report

The ART real-time report displays how splits or skills are meeting service level targets, both in real-time and within the current interval.

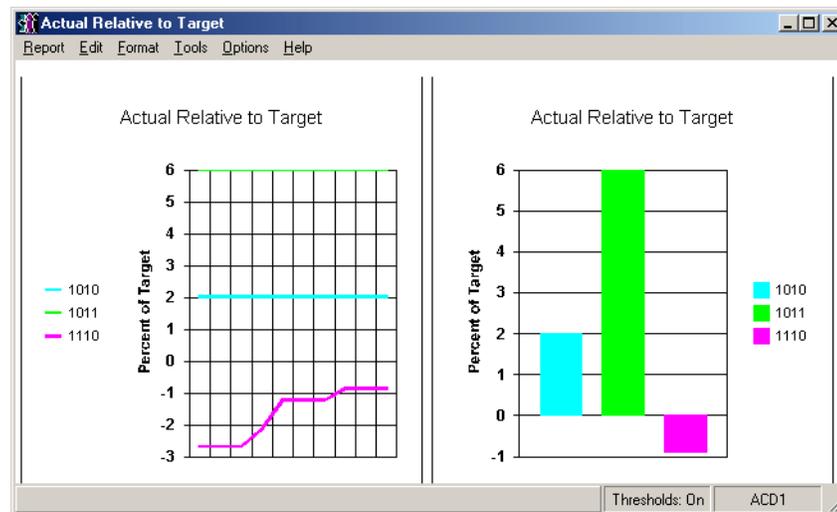
The graph on the left side of the report window displays how splits or skills are meeting service level targets within the current interval. Through this view, you can determine if staffing or the service level target is appropriate for the specified service level.

The right side of the report displays a bar graph that represents how splits and skills are currently meeting target service levels. This graph refreshes based on a time interval that you specify prior to running the report.

Positive values indicate that the split or skill is exceeding the target service level while negative values indicate that it is not meeting the target service level.

## Report example

The following graphic provides an example of this report:



## ART historical reports

The ART historical reports display the performance of splits or skills as compared to specified target service levels over a period of days or between intervals.

### Daily report

The daily report is used to display target service level performance for a period of two or more days.

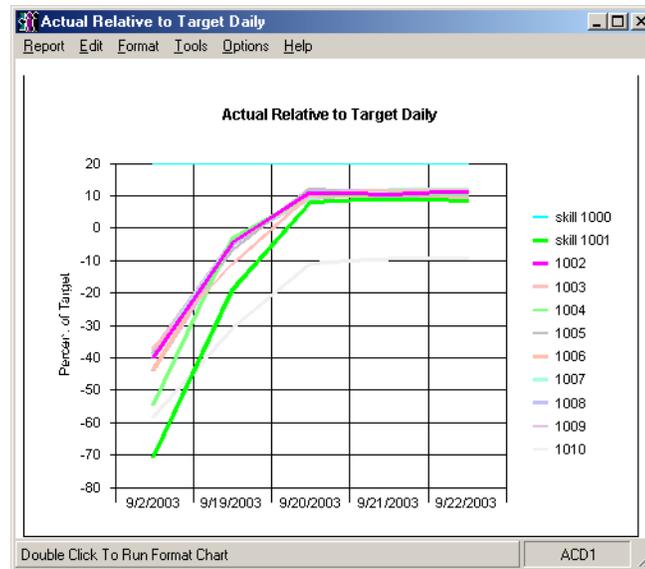
**Note:**

If you specify only one day for this report, no information is displayed as this report is used to compare daily target service levels. If you want to display information in the report for one day, reformat the report to display as a bar graph.

## Report changes

### Report example

The following graphic displays an example of this report:



## Interval report

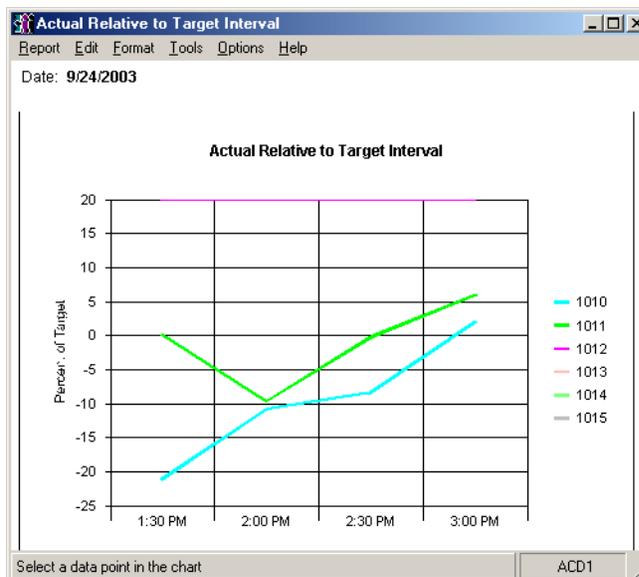
The interval report is used to display target service level performance for a period of time on a specific date.

**Note:**

If the timespan entered in the **Times** field is not a full interval, this report will not display accurate data.

## Report example

The following graphic provides an example of this report:




---

## ART integrated report

The ART integrated report displays the same information as the real-time report except that you are able to specify the starting time for the left side of the report that shows the progress over time. The left side of the real-time report displays information for the current interval only.

---

## BEHIND and AUTORSV skill states

These two new skill states result from the Service Level Maximizer feature. The purpose of these states is to identify when a split or skill could fail to meet the assigned target service level.

The string values for these new states can be modified in CMS Supervisor in the Dictionary. Select **Commands > Dictionary > Split/Skill String Values** to view or modify string values for splits or skills.

These skills states are available in many CMS Supervisor real-time, historical, and integrated reports, which display state information for splits or skills.

---

## PERCENT\_SK\_AVAIL calculation

The new PERCENT\_SK\_AVAIL calculation results from the Service Level Maximizer feature. Its purpose is to identify the availability of an agent in an assigned skill. Agent summary reports in CMS Supervisor now display this information as a new column. Within these reports, this field appears as % **Skills Avail**.

---

## New Avaya Business Advocate reports

This section provides general information about how to use the new Avaya CMS Supervisor Business Advocate reports. Avaya CMS Supervisor reports display, report, and summarize the performance of any measured subset of the Automatic Call Directory (ACD), including agents, splits/skills, trunks/trunk groups, Vector Directory Numbers (VDNs), and vectors. To use these reports, you must have purchased and implemented Report Designer.

This section includes the following topics:

- [Impacted documentation](#) on page 63
- [Description of reports](#) on page 63

---

### Impacted documentation

The following documents are impacted by the new Avaya Business Advocate reports.

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

Document	Updated for R12?
<i>Avaya CMS Supervisor Release 12 Reports</i>	Yes
<i>Avaya Call Management System R11 Report Designer User Guide</i>	No

---

### Description of reports

The following reports for Avaya Business Advocate are located on the Avaya CMS Supervisor product CD-ROM.

## Report changes

Report	Description
Advocate Skill Status (historical)	Use this report to view the following information: <ul style="list-style-type: none"> <li>● Total ACD calls for skills</li> <li>● Calls answered by Reserve1 and Reserve2 agents</li> <li>● The time that the skill was in the Normal state</li> <li>● The time that the skill was in each Overload state</li> </ul>
Agent Group Occupancy with ACW by Interval (historical)	This report displays each agent in an agent group and the occupancy of the agent. This includes After Call Work (ACW) time and the time that the agent spent in other work states.
Agent Group Occupancy without ACW by Interval (historical)	This report displays each agent in an agent group and the occupancy of the agent. This does not include ACW time or other work states.
Agent Login-Logout with Level (historical)	This report is a standard Login-Logout agent report, but it also displays the preference level for each skill in the agent profile.
Graphical Daily Agent Occupancy by Split/Skill (historical)	This report is a graphical representation of daily agent occupancy for the skills that you select.
Group Summary Daily by Skill (historical)	This report displays the skills for each agent in an agent group and the amount of time that the agent spent in each skill.
Summary Reserve Daily (historical)	This report displays the following information for one or more skills: <ul style="list-style-type: none"> <li>● Percentage in Service Level</li> <li>● Calls answered in Main (primary agents)</li> <li>● Percentage answered in Main</li> <li>● Calls answered by Reserve1 and Reserve2 agents</li> <li>● Percentage answered by Reserve1 and Reserve2 agents</li> <li>● The amount of time that the skill was in the Normal state</li> <li>● The amount of time that the skill was in the Overload state</li> </ul>
Summary Reserve Interval (historical)	This report displays the same information as the Summary Reserve Daily report, but for a time interval that you specify.
Summary Reserve Weekly (historical)	This report displays the same information as the Summary Reserve Daily report, but over a span of a week.

Report	Description
Summary Reserve Monthly (historical)	This reports displays the same information as the Summary Reserve Daily report, but over a span of a month.
Advocate Comparison (integrated)	<p>This report is a comparison of the following:</p> <ul style="list-style-type: none"> <li>● Primary agents staffed, on ACD calls, or in AUX work mode</li> <li>● Reserve agents staffed, on ACD calls, or in AUX work mode</li> <li>● Total calls answered with Average Speed of Answer (ASA)</li> <li>● Percentage of ACD calls that have met the Service Level at the time of the report</li> </ul>

---

## Best Service Routing reports

This section provides general information about how to use the new Avaya CMS Supervisor Best Service Routing reports. This section includes the following topics:

- [Impacted documentation](#) on page 66
- [Description of reports](#) on page 66

---

## Impacted documentation

The following documents are impacted by the Best Service Routing report changes.

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

Document	Updated for R12?
<i>Avaya CMS Supervisor Release 12 Reports</i>	Yes

---

## Description of reports

The following reports are located on the Avaya CMS Supervisor product CD-ROM.

Report	Description
VDN Group Report-Daily (historical)	For VDN groups, which are created through the Dictionary, this report displays the total number of ACD calls and the Percentage of those calls within Service Level.
VDN Group Report-Interval (historical)	This report displays the same information that is found in the VDN Group Report-Daily report, but for a time interval that you specify.

<b>Report</b>	<b>Description</b>
VDN Group Report-Weekly (historical)	This report displays the same information that is found in the VDN Group Report-Daily report, but over the span of a week.
VDN Group Report-Monthly (historical)	This report displays the same information that is found in the VDN Group Report-Daily report, but over the span of a month.
VDN Comparison Report (integrated)	This report displays the same information as the other BSR historical VDN Group reports, but as an integrated report where data is accumulated from a specified starting time within the past 24 hours until the time that the report is generated.

## Report changes



## Chapter 7: Avaya CMS R12 CUE changes

This section provides an overview of the changes for Avaya CMS R12 CMS Upgrade Express (CUE). The specific CUE documents will provide the detail. This section contains the following topics:

- [Overview](#) on page 70
- [Impacted documentation](#) on page 71
- [Supported CMS loads for CUE upgrades](#) on page 72

## Overview

CMS Upgrade Express (CUE) has been updated to support the following changes:

- Changes to supported switch releases. CUE does not support upgrades from R7 and earlier switch releases.
- Changes to supported platforms. With CMS R12, the Enterprise 3000 and Ultra 5 platforms are no longer supported, which means that they are not supported for CUE upgrades. With R12, the Sun Fire V880 is added to the list of supported platforms.
- Dropping support for upgrades from R3V5u to R12. R3V6, R3V8, R3V9, and R3V11 are supported for upgrades to R12.
- Supporting in-version (R12 to R12), disk-only upgrades. Previously, CUE did not officially support in-version upgrades.
- Dropping support for X.25 switch links. CMS R12 does not support X.25 switch links.
- Dropping support for SAI/P on Sun Blade 100/150. CMS R12 does not support serial connections using the SAI/P card.
- Installing the Visual Vectors Server (VVS) on all systems and preserving existing configurations.

---

## Impacted documentation

The CUE documents will be updated to include information associated with the R12 CUE changes. The main documentation change for R12 is moving all customer pre-upgrade and post-upgrade procedures into one document that can be sent to the customer ahead of the actual upgrade. Previously, this customer information was part of the individual platform CUE documents.

**Note:**

For the document numbers, see [Related documentation](#) on page 13.

Document	Updated or new for R12?
<i>Avaya CMS R12 CUE Customer Requirements</i>	New
<i>Avaya CMS R12 Sun Blade 100/150 Workstation CUE</i>	Yes
<i>Avaya CMS R12 Sun Blade 100/150 Workstation Mirrored System CUE</i>	Yes
<i>Avaya CMS R12 Sun Enterprise 3500 Computer CUE</i>	Yes
<i>Avaya CMS R12 Sun Enterprise 3500 Computer Mirrored System CUE</i>	Yes
<i>Avaya CMS R12 Sun Fire V880 Computer CUE</i>	New

## Supported CMS loads for CUE upgrades

Sun Blade 100/150, Sun Enterprise 3500, and Sun Fire V880 platforms can be upgraded to CMS R12 from the following CMS loads using CUE:

- R3V6
- R3V8
- R3V9
- R3V11
- R12

**Note:**

CUE *cannot* be used to upgrade a Sun SPARCserver computer, Sun Ultra 5 computer, or Sun Enterprise 3000 computer to R12. Also, CUE *cannot* be used to upgrade a CMS R3V5 or earlier system to R12. You must follow the procedures found in *Avaya CMS Release 3 Version 11 Platform Upgrade and Data Migration*.

■ ■ ■ ■ ■ ■

# Chapter 8: Avaya Communication Manager enhancements

This section provides an overview of the Avaya Communication Manager 2.0 enhancements and includes the following topics:

- [Impacted documentation](#) on page 73
- [Variables in Vectors](#) on page 74
- [Send ASAI UUI data to CMS](#) on page 74
- [NCR ETSI-ECT](#) on page 75
- [Local treatment for remotely queued IP and ISDN calls](#) on page 75
- [SLM and MAO](#) on page 76
- [Capacity increases](#) on page 76

---

## Impacted documentation

The following document is impacted by the Avaya Communication Manager 2.0 enhancements.

**Note:**

For the document number, see [Related documentation](#) on page 13.

Document	Updated for R12?
<i>Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)</i>	Yes

## Variables in Vectors

Variables in Vectors (VIV) is a Call Vectoring feature introduced in Avaya Communication Manager 2.0.

The VIV feature allows you to create variables that can be used in **goto** and **collect** commands as conditionals, thresholds, or both to:

- Improve the general efficiency of vector administration.
- Provide increased manager and application control control over call treatments.
- Allow you to create more flexible vectors that better serve the needs of your customer and contact center operations.

**See also:**

For more information, see *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

---

## Send ASAI UII data to CMS

Avaya Communication Manager 2.0 has a new ability to send up to 96 bytes of ASAI UII data that is associated with a call to CMS in a DIGITS7 message. CMS stores this data in a new ASAIUII field in the External Call History (ECH) call record.

**See also:**

For more information, see [External Call History changes](#) on page 33.

---

## NCR ETSI-ECT

For Avaya Communication Manager 2.0, the Network Call Redirection (NCR) feature supports call redirection based on the European Telecommunications Standards Institute (ETSI) Explicit Call Transfer (ECT) protocol. This capability is provided for users whose Public Switched Telephone Network (PSTN) carrier supports ETSI-ECT.

**See also:**

For more information, see Network Call Redirection in *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

---

## Local treatment for remotely queued IP and ISDN calls

In a multi-site BSR configuration, a call that arrives at a local communication server may be rerouted to a remote server located in a different part of the world. To address such situations, Avaya Communication Manager 2.0 or later includes a new *BSR Local Treatment for Calls Queued Remotely Over IP or ISDN Trunks* feature that allows you to provide local audio feedback for IP and ISDN calls while a call waits in queue on a remote server.

**See also:**

For more information, see *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

## SLM and MAO

Avaya Communication Manager 2.0 supports Service Level Maximizer (SLM) and Maximum Agent Occupancy (MAO).

**See also:**

For more information see any of the following:

- For a basic description of SLM, see [SLM](#) on page 49.
- For a basic description of MAO, see [MAO](#) on page 50.
- For a detailed description of both, see *Avaya Communication Manager Contact Center Call Vectoring and Expert Agent Selection (EAS)*.

---

## Capacity increases

Avaya Communication Manager 2.0 supports the Release 12 capacity increases.

**See also:**

For more information, see [Capacity increases](#) on page 48.

# Index

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## Symbols

% Skills Avail . . . . . 62

---

## A

ACDs, adding to ACD Groups . . . . . 50  
ART . . . . . 56  
ASAI UUI data . . . . . 74  
ASAIUUI field . . . . . 74  
auth\_display changes for ECH . . . . . 39

---

## B

Best Service Routing reports . . . . . 66  
Business Advocate reports . . . . . 63

---

## C

calculations for SLM . . . . . 56  
Call Management System, see CMS  
call record enhancements for ECH . . . . . 37  
call record field descriptions for ECH . . . . . 38  
capacity increases . . . . . 48  
capacity increases and database changes . . . . . 52  
changing the call record format for ECH . . . . . 41  
CMS  
    calculations added to support SLM . . . . . 56  
    capacity increases . . . . . 48  
    CUE changes . . . . . 69  
    database changes for capacity increases . . . . . 52  
    database item changes . . . . . 51  
    database items added to support SLM . . . . . 54  
    ECHI and . . . . . 34  
    enhancements . . . . . 45  
    network services changes . . . . . 29  
    nonsupported hardware platforms . . . . . 21  
    operating system configuration changes . . . . . 31  
    security recommendations . . . . . 32  
    serial connectivity . . . . . 21  
    software . . . . . 22  
    Solaris security changes . . . . . 27  
    SSH and . . . . . 31  
    supported connections to the switch . . . . . 25  
    supported software . . . . . 22

---

supported switches . . . . . 25  
CUE  
    impacted documentation . . . . . 71  
    R12 changes to . . . . . 69  
    supported CMS loads for upgrades . . . . . 72

---

## D

database changes  
    capacity increases . . . . . 52  
    SLM . . . . . 53, 54  
database items and table additions . . . . . 51

---

## E

ECH  
    ASAIUUI field . . . . . 74  
    auth\_display changes . . . . . 39  
    call record enhancements . . . . . 37  
    call record field descriptions . . . . . 38  
    changing the call record format . . . . . 41  
    file header changes . . . . . 36  
    pkg\_install changes . . . . . 40  
ECHI . . . . . 34  
External Call History Interface, see ECHI  
External Call History, see ECH

---

## F

file header changes for ECH . . . . . 36

---

## H

helplines. . . . . 17

---

## I

I\_AUTORESERVETIME . . . . . 54  
I\_BEHINDTIME . . . . . 54  
IP calls . . . . . 75  
ISDN calls . . . . . 75

---

## L

LAN backup  
    software . . . . . 22, 23

---

LOGONSKILL21 through LOGONSKILL60. . . . . 52

---

## M

MAO . . . . . 50

---

## N

NCR. . . . . 75  
Network Call Redirection . . . . . 75  
Network Reporting  
  software . . . . . 24  
network services changes . . . . . 29

---

## P

PERCENT\_SK\_AVAIL . . . . . 56  
pkg\_install changes . . . . . 40

---

## R

Report Designer . . . . . 63  
reports  
  Best Service Routing . . . . . 66  
  Business Advocate . . . . . 63

---

## S

Secure SHell, see SSH  
security recommendations . . . . . 32  
SKLEVEL21 through SKLEVEL60. . . . . 52  
SKPERCENT21 through SKPERCENT60 . . . . . 52  
SLM  
  information about . . . . . 49  
software  
  CMS . . . . . 22  
  ECHI. . . . . 34, 40  
  LAN backup . . . . . 23  
  Supervisor and Network Reporting . . . . . 24  
Solaris 9. . . . . 22, 23  
Solaris security changes . . . . . 27  
SSH  
  description of . . . . . 46  
  operating system configuration changes . . . . . 31  
Sun . . . . . 22  
Sun Blade 100 . . . . . 21, 70, 72  
Sun Blade 150 . . . . . 21  
Sun Enterprise 3000 . . . . . 21  
Sun Enterprise 3500 . . . . . 21, 72  
Sun Fire V880 . . . . . 21, 22, 70, 72  
Sun Ultra 5 . . . . . 21  
Supervisor  
  Advocate reports . . . . . 63

Best Service Routing reports . . . . . 66  
  software . . . . . 24  
switches, supported hardware and software . . . . . 25

---

## T

TARGETABNS . . . . . 54  
TARGETACDCALLS . . . . . 54  
TARGETOUTFLOWS . . . . . 55  
TARGETPCTCHG . . . . . 55  
TARGETPERCENT . . . . . 55  
TARGETSECCHG . . . . . 55  
TARGETSECONDS . . . . . 55  
Tivoli Storage Manager . . . . . 23

---

## V

Variables in Vectors. . . . . 74  
VIV . . . . . 74

---

## W

WORKSPLIT21 through WORKSPLIT60 (real-time). . . 53



