Avaya Aura® Communication Manager System Capacities Table

Release 6.3

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INTRODUCTION

This document contains the Avaya Aura® Communication Manger Release 6.3 system software-defined capacities information for all templates of Communication Manager, ASAI, Messaging, and Call Center. This document does not contain capacities for Communication Manager Branch Edition, Communication Manager Essential Edition, and Session Manager.

Both software-defined limits and offer limits are provided in the capacities table of Communication Manager, Release 6.3. The offer limits are highlighted in tan for easy identification. They are enforced by license files and by the Avaya support policy.

The capacities table in this document is the basis for the offer-based system capacities table posted on the Avaya website which is accessed by the Avaya sales people, offer managers and customers. The document shows only the offer limits when the offer limits are less than the corresponding software limits.

Because the information compiled here is obtained from various sources, the authors appreciate review of the document by a wider audience. This helps reduce errors and inconsistencies and refine the information contained in these tables. MRs must be written against this document for changes related to the capacities table.

Highlights of Communication Manager Release 6.3

See the capacities table for details. Communication Manager Release 6.3 introduces:

- Offline call log entries for H.323 endpoints.
- Increase in the network region and locations from 250 to 2000.
- Increase in the number of Coverage answer groups (1000 to 1500), members in a group (8 to 100) and the system max of all members across groups (22000 to 33000).
- Increase in the number of display-parameters from 25 to 50. Increase in the number of location parameters to 50.
- Increase in the number of route patterns from 999 to 2000.
- Increase in the number of AAR and ARS analysis patterns from 999 to 2000.
- Increase in the number of simultaneous VDN Service Observers from 50 to 999.
- Increase in the number of simultaneous classified calls from 600 to 1200.
- SIP CC agents. The maximum capacity is 5000 agents.
- Increase in messages per second per AES connection from 1000 to 2000.
- Increase in ASAI event notification associations from 10,000 to 30,000.
- Increase in the number of simultaneous admin login sessions from 15 to 20 via GRIP 7364.
- The VE offer. See footnote 146.

Highlights of Communication Manager Release 6.2

See the capacities table for details. Communication Manager Release 6.2 introduces:

- Increase in the offer limit for SIP endpoints (stations) from 18,000 to 36,000 for general business configurations.
- Increase in the number of Crisis Alert buttons for special application SA8608 from 250 to 750. Increase in the “Max number of Bridges to a Principal’s Call Appearance from 25 to 63 and from 63 to 255 with SA9018 (described in Endnote 15).
- Increase in the number of table entries for the ip-network-map table from 500 to 4000 with SA9115.
- The midsize enterprise limits are preliminary and subject to change.

- Video capacities have been re-stated.
- SIP trunk capacities have been re-stated.
- A new 96x1 SIP agent deskphone – 6.2 SIP for EAS Agent use. This phone will be announced separately when it becomes available.

Highlights of Communication Manager Release 6.1 (6.0.1)

See the capacities table for details. Communication Manager Release 6.1 (6.0.1) introduces:

- A new System Platform template:
  - Avaya Aura® Midsize Enterprise configuration (Midsize_Ent).
- A new ISDN BRI Media Module (MM_721).

Highlights of Communication Manager Release 6.0

See the capacities table for details. Communication Manager Release 6.0 introduces:

- Five new System Platform templates:
  - Avaya Aura® Main / Avaya Aura® for Survivable Core Duplex configuration (CM_Duplex)
  - Avaya Aura® Main / Avaya Aura® for Survivable Core Simplex configuration (CM_Simplex)
  - Avaya Aura® for Survivable Remote Simplex configuration (CM_SurvRemote[140])
  - Avaya Aura® Main Embedded configuration (CM_onlyEmbed)
  - Avaya Aura® for Survivable Remote Embedded configuration (CM_SurvRemoteEmbed[140])
- Many capacity increases for Call Center including increase of logged in agent capacity to 10,000 agents, vectoring increases and some general increases that are needed for Call Center applications.
- Not certified or supported: ATM
- Not certified or supported: Center Stage Switch (CSS) except for federal government use.
- Not certified or supported: G600 gateways
- Not certified or supported: G150 gateways
- Not certified or supported: S8300B, S8300C, S8400A, S8400B, S8500B, S8500C, S8730, S8720, S8710
- Not certified or supported: MM312, MM314, MM316, and MM340.
- End of Sale but supported in R6 for Avaya Aura® Evolution Server Configurations: G250 gateways, G350 gateways

Highlights of Communication Manager Release 5.2.1

See the capacities table for details. Communication Manager Release 5.2.1 introduces:

- The S8800 server.
- The S8300D, with the co-resident SES server enabled, supports a maximum of 450 stations.

Highlights of Communication Manager Release 5.2

See the capacities table for details. Communication Manager Release 5.2 introduces:

- Increase in number of IP (H.323 and SIP) endpoint and trunk maximum.
- Increase in the announcement capacity for the G450 media gateway.

- A new Communication Manager platform: S8300D (same capacities as the S8300C).

Highlights of Communication Manager Release 5.1
See the capacities table for details. Communication Manager Release 5.1 introduces:
- A Communication Manager platform, S8510, with the same capacities as the S8500C/D.

Highlights of Communication Manager Release 5.0
See the Capacities Table for details. Communication Manager Release 5.0 introduces:
- The S8730 server. The capacity limits of the S8730 are the same as those of the S8720XL, but the S8730 does not offer the Standard and XL versions of the S8720.
- Co-resident Communication Manager and SIP Enabled Server (SES) on the S8300 server.
- The G450 Media Gateway, which has the same capacity limits as the G700 Media Gateway.
- The Avaya Agent Deskphone 16CC**,** an OPTIM-interfaced SIP Call Center agent phone, along with support in Communications Manager, SES and other AST components. There are limits on how many Avaya Agent Deskphone 16CCs, added under the OPTIM Applications section, can be logged in simultaneously.

Communication Manager 5.0 does not support S8700 and S8500A servers.

Highlights of Communication Manager Release 4.0
See the capacities table for details. Communication Manager Release 4.0 introduces:
- The S8720XL feature which allows for specific feature capacity increases as noted in a separate column.
- Other system capacity increases.

Highlights of Communication Manager Release 3.1
See the capacities table for details. Communication Manager Release 3.1 introduces:
- New Communication Manager platforms: S8720 (same capacities as the S8700 and S8710) and S8400.
- Other system capacity increases, such as support for 5,000 SIP trunks.

Highlights of Communication Manager Release 3.0
See the capacities table for details. Communication Manager Release 3.0 introduces:
- The G250 Media Gateway for small branch office configurations.
- Expanded Meet-Me Conferencing (EMMC), MM720 Line Side BRI and other feature related capacities.
- SIP (SES, SUSHI, and SCCAN) related capacity increases but not restricted to SIP.
- Increased entries in the **Incoming Call Handling Treatment** (ICHT) table on the Trunk Group form and **public-unknown-numbering** screen.
- Number of Bridged Appearances to 80,000 system-wide, SIP trunks, maximum SIP users per SES Home node and per System (S8700/S8500/S8300).
- Call Center support on the VM Blade Server platform.
- The Application Enablement Services interface for ASAI/CTI applications.

Highlights of Communication Manager Release 2.2

See the capacities table for details. Communication Manager Release 2.2 introduces:

- The S8710 HP server, which supports IP-Connect and MultiConnect configurations. Capacities and configurations information from earlier releases applies to the S8710.
- Support for ASAI Switch Classified Calls for trunks on H.248 Gateways and IP-Connected Port Network Gateways.
- The G150 H.323 Remote Office Gateway. It works with S8700, S8710, S8500, S8300, and G3si as the main Communication Manager server. G150 provides connectivity over the WAN. Models of the G150 are the G150 2T + 4A (3 VOIP); G150 4T + 4A + 8DS (3VOIP); G150 4T + 4A + 8DS (16VOIP).
- The capacities for the RO Gateways are separate and independent from the H.248 media gateway capacity limits.
- G3SI offer End-of-Sale.
    - New systems: The last date for sale is end of June 2005.
    - Upgrades: The last date for upgrades is December 2005.
    - Software Release: The last software release that supports G3SI is Communication Manager R2.2.
    - S8500 replaces G3SI.
- The number of BRI trunk boards increases from 60 to 250 on all Communication Manager Linux platforms.

Highlights of Communication Manager Release 2.1

- The S8700 IP-Connect system capacities are the same as for S8700 MultiConnect system. The Capacities Table contains capacities for both 2.0 and 2.1, with separate columns for IP-Connect and Multi-Connect systems.
- The S8100 (Windows/D1/IP600/gaznt) is not offered on Communication Manager Release 2.1 and beyond. Communication Manager Release 2.0 is offered on the S8100.
- G350 in Call Center Applications: the G350 can be used in both ICC (S8300/G350) and ECC (as media gateway and survivable remote (formerly LSP)). See footnotes [1] and [2] on this page, applicable to all H.248 media gateways.
- Blade Server capacities information is not included in this document, as recommended by Jan Leistikow, Scott Horton and others. Blade Server information is also not included in the System Capacities Table on the web, because the Table is for the Enterprise Customer market and the Blade solution is for the Service Provider market. The Blade Server is not offered through the CSD business unit; it can only be obtained through the hosted solutions business unit, and they have a separate marketing organization.

Highlights of Communication Manager R2.0

- The DEFINITY® Server R (G3R) was discontinued on December 8, 2003. The G3R cannot be upgraded to Communication Manager R2.0, but upgrades to Communication Manager R1.3.x were sold until November 2004. Please consult *Upgrades and Additions for Avaya DEFINITY Server R, 555-233-115*, for information about upgrading to Communication Manager R1.3.
- The Category B offer is not offered in Communication Manager R2.0 and beyond.

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[1] Tone Detectors: G700 and G350 have a limit of 15 Tone Detectors, which is sufficient for most call center applications considering the smaller overall capacity; but if many calls have long tone detector holding time it may not support all the trunk capacity. Configurations have to be traffic engineered. This has always been the case but it is even more critical with H.248 gateways because resources tend to be dedicated on a per-gateway basis, compared to the multi-connect configuration with port networks where the resources are pooled across the configuration.

[2] ASAI Switch Classified calls (for Predictive Dialing and Communication Manager applications) function for trunks on H.248 gateways starting with Release 2.2.

- G350 in Call Center applications: G350 can be used in ECC configurations with Communication Manger R2.0, but not as a standalone S8300/G350 (ICC configuration). This applies to G350 Media Gateways used in media server (S8700 or S8500 or S8300/G700) configurations. See footnotes [1] and [2] on this page, applicable to all H.248 media gateways.

SYMBOL USED IN THE CAPACITIES TABLES:
An asterisk (*) indicates that the software-defined capacity may not be reachable due to hardware and/or processor capacity limits for the template.

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote)[136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
Documentation disclaimer: The capacities specified in this table pertain to general business configurations and may not be valid or recommended for Contact Center (CC) solutions. Simultaneously achieving the upper bounds for multiple capacities may not be possible for real-world CC systems. Call rates and other operational aspects of these CC systems may preclude realizing the maximum limits. **Contact Sales Factory Design Center for assistance with specific Contact Center solutions and capacities**.							
In general, software capacities of LSPs and ESSes are that of the Main Communication Manager they are associated with. They are not listed separately in this table. Exceptions to this general rule are noted in the table and in the endnotes. For example, compare row *System-wide Maximum H.248 media gateways* with row *H.248 media gateways per LSP*.							
The call handling capacities are based on the platform limits. Some of the capacities are offer-specific and are determined by the license file. Other capacities are offer-specific but are not limited by the license file. Some Call Center capacity increases require a Call Center Software upgrade to the release the increase is provided in. This table contains both the software-based capacities and offer-based limits. Offer and license limits are under the corresponding rows that provide the System Software limits.							
Avaya Aura® Contact Center (AACC): See detailed capacities in *Avaya Aura® Contact Center Planning Engineering Guide* (44400-210) , available on support.avaya.com.							
An asterisk (*) indicates that the software-defined capacity may not be reachable due to hardware and/or processor capacity limits for the platform.							
65	***ABBREVIATED DIALING and Autodial***						
70	AD Lists per System [68]	20,000	20,000	20,000	2,400	20,000	20,000
75	AD List Entry Size	24	24	24	24	24	24
80	AD Entries per System [69]	250,000	250,000	250,000	12000 *	250,000	250,000
85	***ABBREVIATED DIALING Lists (See endnote 132 for Autodial Buttons)***						
90	Autodial buttons per System	endnote 132	endnote 132	endnote 132	endnote 132	endnote 132	endnote 132
95	Enhanced List (a System List) [70]	2	2	2	2	2	2
100	Max entries across both enhanced lists	20,000	20,000	20,000	10,000	10,000	20,000
105	Group Lists	1,000	1,000	1,000	1,000	1,000	1,000
110	Max entries per list	100	100	100	100	100	100
115	Group lists / extension	3	3	3	3	3	3

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
120	System List	1	1	1	1	1	1
125	Max entries	100	100	100	100	100	100
130	Personal Lists	20,000	20,000	20,000	2,400	2,400	20,000
135	*Max entries per list*	100	100	100	100	100	100
140	Personal lists / extension	3	3	3	3	3	3
145	***ANNOUNCEMENTS: See RECORDED ANNOUNCEMENTS and the information under: ACD, Call Vectoring, and Hunt Groups.***						
150	***APPLICATIONS ADJUNCTS***						
155	Asynchronous Links (IP)	10	10	10	10	10	10
160	CDR Output Devices [4.6]	2	2	2	2	2	2
165	Journal Printers : System Printer [4.6]	2:01	2:01	2:01	2:01	2:01	2:01
170	Property Management Systems [4.6]	1	1	1	1	1	1
175	***SM (Session Manager): For SIP features and services, see the section on SIP***						
180	***Application Enablement Services***						
185	Communication Manager servers supported by one AES Server	16	16	16	16	16	16
190	AES Servers per Communication Manager	16	16	16	16	16	16
195	Connections to a Communication Manager with one AES Server	16	16	16	16	16	16
200	AES Server Interfaces (Processor Ethernet or CLAN Boards)	16	16	16	16 *	16 *	16

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
205	Inbound Messages/Second per AES Connection over PE	2,000	2,000	2,000	240	240	2,000
210	Inbound Messages/Second per AES Connection over CLAN	200	200	200	200	200	200
215	Outbound Messages/Second per AES Connection over PE	2,000	2,000	2,000	240	240	2,000
220	Outbound Messages/Second per AES Connection over CLAN	240	240	240	240	240	240
225	Messages/Sec/System (full duplex) [63]	2,000	2,000	2,000	240	240	2,000
230	***Adjunct Links***						
235	Maximum Links	254	254	254	254	254	254
240	PPP Links/switch using C-LAN board [4.1]	254	254	254	NA	NA	254
245	IP Routes (with C-LAN or PE) [4.1]	650	650	650	650	650	650
250	***VOICE PROCESSING ADJUNCTS***						
255	***COMMUNICATION MANAGER MESSAGING [134]***						
260	Subscriber Mailboxes [134]	NA	6,000	NA	1,000	NA	2,400
265	IP Trunk Call Answer Ports	NA	210	NA	24	NA	24
270	IP Trunk Total Ports	NA	250	NA	36	NA	36
275	IMAP4 Sessions	NA	6,000	NA	1,000	NA	1,000
280	MCAPI Sessions	NA	128	NA	128	NA	128

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285	TTS Sessions	NA	30	NA	8	NA	15
290	***INTUITY AUDIX*** **®**						
295	INTUITY AUDIX (Via Mode Code)	1	1	1	1	1	1
300	INTUITY AUDIX (Via TCP/IP)	8	8	8	8	8	8
305	Mode Code Voice Mail Systems	1	1	1	1	1	1
310	SIP MWI Hunt Groups for SIP-integrated Messaging Platforms [4.3]	10	10	10	10	10	10
315	QSIG MWI Hunt Groups for QSIG-integrated Messaging Platforms [4.3]	10	10	10	10	10	10
320	***MODULAR MESSAGING***						
325	Modular Messaging (T1/E1 QSIG)	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits
330	Modular Messaging H.323 QSIG (IP Now)	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits
335	Modular Messaging Inband (Mode Code)	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits
340	Modular Messaging over C-LAN or PE	NA	NA	NA	NA	NA	NA
345	**AVAYA AURA MESSAGING**						
350	SIP Integration	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits	No Switch-based hard limits

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
355	***OTHER ADJUNCTS***						
360	CMS/IQ C-LAN/PE LAN Adjuncts [4.5]	4	4	4	4	4	4
365	TCP/IP Processor Channels (Includes Gateway Channels)	384	384	384	384	384	384
370	***ACD - AUTOMATIC CALL DISTRIBUTION. See end of table for CMS adjunct capacities. See EAS Section for capacities with EAS active.***						
375	Announcements per Split	2	2	2	2	2	2
380	Announcements per System	9,000	9,000	9,000	3,000	9,000	3,000
385	Splits	8,000	8,000	8,000	99	8,000	2,000
390	ACD Members per Split	1,500	1,500	1,500	200	1,500	1,500
395	Max Administered ACD members [4.4]	100,000	100,000	100,000	1,000	1,000	60,000
400	Logged-In Splits per Agent [5]	4	4	4	4	4	4
405	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
410	***Max logged-in ACD agents (per system) when each logs into:*** [1, 6]						
415	1 Split	10,000	10,000	10,000	500	500	5,200
420	2 Splits	10,000	10,000	10,000	500	500	5,200
425	3 Splits	10,000	10,000	10,000	333	333	5,200
430	4 Splits	10,000	10,000	10,000	250	250	5,200
435	Queue Slots per Group [7]	NA	NA	NA	NA	NA	NA
440	Queue Slots per System [7]	NA	NA	NA	NA	NA	NA
445	***ARS / AAR***						
450	AAR/ARS Analysis Patterns (Shared)	2,000	2,000	2,000	254	254	999
451	Number of Route Patterns	2,000	2,000	2,000	254	254	999

Row	CM Capacity Item	Avaya Aura® ™ for					
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455	Number of entries in ARS/AAR Analysis Tables	16,000	16,000	16,000	5,000	5,000	8,000
456	Call type analysis entries	16,000	16,000	16,000	800	800	4,000
460	Maximum ARS/AAR Tables	250	250	250	50	50	250
465	Choices per RHNPA Table	24	24	24	24	24	24
470	Digit Conversion Entries	12,000	12,000	12,000	2,500	2,500	4,000
475	***AAR/ARS Digit Conversion***						
480	Digits Deleted for ARS/AAR	28	28	28	28	28	28
485	Digits Inserted for ARS	18	18	18	18	18	18
490	***AAR/ARS Sub-Net Trunking***						
495	Digits Deleted for ARS/AAR [8]	28	28	28	28	28	28
500	Digits Inserted for ARS/AAR	36	36	36	36	36	36
505	Entries in each RHNPA Table	1,000	1,000	1,000	1,000	1,000	1,000
510	Facility Restriction Levels (FRLs)	8	8	8	8	8	8
515	Inserted Digit Strings [9]	3,000	3,000	3,000	1,200	1,200	3,000
520	***Patterns for Measurement***						
525	Shared Patterns for Measurement	25	25	25	25	25	25
530	RHNPA (Remote Home Numbering Plan Area) Tables	250	250	250	32	32	250
535	Routing Plans [4]	8	8	8	8	8	8
540	ARS Toll Tables	32	32	32	32	32	32

Row	CM Capacity Item	Avaya Aura® ™ for					
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545	Entries per Toll Table	800	800	800	800	800	800
550	Trunk Groups in an ARS/AAR Pattern	16	16	16	16	16	16
555	UDP (Entries)	80,000	80,000	80,000	10,110	10,110	80,000
560	Time of Day (TOD) Charts [4]	8	8	8	8	8	8
565	Toll Analysis Table Entries	2,000	2,000	2,000	1,000	1,000	2,000
570	***ASAI - Adjunct Switch Application Interface (System-wide limits shown unless otherwise noted. Each limit is achievable on a single link)***						
575	Adjunct Control Associations per Call (3rd party make call or take control)	1	1	1	1	1	1
580	Active Adjunct Control Associations (Simultaneous Active Call Controlled Calls and Max Adj. Transaction Records)	16,000	16,000	16,000	600	600	8,000
585	Active Adjunct Route Requests [112]	8,000	8,000	8,000	300	300	4,000
590	Active Notifications per Call	6	6	6	6	6	6
595	Active Notifications per Split Domain	6	6	6	6	6	6
600	Active Notifications per VDN Domain	6	6	6	6	6	6
605	Domain-Control Associations per Call	24	24	24	24	24	24

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610	3rd-party Domain-Control Station Associations (Active Station Control Assoc.) - i.e., Domain Trans. Records	32,000	32,000	32,000	2,000	2,000	32,000
615	Domain-Control Split/Skill Associations	2,000	2,000	2,000	300	300	2,000
620	Domain-controllers per Station Domain	4	4	4	4	4	4
625	Domain-controllers per Split/skill Domain	8	8	8	8	8	8
630	Event Notification Associations	30,000	30,000	30,000	300	300	10,000
635	Max Calls With Send DTMF Active[151]	32	32	32	32	32	32
640	Max Simultaneous Calls Being Classified[149]	1,200	1,200	1,200	1200	1200	1200
645	Simultaneous Billing (MultiQuest) Requests	1,000	1,000	1,000	100	100	1,000
650	Simultaneous Selective Listening Disconnected Paths	300	300	300	75	75	300
655	***ASAI Traffic***						
660	Messages/Sec per ASAI/ADJUNCT IP Link (full duplex)	2,000	2,000	2,000	240	240	2,000
665	Messages/Sec/System (full duplex)	2,000	2,000	2,000	240	240	2,000
670	***Maximum CTI Links***						

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675	Maximum ASAI Links (Open and Proprietary) [92]	64	64	64	64	64	64
680	***ATTENDANT SERVICE. Note: IP Soft Console is not a newly introduced capacity.***						
685	Attendant Consoles(one is reserved for night) [10]	414	414	414	68	68	128
690	IP Soft Consoles(one is reserved for night) [10, 141]	414	414	414	68	68	128
695	License Limit: IP Soft Consoles(day:night) [10]	414	414	414	68	68	128
700	Crisis Alert Stations (on Attendant consoles + Crisis Alert buttons on digital stations) [10.2]	414 + 10	414 + 10	414 + 10	68 + 10	68 + 10	128 + 10
705	Attendant Console 100s Groups/Attendant	20	20	20	20	20	20
710	Attendant Control Restriction Groups	996	996	996	996	996	996
715	***Centralized Attendant Service***						
720	Release Link Trunks at Branch	255	255	255	255	255	255
725	Release Link Trunk Group at Branch	1	1	1	1	1	1
730	Administered Release Link Trunks at Main [139]	24,000	24,000	24,000	4,000	4,000	24,000
735	Offer limit: Administered Release Link Trunks at Main [139]	24,000	24,000	24,000	4,000	4,000	12,000
740	Release Link Trunk Groups at Main [11, 23]	2,000	2,000	2,000	99	99	2,000
745	***Other Access Queues***						

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750	Max Number of attendant Priority Queue Values [12]	13	13	13	13	13	13
755	Size range of attendant Reserved Queue	2 - 1108	2 - 1108	2 - 1108	2 - 182	2 - 182	2 - 342
760	Reserved attendant Queue Default Size	5	5	5	5	5	5
765	Attendant Queue Length	4,435	4,435	4,435	728	728	1,371
770	Switched Loops/Console	6	6	6	6	6	6
775	***AUTHORIZATION***						
780	Authorization Codes	90,000	90,000	90,000	5,000	5,000	90,000
785	Station Security Code Length	3 - 8	3 - 8	3 - 8	3 - 8	3 - 8	3 - 8
790	Administrable Classes of Restrictions (COR)	996	996	996	996	996	996
795	Classes of Service (COS) [142]	16	16	16	16	16	16
800	Length of Authorization Code	4 - 13	4 - 13	4 - 13	4 - 13	4 - 13	4 - 13
805	Length of Barrier Code	4 - 7	4 - 7	4 - 7	4 - 7	4 - 7	4 - 7
810	Length of Account Codes	1 - 15	1 - 15	1 - 15	1 - 15	1 - 15	1 - 15
815	Restricted Call List [113]	1	1	1	1	1	1
820	Remote Access Barrier Codes	10	10	10	10	10	10
825	Lists of CDR FEAC destinations [113]	1	1	1	1	1	1
830	Toll Call List [113]	1	1	1	1	1	1
835	Unrestricted/Allowed Call Lists [113]	10	10	10	10	10	10

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840	Total Call List Entries	1,000	1,000	1,000	1,000	1,000	1,000
845	***AUTOMATIC CALL BACK (ACB) CALLS***						
850	Max ACB Calls	1,500	1,500	1,500	1,500	1,500	1,500
855	***AUTOMATIC WAKEUP***						
860	Simultaneous Display Requests	30	30	30	30	30	30
865	Wakeup Requests per System	15,000	15,000	15,000	2,400	2,400	15,000
870	Wakeup Request per Extension	2	2	2	2	2	2
875	Wakeup Requests per 15 min Interval [20]	950	950	950	450	450	950
880	***BASIC CALL MANAGEMENT SYSTEM (BCMS)***						
885	Measured Agents or Login Ids	3,000	3,000	3,000	400	400	3,000
890	Measured Agents per Split/Skill	1,500 / 3,000	1,500 / 3,000	1,500 / 3,000	200	200	1,500 / 3,000
895	Measured Splits/Skills	600	600	600	99	99	600
900	Measured Agent-split/skill pairs	40,000	40,000	40,000	1,000	1,000	40,000
905	Measured Trunk Groups	32	32	32	32	32	32
910	Measured VDNs	512	512	512	99	99	512
915	Maximum Agents Displayed by Monitor BCMS Split Command [12.1]	100	100	100	100	100	100
920	Max BCMS Terminals	4	4	4	3	3	4
925	Max Active Maintenance Commands for System	5	5	5	5	5	5

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930	Max Simultaneous BCMS Terminals in Monitor Mode [12.2]	13	13	13	1	1	13
935	***Reporting Periods***						
940	Intervals	25	25	25	25	25	25
945	Days	7	7	7	7	7	7
950	***BRIDGING (See entry below for CALL APPEARANCES and BRIDGED CALL APPEARANCES)***						
955	***CABINETS***						
960	***Port Network Connectivity. This feature is for Federal Government use only.***						
965	Port Networks (see endnotes for migration)	64	64	64	NA	NA	64
970	Port Networks per MCC Cabinet [67]	5	5	5	NA	NA	5
975	Switch Nodes (Simplex) [3]	3	3	3	NA	NA	3
980	Switch Nodes (Duplex) [3]	6	6	6	NA	NA	6
985	DS1 Converter Complex (Simplex) [3]	41	41	41	NA	NA	41
990	DS1 Converter Complex (Duplex) [3]	82	82	82	NA	NA	82
995	***EPN [13]***						
1000	MCC [67]	64	64	64	NA	NA	64
1005	SCC	64 (4/stk)	64 (4/stk)	64 (4/stk)	NA	NA	64
1010	G650 (19 inch Rack Mount)	64 (5/stk)	64 (5/stk)	64 (5/stk)	NA	NA	64
1015	**PPN**	NA	NA	NA	NA	NA	NA
1020	***CALL APPEARANCES and BRIDGED CALL APPEARANCES***						
1025	Call and Bridged Appearances per Station [16]	97	97	97	97	97	97
1030	Max Call Appearances per Ext.	10	10	10	10	10	10

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1035	Min Call Appearances per Ext.	0	0	0	0	0	0
1040	***Primary Extension Bridging***						
1045	System-wide Maximum Bridged Appearances	80,000	80,000	80,000	2,400	2,400	80,000
1050	Max Simultaneously Active (Off-hook) Bridge Users on a Call (excluding principal and the calling/called party on the call) [17]	5	5	5	5	5	5
1055	Max Number of Bridges to a Principal's Call Appearance [15] (See below for extended numbers)	63	63	63	63	63	63
1060	Administered Users with Bridged Appearances (Station User maximum) [71.0, 72]	41,000	41,000	41,000	2,400	2,400	36,000
1065	Max Number Bridges to a Principal's Call Appearance with Extension that allows additional bridges [15]	63	63	63	63	63	63
1070	Number of Principals that can have the Extended number of Bridges	1,250	1,250	1,250	1,250	1,250	1,250
1075	***CALL COVERAGE***						
1080	Coverage Answer Groups (CAG) [145]	1,500	1,500	1,500	200	200	1,000
1081	Members per CAG	100	100	100	100	100	100

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1082	Administered entries across all CAGs	33,000	33,000	33,000	1,600	1,600	8,000
1083	Simultaneous terminations across all CAGs	12,000	12,000	12,000	1,600	1,600	8,000
1085	Coverage Paths	9,999	9,999	9,999	2,000	2,000	9,999
1090	Coverage Paths Incl. in Call Coverage Report	200	200	200	200	200	200
1095	Coverage Path per Station	2	2	2	2	2	2
1100	Coverage Points in a Path	6	6	6	6	6	6
1105	Remote Coverage Points [97]	10,000	10,000	10,000	10,000	10,000	10,000
1115	Time of Day Coverage Tables	1,000	1,000	1,000	1,000	1,000	1,000
1120	Time of Day Changes per Table	5	5	5	5	5	5
1125	Remote Admin Coverage Paths	2	2	2	2	2	2
1130	***CALL DETAIL RECORDING***						
1135	Intra-switch Call Trackable Extensions [119]	5,000	5,000	5,000	1,000	1,000	5,000
1140	Max Number of CDR Records That Can Be Buffered in the Switch [54.1]	17,326	17,326	17,326	6,902	6,902	17,326

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1145	Number of Records Buffered for the Primary Output Device that will cause Secondary Device to be Busied Out for 2 Minutes [54.1]	1,900	1,900	1,900	1,900	1,900	1,900
1150	Survivable CDR: Number of Output Files [54, 55]	20	20	20	20	20	20
1155	***CALL FORWARDING***						
1160	Call Forwarded Digits (standard off-net)	18	18	18	18	18	18
1165	Call Forwarded Digits (enhanced off-net)	24	24	24	24	24	24
1170	Total number of Call Forwarded stations [71.0]	41,000	41,000	41,000	2,400	2,400	36,000
1175	***CALL PARK***						
1180	Attendant Group Common Shared Ext. Numbers per System [19]	1,182	1,182	1,182	1,182	1,182	1,182
1185	Number of Parked Calls	10,604	10,604	10,604	723	723	10,640
1190	***CALL PICKUP GROUPS: (based on station user max)***						
1195	Call Pickup Members/Group	50	50	50	50	50	50
1200	Call Pickup Members/System [71.0]	41,000	41,000	41,000	2,400	2,400	36,000
1205	Number of Groups	5,000	5,000	5,000	800	800	5,000
1210	***CALL VECTORING***						

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1215	Skills a Call Can Simultaneously Queue to	3	3	3	3	3	3
1220	Priority Levels	4	4	4	4	4	4
1225	Recorded Announcements/Audio Sources for Vector Delay	9,000	9,000	9,000	3,000	3,000	3,000
1230	Vector Steps per Vector (32 prior to 4.0)	99	99	99	99	99	99
1235	Vector Directory Numbers (VDNs) [20.1]	30,000	30,000	30,000	512	512	20,000
1240	Vectors per System	8,000	8,000	8,000	256	256	2,000
1245	Number of Collected Digits for Call Prompting or CINFO	16	16	16	16	16	16
1250	Number of Dial-Ahead Digits for Call Prompting	24	24	24	24	24	24
1255	Vector Routing Tables (100 entries per table)	999	999	999	999	999	999
1260	BSR Application Routing Tables (forms)	511	511	511	511	511	511
1265	BSR Application-Location Pairs [20.5]	2,560	2,560	2,560	2,560	2,560	2,560
1270	Holiday Tables (15 entries per table)	999	999	999	999	999	999
1275	Service Hours Tables	999	999	999	999	999	999
1280	Total non-blank Comment Steps	40,000	40,000	40,000	1,280	1,280	10,000
1285	Vector Variables (26 with prior releases)	702	702	702	702	702	720

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1290	Active Collect Local Variables	12,000	12,000	12,000	450	450	8,000
1295	VDN Variables	9	9	9	5	5	5
1300	Policy Routing Tables	8,000	8,000	8,000	256	256	2,000
1305	Policy Routing Points (PRTs x VDN entries)	24,000	24,000	24,000	768	768	6,000
1310	***CONFERENCE***						
1315	Maximum Number of Parties in a Conf	6	6	6	6	6	6
1320	Simultaneous 3-way Conf. Calls [21]	10,304	10,304	10,304	see endnote	see endnote	10,304
1325	Simultaneous 6-way Conf. Calls [22]	5,120	5,120	5,120	see endnote	see endnote	5,120
1330	***Meet-Me Conferencing***						
1335	Max Number of Conference Parties	3 - 6	3 - 6	3 - 6	3 - 6	3 - 6	3 - 6
1340	Max Required Security Code Length	0 or 6	0 or 6	0 or 6	0 or 6	0 or 6	0 or 6
1345	Meet-Me Conference VDNs	1,800	1,800	1,800	175	175	1,800
1350	***Expanded Meet-Me Conferencing (EMMC) NOTE: The Meet-me Conf VDN Maximums apply to EMMC as well.***						
1355	Maximum EMMC Ports	300	300	300	300	300	300
1360	Conferees in EMMC	3 - 300	3 - 300	3 - 300	3 - 300	3 - 300	3 - 300
1365	***DATA PARAMETERS***						
1370	Administered Connections	128	128	128	128	128	128
1375	PRI Endpoints (PE)	50	50	50	50	50	50
1380	Administered Access Endpoints	24,000	24,000	24,000	2,400	2,400	12,000
1385	Offer limit: Administered Access Endpoints [139]	24,000	24,000	5,000	1,000	1,000	2,400
1390	***ALPHANUMERIC DIALING***						

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
1395	Max entries	1,250	1,250	1,250	NA	NA	1,250
1400	Alphanumeric Characters per Entry	24	24	24	NA	NA	24
1405	***MULTIMEDIA PARAMETERS*** [3]						
1410	TN787K multimedia interface (MMI) Boards	14	14	14	NA	NA	14
1415	TN788C multimedia voice conditioner (VC) Boards	52	52	52	NA	NA	52
1420	MMI and VC Boards in Multiple PN	Yes	Yes	Yes	NA	NA	Yes
1425	Multimedia One Number Conferences per System	5,000	5,000	5,000	NA	NA	5,000
1430	Multimedia Dynamic Conference Records	208	208	208	NA	NA	208
1435	***Maximum Number of BRI Connections*** [101]	7,000	7,000	7,000	1,000 *	1000 *	7,000
1440	***DIGITAL DATA ENDPOINTS***	7,500	7,500	7,500	800	800	7,500
1445	***DIAL PLAN***						
1450	DID LDNs (without Tenant Partitioning)	20	20	20	20	20	20
1455	Maximum Extensions (of all types) [24]	64,000	64,000	64,000	3,500	3,500	49,733
1460	Station Extensions (included in Maximum Extensions) [24.1]	41,000	41,000	41,000	2,400	2,400	36,000
1465	Miscellaneous Extensions (included in Maximum Extensions) [25]	32,508	32,508	32,508	900	900	26,508

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
1470	VDN Extensions (included in Miscellaneous Extensions)	30,000	30,000	30,000	512	512	20,000
1475	Station Extensions plus VDN Extensions combined limit (share a message server table)	NA	NA	NA	NA	NA	NA
1480	Extension Number Portability (UDP Entries)	80,000	80,000	80,000	10,110	10,110	80,000
1485	Maximum Dial Plan Analysis Table entries	540	540	540	540	540	540
1490	***Feature Dial Access Codes***						
1495	Number of Codes [100]	166	166	166	166	166	166
1500	Number of Digits in a Feature Access Code	1 - 4	1 - 4	1 - 4	1 - 4	1 - 4	1 - 4
1505	***Integrated Directory Entries [27]***	41,415	41,415	41,415	2,469	2,469	36,129
1510	***Maximum Extension Size [123]***	13	13	13	13	13	13
1515	***Minimum Extension Size***	1	1	1	1	1	1
1520	***NAMES***						
1525	Number of names [28]	83,423	83,423	83,423	4,268	4,268	72,137
1530	Number of characters in a station name	27	27	27	27	27	27
1535	Number of characters in a group name	25	25	25	25	25	25
1540	Number of name characters in a missed call message	20	20	20	20	20	20
1545	***Non-DID LDNs***	2,000	2,000	2,000	99	99	2,000

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]	Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]	Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]	Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]	Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]
1550	***EXTENSIONS (total)*** [24]						
1555	Prefix Extensions	Yes	Yes	Yes	Yes	Yes	Yes
1560	Prefix Extensions Lengths [99]	2 - 6	2 - 6	2 - 6	2 - 6	2 - 6	2 - 6
1565	***Trunk Dial Access Codes***						
1570	Number of Dial Access Codes	2,218	2,218	2,218	317	317	2,218
1575	Number of digits in DAC	1 - 4	1 - 4	1 - 4	1 - 4	1 - 4	1 - 4
1580	***Max Locations*** [106]	2000	2000	2000	250	250	250
1581	***Display Parameters and Location Parameters*** [106]	50	50	50	25	25	25
1585	***DO NOT DISTURB (DND)***						
1590	DND Requests per System	41,000	41,000	41,000	2,400	2,400	36,000
1595	Simultaneous Display Requests	30	30	30	30	30	30
1600	***EXPERT AGENT SELECTION (EAS) (note 83)***						
1605	Skill Groups	8,000	8,000	8,000	99	99	2,000
1610	VDN Skill Preferences	3	3	3	3	3	3
1615	Max Skills a Call Can Simultaneously Queue to	3	3	3	3	3	3
1620	Max Administered ACD Members (login ID / Agent-Skill pairs) [28.1]	999,999	999,999	999,999	6,000	6,000	180,000
1625	Max Staffed (logged-in) ACD Members [28.3] i.e., agent-skill pairs	100,000	100,000	100,000	1,000	1,000	60,000
1630	Max Administered Agent Login IDs [28.4]	30,000	30,000	30,000	1,500	1,500	20,000

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		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
1635	***Max Skills per Agent***						
1640	Max Skills per Agent in CM	120	120	120	20	20	60
1645	Skill Levels (preferences) per Agent Skill	16	16	16	16	16	16
1650	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
1655	Max Staffed (logged-in) EAS Agents per Skill (members per group) [1, 28.6]	10,000	10,000	10,000	500	500	5,200
1656	Max Staffed (logged-in) EAS SIP CC Agents [28.7]	5,000	5,000	5,000	50	50	500
1660	Max Calls that can be queued to a skill.	3,000	3,000	3,000	3,000	3,000	3,000
1665	***Max Logged in EAS Agents (per system) when each has:*** [1, 6]						
1670	1 Skill	10,000	10,000	10,000	500	500	5,200
1675	2 Skills	10,000	10,000	10,000	500	500	5,200
1680	4 Skills	10,000	10,000	10,000	250	250	5,200
1685	10 Skills	10,000	10,000	10,000	100	100	5,200
1690	20 Skills	5,000	5,000	5,000	50	50	3,000
1695	60 Skills (R12 or later CMS Required)	1,666	1,666	1,666	NA	NA	1,000
1700	120 Skills (R16.1 or later CMS Required)	833	833	833	NA	NA	NA
1705	***EXTERNAL DEVICE ALARMING***	90	90	90	90	90	90
1710	***FACILITY BUSY INDICATORS***						
1715	Buttons per Tracked Resource [65]	100	100	100	100	100	100

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
1720	Number of Station Busy Indicators (SBI) [95]	10,000	10,000	10,000	3,600	3,600	10,000
1725	Facility Busy Indicators per system (SBIs + Queue Status buttons + ((24 DTGS buttons and 2 SBIs on each Attendant) x Attd Max) [95.1]	32,726	32,726	32,726	5,868	5,868	18,528
1730	***HUNT GROUPS (NON ACD)*** [28.5]						
1735	Announcements per Group	1	1	1	1	1	1
1740	Announcements per System [18]	9,000	9,000	9,000	3,000	3,000	3,000
1745	Total Hunt Groups	8,000	8,000	8,000	99	99	2,000
1750	Members per Group	1,500	1,500	1,500	200	200	1,500
1755	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
1760	Group Members per System [1, 28.5]	10,000	10,000	10,000	500	500	5,200
1765	Queue Slots per Group [7]	NA	NA	NA	NA	NA	NA
1770	***INTERCOM TRANSLATION TABLE (ICOM): Automatic, Manual and Dial***						
1775	ICOM groups per system [131]	256	256	256	32	32	256
1780	Auto/Manual ICOM Groups	256	256	256	32	32	256
1785	Dial ICOM Groups	256	256	256	32	32	256
1790	***Members per ICOM group***						
1795	Auto/Manual ICOM Groups	32	32	32	32	32	32
1800	Dial ICOM Groups	32	32	32	32	32	32

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
1805	Members per System [131]	8,192	8,192	8,192	1,024	1,024	8,192
1810	***IP Network Region & IP Network Map***						
1812	IP Network Regions[148]	2000	2000	2000	250	250	250
1815	IP network Map Number of entries [144]	500	500	500	500	500	500
1820	***IP Solutions and SIP Specific Capacities (also see sections on OPTIM and Trunks)***						
1825	***IP Attendant Consoles and Soft Console capacities: See Attendant category***						
1830	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
1835	**Simultaneous in-use IP ports (including stations and trunks) [1, 71.0, 71.4, 71.5, 71.6, 72] (See entries under the PORTS category for total ports, including ALL port types)**						
1840	With a mix of H.323 and SIP [1, 78]	24,576	24,576	24,576	5,000	5,000	24,000
1845	When all IP ports are H.323 [1, 78]	24,576	24,576	24,576	5,000	5,000	24,000
1850	When all IP ports are SIP [1]	24,000	24,000	24,000	4,000	4,000	12,000
1855	Offer limit: When all IP ports are SIP [1]	see above	see above	12,000	see above	see above	see above
1860	TN799 Circuit Packs (C-LAN)	106	106	106	NA	NA	64
1865	Number of Sockets on PE Interface [75]	24,576	24,576	24,576	6,000	6,000	24,576
1870	Max Duplicated TN2602 virtual MAC Tables	8	8	8	NA	NA	8
1875	Maximum of all IP Media Resources (TN2302AP (64-port) + TN2602AP (80 or 320 port) [71.0, 71.1, 71.5, 71.6]	200	200	200	see endnotes	see endnotes	200

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1880	TN2602AP (IP Media Resource 80) - Part of the Overall Maximum above	128	128	128	NA	NA	128
1885	TN2602AP (IP Media Resource 320) - Part of the Overall Maximum above	128	128	128	NA	NA	128
1890	Maximum Port Networks (including G650s) - Also see row 950 G650 for the number of Cabinets in a G650 PN.	64	64	64	NA	NA	64
1895	System-wide Maximum H.248 media gateways (G250, G350, G700, IG550, G430, G450) [71.0, 71.5, 71.6]	250	250	250	50	50	250
1900	Maximum H.323 media gateways (MultiTech) - NOT part of the above limit of 250 H.248 media gateways or 64 PNs	250	250	250	250	250	250
1905	Total Number of LSPs (includes all Servers)	250	250	250	50	50	250
1910	H.248 media gateways per LSP [71.0, 71.5, 71.6]	50	50	50	50	50	50
1915	Maximum administered H.323 trunks [62, 71.0, 139]	12,000	12,000	12,000	4,000	4,000	12,000
1920	Offer Limit: Maximum administered H.323 Trunks [62, 71.0, 139]	see above	see above	see above	4,000	4,000	2000

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1925	Maximum Concurrently Registered H.323 Stations [45.1, 47, 71.0, 72, 139, 141]	18,000	18,000	18,000	2,400	2,400	12,000
1930	Offer Limit: Maximum Concurrently Registered H.323 Stations [45.1, 47, 71.0, 72, 139]	see above	see above	5,000	1,000	1,000	2,400
1935	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
1940	Offer Limit: Maximum H.323 IP ACD Agents [1, 66]	10,000	10,000	5,000	500	500	1,000
1945	Offer Limit: Maximum H.235.5 (Annex H) Stations [57]	5,000	5,000	5,000	1,000	1,000	2,400
1950	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
1955	Administered Analog+ISDN+IP Trunks (pool of Analog, ISDN, IP, and SIP trunk Ports). See also section "SIP". [1, 62, 71.0, 72, 143]	24,000	24,000	24,000	4,000	4,000	12,000
1960	Offer Limit: Administered Analog+ISDN+IP Trunks (pool of Analog, ISDN, IP, and SIP trunk Ports). See also section "SIP". [1, 62, 71.0, 72, 133, 135, 143]	24,000	24,000	24,000	4,000	4,000	2,400
1965	Signaling Groups [60]	999	999	999	999	999	999

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1970	Number of IP (H.323 or SIP) Trunk members in a Signaling Group	255	255	255	255	255	255
1975	Administered Video-Capable H.323/SIP Stations or Softphones [116]	18,000	18,000	18,000	2,400	2,400	12,000
1980	Offer Limit: Video capable H.323 stations or softphones	18,000	18,000	5,000	1,000	1,000	2,400
1985	Video Call Resource [77]	10,666	10,666	10,666	833	833	8,000
1990	Number of Simultaneous Video Calls on a CM-ES [77]	5,333	5,333	5,333	416	416	4,000
1995	Number of Simultaneous Video Calls on a CM-FS [77]	2,666	2,666	2,666	208	208	2,400
2000	Max Number of Video Bridges	40	40	40	40	40	40
2005	***Remote Office Feature Group (also see endnote 114)***						
2010	Remote Office Gateways (H.323 RO Gateway)	250	250	250	250	250	250
2015	License Limit: Maximum Administered Remote Office Stations	18,000	18,000	18,000	2,400	2,400	12,000
2020	Offer Limit: Maximum Administered Remote Office Stations	see above	see above	5,000	1,000	1,000	2,400

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2025	License Limit: Maximum Administered Remote Office Trunks	12,000	12,000	12,000	4,000	4,000	12,000
2030	Offer Limit: Maximum Administered Remote Office Trunks	see above	see above	see above	4,000	4,000	2,000
2035	***Service Observing/Call Recording Capacities***						
2040	Additional timeslots per observing association within a port network gateway - with No Talk FAC or ASAI Single Step Conference	0	0	0	0	0	0
2045	Additional timeslots per observing association within a H.248 gateway - with SO buttons or FACs (Talk or no Talk)	1	1	1	1	1	1
2050	Total Observers of extensions for the system [127]	not limited	not limited	not limited	not limited	not limited	not limited
2055	Total Observers of VDNs for the system	999	999	999	50	50	50
2060	Total observers of the same EAS agent LoginID or station extension (option set to **y** - when set to **n**, only one observer is allowed in a call) [125]	2	2	2	2	2	2

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2065	Maximum parties in a connection being observed. The observer(s) are each counted as a party. [126]	6	6	6	6	6	6
2070	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
2075	***SIP (See endnotes 1, 62, 120)***						
2080	Administered Trunks [1, 14, 62, 71.0, 133, 135. 143.] Part of Analog/ISDN/IP/SIP trunk pool.	24,000	24,000	24,000	4,000	4,000	12,000
2085	Offer Limit: Administered Trunks for CM-ES [1, 62, 133, 135, 143]	24,000	24,000	24,000	4,000	4,000	2,400
2090	Offer Limit: Simultaneous in use Trunks for CM-ES [62, 133, 135, 143]	12,000	12,000	12,000	4,000	4,000	2,400
2095	Offer Limit: Administered Trunks for CM-FS [1, 133, 135, 143]	24,000	24,000	24,000	4,000	4,000	2,400
2100	Offer Limit: Simultaneous in use Trunks for CM-FS [133, 135, 143]	24,000	24,000	24,000	4,000	4,000	2,400
2105	SES: See endnote 120	NA	NA	NA	NA	NA	NA
2110	Administered SIP stations [1, 139]	41,000	41,000	41,000	2,400	2,400	36,000
2115	Offer Limit: Administered SIP stations [1, 139]	36,000	36,000	2,000	1,000	700	2,400
2120	SIP Softclient Buddies	50	50	50	50	50	50

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2125	***Maximum Bridged Call Appearances and Extended Bridged Groups: See Entry above under Call APPEARANCES and BRIDGED CALL APPEARANCES***						
2130	***SBS (Separation of Bearer and Signaling)***						
2135	SBS Trunks	1,000	1,000	1,000	1,000	1,000	1,000
2140	SBS Stations	500	500	500	500	500	5000
2145	***LAST NUMBER DIALED***						
2150	Entries/System [29]	48,914	48,914	48,914	3,268	3,268	43,628
2155	Number of Digits	24	24	24	24	24	24
2160	***LEAVE WORD CALLING (SWITCH BASED) and MESSAGE WAITING***						
2165	System-wide Messages Stored	12,000	12,000	12,000	2,000	12,000	12,000
2170	Max Remote Leave Word Calling Messages	2,000	2,000	2,000	1,000	1,000	2,000
2175	Messages per User	125	125	125	125	125	125
2180	***REMOTE MESSAGE WAITING INDICATORS***						
2185	Remote MWI per Extension	80	80	80	80	80	80
2190	Remote MWI per System [117] (Station user max / 20)	2,050	2,050	2,050	120	120	1,800
2195	Simultaneous Message Retrievers	400	400	400	400	400	400
2200	System-wide Super Message Retrievers (can retrieve anyone's messages)	30	30	30	30	30	30
2205	***MALICIOUS CALL TRACE***						
2210	Max Simultaneous Traces	16	16	16	16	16	16
2215	***MULTIPLE LISTED DIRECTORY NUMBERS (MLDN)***						
2220	Via DID without Tenant Partition	20	20	20	20	20	20

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2225	Via DID with Tenant Partition [128]	100	100	100	100	100	100
2230	Via CO	2,000	2,000	2,000	99	99	2,000
2235	***MODEM POOL GROUPS - Mode 2/Analog*** [3]						
2240	Group members per system	2,016	2,016	2,016	160	160	2,016
2245	Number of groups	63	63	63	5	5	63
2250	Members per group	32	32	32	32	32	32
2255	***NETWORKING (also see Trunks)***						
2260	CAS RLT Nodes [23]	2,000	2,000	2,000	99	99	2,000
2265	***DCS Nodes*** [31]						
2270	TCP/IP	63	63	63	63	63	63
2275	ISDN PRI (Public and/or Private)	63	63	63	63	63	63
2280	Hybrid (combination of PRI and TCP/IP)	63	63	63	63	63	63
2285	ENP Nodes [32]	999	999	999	999	999	999
2290	***QSIG Nodes: No Fixed Node Capacity. See endnote 73.***						
2295	***QSIG/DCS Interworked Nodes*** [76]	63	63	63	63 *	63 *	63
2300	***OPTIM Applications such as EC500, OPS, PBFMC, PVFMC*** [105]						
2305	Number of OPTIM applications per Station (EC500, OPS, PBFMC, PVFMC)	4	4	4	4	4	4
2310	Software-defined OPTIM Station Capacity [71.0, 72, 104]	41,000	41,000	41,000	2,400	2,400	36,000
2315	Offer Limit: OPTIM Station Capacity	41,000	41,000	5,000	1,000	1,000	2,400
2320	License Limit: administered OPTIM EC500 telephones	41,000	41,000	41,000	2,400	2,400	36,000

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]	Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]	Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]	Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]	Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]
2325	Administered OPTIM-OPS stations (SIP Endpoints) [139]	41,000	41,000	41,000	2,400	2,400	36,000
2330	Offer Limit: Administered OPTIM-OPS stations (SIP Endpoints) [139]	36,000	36,000	5,000	1,000	1,000	2,400
2335	OPTIM Mapping Table Capacity	123,000	123,000	123,000	9,600	9,600	61,500
2340	***PAGING***						
2345	Code Calling IDs	125	125	125	125	125	125
2350	Loudspeaker Zones	9	9	9	9	9	9
2355	***Group Paging using Speaker Phone*** [50]						
2360	Number of Groups [33]	32	32	32	32	32	32
2365	Members per Group [35]	32	32	32	32	32	32
2370	***PARTITIONS***						
2375	Attendant Groups (System wide)	414	414	414	68	68	128
2380	Tenant Partitions[130]	250	250	250	250	250	250
2385	Multiple Music on Hold Sources [26]	100	100	100	100	100	100
2390	***PERSONAL CO LINES (PCOL)***						
2395	PCOL Appearances per group	16	16	16	16	16	16
2400	PCOL Lines (Trunk Groups)	200	200	200	200	200	200
2405	PCOL Trunks per PCOL Group	1	1	1	1	1	1
2410	***PORTS (Max Ports including stations and trunks)***						

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2415	Software-defined Max Ports on System (Row "Administered Stations (Overall Maximum Number)") plus row "Administered Trunks (Overall Maximum Number)".) [71.0, 71.4, 71.5, 71.6, 72]	65,000	65,000	65,000	6,400	6,400	48,000
2420	License Limit: Maximum number of ports	65,000	65,000	65,000	6,400	6,400	48,000
2425	***Maximum PORT CIRCUIT PACK SLOTS*** [34]						
2430	***Per PN***						
2435	MCC Standard Reliability	99	99	99	NA	NA	99
2440	SCC Standard Reliability	71	71	71	NA	NA	71
2445	***RECORDED ANNOUNCEMENTS / AUDIO SOURCES***						
2450	Announcement/Audio Source Extensions per System [18]	9,000	9,000	9,000	3,000	3,000	3,000
2455	***Analog & Aux Trunk Announcements***						
2460	Queue Slots per Announcement	1,000	1,000	1,000	150	150	1,000
2465	Queue Slots per System	1,000	1,000	1,000	150	150	1,000
2470	Calls Connected to Same Announcement	1,000	1,000	1,000	1,000	1,000	1,000
2475	***Integrated Announcements***						
2480	Queue Slots per System	4,000	4,000	4,000	4,000	4,000	4,000

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2485	Calls Connected to Same Announcement	1,000	1,000	1,000	1,000	1,000	1,000
2490	Total Announcement Sources: Integrated Boards on PNs plus embedded **vVAL** Sources on G250, G350, G700, etc. media gateways	378	378	378	178	178	378
2495	***TN2501AP (VAL) Boards in Port Network Gateways (G650, MCC1, SCC1)***						
2500	VAL Boards (TN2501) per system	128	128	128	NA	NA	10
2505	Channels per Board (Playback Ports)	31	31	31	NA	NA	31
2510	Maximum Announcements per TN2501 Board (Firmware 17 or later otherwise limited to 256)	1,024	1,024	1,024	NA	NA	1,024
2515	Board Content Saved [91]	All active boards	All active boards	All active boards	NA	NA	All active boards
2520	Recording Time per Board (in Minutes) [90, 124]	60	60	60	NA	NA	60
2525	***Embedded Media Gateway Integrated Virtual VAL (Voice Annc. Over LAN) vVAL Announcement Sources***						
2530	Channels per Source (playback ports) - depends on the Media Gateway [124]	see endnote	see endnote	see endnote	see endnote	see endnote	send endnote
2535	Maximum Announcements per Source	1,024	1,024	1,024	1,024	1,024	1,024

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2540	Source Contents Saved (VAL FTP download) [91]	All active boards	All active boards	All active boards	All active boards	All active boards	All active boards
2545	Recording Time per Source in Minutes - depends on the Media Gateway (15 min for G250/G350/G430, 20 min. for G700 and 45 or 240 min. for G450) [90, 124]	15, 20, or 45/240	15, 20, or 45/240	15, 20, or 45/240	15, 20, or 45/240	15, 20, or 45/240	15,20, or 45/240
2550	***Locally Sourced Music and Announcements (LSMA) - Provides groups of announcement sources and allows announcements and audio groups to be used as Music on Hold sources.***						
2555	Audio Groups (for announcements/music) [121]	50	50	50	50	50	50
2560	Sources per Audio Group (VAL and/or vVAL)	378	378	378	378	378	378
2565	Administered Announcement Files [122]	12,000	12,000	12,000	3,000	3,000	3,000
2570	MOH Groups (for assignment as the system music source or Tenant Partition Multiple Music Source)	10	10	10	10	10	10
2575	Analog/Aux Trunk Sources (Ports) per MOH Group [56]	100	100	100	100	100	100

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]	Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]	Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]	Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]	Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]
2580	Unique Analog/Aux Trunk MOH Ports per System (each referenced only once) [56]	100	100	100	100	100	100
2585	***SIP Enablement Services (See IP Solutions and SIP Specific Capacities)***						
2590	***STATIONS (See Voice Terminals; also see Ports for maximum ports including Stations and trunks)***						
2595	***SYSTEM ADMINISTRATION TERMINAL (SAT)***						
2600	Admin History Log File Entries	1,800	1,800	1,800	500	500	18,00
2605	Simultaneous Admin Commands [2]	10	10	10	10	10	10
2610	Simultaneous Maintenance Commands [2]	5	5	5	5	5	5
2615	Simultaneous System Management Sessions [2]	17	17	17	5	5	17
2620	Number of Scheduled Reports	50	50	50	50	50	50
2625	***SPEECH SYNTHESIS CIRCUIT PACKS***						
2630	Number of Speech Synthesis Circuit Packs	40	40	40	NA	NA	40
2635	Channels per Speech Circuit Pack	4	4	4	NA	NA	4
2640	***TERMINATING EXTENSION GROUPS (TEG)***						
2645	TEGs	32	32	32	32	32	32
2650	Users That May Share a TEG	4	4	4	4	4	4
2655	***TIME SLOTS [36]***						
2660	Simultaneous Calls in CM [36]	15,424	15,424	15,424	5,000	5,000	15,424

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2665	Simultaneous calls between 2 SIP stations [52]	6,000	6,000	6,000	1,000	1,000	3,000
2670	Total Time Slots in CM [61]	32,768	32,768	32,768	endnote 61	endnote 61	32,768
2675	Total Time Slots for Voice & Data [38, 61, 71.1]	30,848	30,848	30,848	endnote 61	endnote 61	30,848
2680	Time Slots per Port Network	512	512	512	NA	NA	512
2685	Time Slots per H.248 Gateway [124]	see endnote	see endnote	see endnote	see endnote	see endnote	see endnote
2690	***TONE CLASSIFIERS***						
2695	Tone Receivers (General) [39, 124]	8,000	8,000	8,000	1,200	1,200	1,200
2700	TTR Queue Size	4	4	4	4	4	4
2705	Prompting TTR Queue Size	80	80	80	80	80	80
2710	***TRUNKS (For Max IP trunks, SIP trunks, Signaling Groups etc., also see IP Solutions)***						
2715	DS1 Circuit Packs including MM710s (PRI/Station only, Total (PRI+Line-side DS1) [94, 94.1]	522	522	522	80 *	80 *	522
2720	DS1 with Echo Cancellers [94, 94.1]	522	522	522	80 *	80 *	522
2725	Queue Slots for Trunks	4,000	4,000	4,000	198	198	4,000
2730	Before using the following capacities in a contact center, read the disclaimer at the beginning of the table or in endnote 1.						
2735	Administered Trunks (Overall Maximum Number of Trunks of all types) [14, 71.0, 72, 102]	24,000	24,000	24,000	4,000	4,000	12,000

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2740	CM Evolution Server (ES) Offer limit: Administered Trunks (Overall Maximum Number of Trunks of all types) [14, 62, 71.0, 72, 102, 143]	24,000	24,000	24,000	4,000	4,000	2,400
2745	CM Feature Server (FS) Offer limit: Administered Trunks (Overall Maximum Number of Trunks of all types) [14, 71.0, 72, 102, 143]	24,000	24,000	24,000	4,000	4,000	2,400
2750	***Total PRI Interfaces*** [40] [94]	522	522	522	80	80	522
2755	***BRI TRUNKS*** [42]						
2760	BRI Trunk Circuit Packs [42.2]	250	250	250	50 *	50 *	250
2765	Administered BRI Trunks in CM (Max B-Channels x Max Boards and/or MMs) [42.3]	6,000	6,000	6,000	1,200 *	1,200 *	6,000
2770	Offer limit: Administered BRI Trunks in CM	see above	see above	see above	see above	see above	see above
2775	***SBS Trunks: see section "IP Solutions and SIP Specific Capacities"***						
2780	***ISDN Temporary Signaling Connections***						
2785	TSCs in System [41]	24,999	24,999	24,999	4,256	4,256	12,999
2790	Call Associated TSCs [41]	24,000	24,000	24,000	4,000	4,000	12,000
2795	Non Call Associated TSCs	999	999	999	256	256	999

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2800	Administered / Fixed TSCs	250	250	250	128	128	250
2805	***Ringback Queue Slots***	4,000	4,000	4,000	198	198	4,000
2810	***Trunk Groups***						
2815	Trunk Group Hourly Measurements	75	75	75	75	75	75
2820	Trunk Groups in the System	2,000	2,000	2,000	99	99	2,000
2825	PRI Call-By-Call Trunk Groups in the System (part of the total trunk groups in the system)	200	200	200	10	10	200
2830	Trunk Members in a Trunk Group	255	255	255	255	255	255
2835	***ISDN / IP / SIP Trunks (also see section on IP Solutions and SIP specific capacities)***						
2840	Incoming Call Handling Treatment (ICHT) per Trunk Group	540	540	540	54	54	540
2845	Incoming Call Handling Treatment (per System)	9,999	9,999	9,999	288	288	9,999
2850	User Defined Services	60	60	60	60	60	60
2855	Usage Allocation Entries (per Plan)	15	15	15	15	15	15
2860	Number of entries in the Public Unknown Numbering form (for outgoing Caller ID/ANI) [37]	9,999	9,999	9,999	240	240	9,999
2865	***VOICE TERMINALS*** [43]						

Row	CM Capacity Item	Avaya Aura® ™ for					
		Main / Survivable Core Duplex (CM_Duplex)[136] LARGE [146, 147]	**Main / Survivable Core Simplex (CM_Simplex)[136] LARGE [146, 147]**	**Survivable Remote Simplex (CM_SurvRemote) [136] LARGE [146, 147]**	**Main Embedded (CM_onlyEmbed) [137] SMALL [146, 147]**	**Survivable Remote Embedded (CM_SurvRemoteEmbed) [138] SMALL [146, 147]**	**Midsize Enterprise (Midsize_Ent) MEDIUM [146, 147]**
2870	Administered Stations (Overall Maximum Number of Stations of all types) [46, 51, 71.0, 72, 101]	41,000	41,000	41,000	2,400	2,400	36,000
2875	License Limit: Maximum administered Stations	41,000	41,000	41,000	2,400	2,400	36,000
2880	Offer Limit: Maximum administered Stations	41,000	41,000	5,000	1,000	1,000	2,400
2885	***Administered BRI (Point-to-Point and Multipoint) Stations (part of the Overall Max)[44]***						
2890	Point-to-Point	7,000	7,000	7,000	1,000 *	1,000 *	7,000
2895	Multipoint (Passive Bus)	7,000	7,000	7,000	1,000 *	1,000 *	7,000
2900	Offer Limit: Administered BRI stations	7,000	7,000	5,000	1,000 *	1,000 *	2,400
2905	***Digital Stations (part of the Overall Max) [45, 71.0, 72]***	41,000	41,000	41,000	2,400	2,400	36,000
2910	***Display Stations (part of the Overall Max) [45, 71.0, 72, 101]***	41,000	41,000	41,000	2,400	2,400	36,000
2915	***Offer Limit: Administered Digital & Display stations***	41,000	41,000	5,000	1,000	1,000	2,400
2920	***H.323 Stations (part of Overall Station Max) [45 71.0]***	18,000	18,000	18,000	2,400	2,400	12,000
2921	Total number of offline call log entries for H.323 stations[150]	8,100	8,100	8,100	1,080	1,080	5,400

Row	CM Capacity Item	Avaya Aura® ™ for					
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2925	Offer Limit: Maximum Concurrently Registered H.323 Stations [47]	see above	see above	5,000	1,000	1,000	2,400
2930	Offer Limit : Maximum Concurrently Registered UNAUTHENTICATED H.323 Stations [47]	see above	see above	5,000	1,000	1,000	2,400
2935	IP stations (administered SIP + registered H.323)	41,000	41,000	41,000	2,400	2,400	36,000
2940	Offer Limit: IP stations (administered SIP + registered H.323)	41,000	41,000	5,000	1,000	1,000	2,400
2945	Station Button Capacity (K Units)	23,286	23,286	23,286	885	885	23,256
2950	Number Of Administrable Physical Buttons	1,440,000	1,440,000	1,440,000	54,400	54,400	1,440,000
2955	Maximum Buttons with Customizable Labels per System	100,000	100,000	100,000	54,400	54,400	100,000
2960	Station Button Feature Capacity [95.1]	32,726	32,726	32,726	5,868	5,868	18,528
2965	***VUSTATS***						
2970	Measured Agents or Login Ids	3,000	3,000	3,000	400	400	3,000
2975	Measured Splits/Skills	600	600	600	99	99	6,000
2980	Measured Trunk Groups	32	32	32	32	32	32
2985	Measured VDNs	512	512	512	99	99	512
2990	Max VuStat Buttons [118]	1,000	1,000	1,000	1,000	1,000	1,000

Row	CM Capacity Item	Avaya Aura® ™ for					
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2995	Display Formats for VuStats	50	50	50	50	50	50
3000	System Max Simultaneous Updating Displays [118]	500	500	500	500	500	500
3005	***Reporting Periods***						
3010	Intervals	25	25	25	25	25	25
3015	Days	1	1	1	1	1	1
3020	***Reporting Adjunct Switch Links***						
3025	CMS R13.1 and earlier	1 or 2	1 or 2	1 or 2	1 or 2	1 or 2	1 or 2
3030	R14 CMS and 4.0 Avaya IQ or later[87]	2 or 4	2 or 4	2 or 4	2 or 4	2 or 4	2 or 4

CMS Capacities

Row	CMS Capacity Item	R17.0 CMS Total Capacity
CMS - 1	ACD Admin Log Records	30,000
CMS - 2	ACDs (multi-ACD configuration)	8
CMS - 3	Agent login/logout data records	1,500,000
CMS - 4	Agent Login/Logout Records	1,500,000
CMS - 5	Agent Trace Records	500,000
CMS - 6	Agent Traces Active	5,000
CMS - 7	ICH Call Records	100,000
CMS - 8	CWC [85]	1,999
CMS - 9	Exception Records	2,000
CMS - 10	External Call History Busy Hour Calls (per 20 min interval)	200,000
CMS - 11	External Call History Busy Hour Calls (per hour)	600,000
CMS - 12	ICH Data Base Rows (write rate 4K in 20 min)	100,000
CMS - 13	Locations / Location IDs	250
CMS - 14	Logged-in Agent-Split/Skill Pairs over 8 ACDs	200,000
CMS - 15	Logged-in Agent-Split/Skill Pairs per ACD	100,000
CMS - 16	Max CWCs collected in the call record	6
CMS - 17	Measured Trunk Groups per ACD	8,000
CMS - 18	Measured Trunks over 8 ACDs (R14 and later) [84]	40,000
CMS - 19	Measured Trunks per ACD (R14 and Later) [84]	12,000
CMS - 20	Measured VDNs for a single ACD	30,000
CMS - 21	Measured VDNs over 8 ACDs	30,000
CMS - 22	Reason Codes (Aux Work) - 15 minute intervals	100
CMS - 23	Skills/Splits over 8 ACDs	32,000
CMS - 24	Splits/Skills per ACD	8,000
CMS - 25	Supervisor Logins (Simultaneous active client sessions) [86]	1,600
CMS - 26	Unmeasured Trunks over 8 ACDs	20,000
CMS - 27	Unmeasured Trunks per ACD	6,000
CMS - 28	Vectors over 8 ACDs	32,000
CMS - 29	Vectors per ACD	8,000

Endnotes

The capacities table for Communication Manager Release 6.3 contains the offer limits for Communication Manager. These endnotes explain some of the contents in the capacities table and some of the major offer limits. Special Applications-based capacity differences are highlighted in green.

For information regarding the end-of-sale of platforms such as G3R and G3si, see the introduction and the notes at the beginning of the capacities table.

Endnote	***Detailed Description***
*	The software-defined capacity might not be reachable due to hardware limits or processor capacity limits or both for the platform.
1	Documentation disclaimer: The capacities specified in this table pertain to general business configurations and may not be valid or recommended for Contact Center (CC) solutions. Simultaneously achieving the upper bounds for multiple capacities may not be possible for real-world CC systems. Call rates and other operational aspects of these CC systems may preclude realizing the maximum limits. Contact the Sales Factory Design Center for assistance with specifying Contact Center solutions and capacities.
2	System Management sessions are used for system administration and maintenance purposes, and some of the platforms allow multiple simultaneous sessions. The *Simultaneous System Management Sessions* row states the number of simultaneous sessions each template supports. However, besides human administrators, the following types of sessions may also be using some of this capacity: • EPN maintenance ports: 1 • Dial in or dial out requests: 1 for each direction • Management Information Systems: 1 • CLAN ports: 1 The system also limits the number of simultaneous administration commands such as **add** and **change**, as long as they are not accessing the same data. The *Simultaneous Admin Commands* row gives the number of these allowed. For example, two administrators cannot change the same station simultaneously. Commands such as **test**, **busyout**, **release**, and **status** are maintenance commands. The *Simultaneous Maintenance Commands* row gives the number of simultaneous maintenance commands that can be issued in addition to the administration commands, as long as they are not accessing the same data and the command is not designated as a single user command.
3	In previous releases, this feature was supported only on Fiber-Connected Port Networks (ATM or Direct-Connect or the center stage switch (CSS)), but Communication Manager Release 6.0 support for

Endnote	*Detailed Description*
	fiber connections uses only CSS, and then only for federal government use.
3.1	Endnote removed.
4	SA9050 provides 32 routing plans and time of day charts on the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates. SA9050 provides 8 routing plans and time of day charts on the CM_onlyEmbed template.
4.1	The TN799 (C-LAN) circuit pack has one Ethernet connection and 16 PPP connections. The sum of links via PPP and Ethernet ports has to be less than the maximum number of communication-interface links per switch. IP Routes refers to the size of the IP routing table accessed by the **change ip-route** command. CLAN boards need to be in a port network. Port networks cannot be used with S8300D. PPP links are not supported via the processor Ethernet interface.
4.2	Endnote removed.
4.3	The system supports 10 QSIG hunt groups, but the number of messaging adjuncts depends on the PRI signaling groups in the system.
4.4	This shows the number of agent-split combinations supported. Agent-split pairs is the total combination used by ACD agents, Auto-Available Splits (AAS) ports (for example, VRUs), non-ACD hunt groups (groups with or without queues, Message Center Service, INTUITY AUDIX®, Remote AUDIX®, etc.). Each non-ACD hunt group member, AAS split member, and split assigned to an ACD agent is counted when administered.
4.5	The number of CMS adjuncts using TN799 circuit packs (C-LAN) for connectivity to the switch counts toward the maximum capacity of C-LANs. The servers also provide LAN connectivity through their native NICs and do not need to use C-LAN boards.
4.6	Administer the links over the TN799 circuit pack (C-LAN) or over the Processor Ethernet (procr).
5	An agent can be assigned more splits during administration but only this number can be simultaneously logged into.
6	The maximum **Members per Group limits** limit the number of agents that can log into the same split/skill. Maximum agent limits are reduced by the number of non-ACD members and AAS ports administered, and with non-EAS, the additional splits assigned to agents that are not logged into.

Endnote	*Detailed Description*
7	Queue slots are shared across non-ACD, ACD (splits/skills) and AAS hunt groups. NOTE: The capacity limits for System and Per Group Queue Slots are not applicable with platforms that run Communication Manager Release 2.1 or later due to the Dynamic Hunt Group Queue Slot Allocation feature. Hunt group queue slots are allocated on an as-needed basis allowing all calls that are possible to be in queue as the default. The previous hunt group **Queue Length** field became a **Queue Limit** field with specified limits carried forward in an upgrade. The common pool of queue slots is 5,000 for the CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates and 15,000 for the CM_Duplex, CM_Simplex, and CM_SurvRemote[140] templates.
8	Plus up to 7 Inter-eXchange Carrier (IXC) digits.
9	This is the number of available inserted-digit-strings administered on the route-patterns selected by AAR/ARS analysis.
10	The number of attendant consoles listed is per software limitations.
10.1	Endnote removed.
10.2	Crisis Alert Stations: Crisis Alert buttons can be administered on attendant consoles and 10 additional digital stations. Prior to 6.2, special application, SA8608, increases this capacity to 250 Crisis Alert digital stations. With 6.2, special application SA8608 increases the capacity of Crisis Alert digital stations to 750.
11	The number of release link trunk groups counts towards the total number of trunk groups in the system.
12	This does not include MLPP. With MLPP the limit is 17 for all platforms.
12.1	The BCMS **monitor split** command shows the status for the first 100 agents logged into the split, regardless of how many additional agents log into the split.
12.2	BCMS monitoring is a maintenance process and is limited by the active maintenance commands limit, as shown in row "Simultaneous Maintenance Commands". This should be reduced by 3 to reserve command slots for INADS and SAT logins.
13	EPNs: The entries reflect the PNs, and in brackets, the number of stacked cabinets per PN. In a Mixed PNC environment, scalability increases for Center Stage Switch (CSS) by expanding the

Endnote	*Detailed Description*
	number of total port networks to 64. The CSS is limited to a maximum of 44 PNs, but another 20 (or more depending on how many PNs are part of the CSS) can be IP Bearer connected, for a maximum of 64. CM 6.0 support for fiber connections is only using the center stage switch, and then only for government use.
14	The total number of trunks in trunk groups that are assigned as measured externally or "both" for CMS and/or IQ tracking and reporting is limited to 12,000 trunks. Also trunk groups with a signaling group defined as "IMS" (IP Multimedia Subsystem) for SIP links with Session Manager (SM) cannot be assigned as measured by BCMS or external reporting adjuncts.
15	There can be up to 16 Bridged Call Appearances for a primary phone's extension (not call appearance button) if ASAI is used. Otherwise, 1250 principal stations can each have up to 63 other stations with bridged appearances of the principal station. After that, the 1251st principal station through the principal station that hits the system-wide maximum number of bridged appearances are limited to having only 25 other stations with bridged appearances of the principal station. Special Application SA9018 increases the number of Bridged Call Appearances for a primary's call appearance to 255.
16	The number of call appearances is the sum of primary and bridged appearances. The *Max Call Appearances per Ext* row gives the maximum that can be primary. A maximum of 54 administrable buttons is supported on the 7434 terminal without display. A maximum 52 call appearances is supported on the 8434 terminal with display and expansion module. A maximum 96 administrable buttons is supported on the 9630, 9640, and 9650 IP telephones with 3 button modules.
17	This maximum varies depending on the number of parties already on the call, on the calling and called parties' sides. The 7-parties maximum number of parties on a call is the guiding principle.
18	To administer announcements greater than 256, specifically refer to an announcement number greater than 256. For example, use **change announcement 300**. The administrator then has access to another 16 pages and so on. For hunt group announcements greater than 256, the Call Center Release must be Release 8.1 or later.
19	Shared extensions must be shared among all attendant groups in the system including Tenant Partitions.

Endnote	*Detailed Description*
20	Special Application SA8661 provides 2050 automatic wakeup requests in a 15-min. interval.
20.1	VDNs are counted as part of the miscellaneous extensions capacity which includes VDNs, hunt groups, announcements, LDNs, TEGs, PCOL groups, access endpoints, administered TSCs, and Code Calling IDs extensions and common shared extensions. The total of stations (station extensions including ACD agent physical set extensions, Logical Agent IDs and AWOH) assigned cannot exceed the platform Station Extensions limit. The total of all extensions assigned for any purpose cannot exceed the platform Maximum Extensions limit (See the Dial Plan section for details).
20.5	BSR (Best Service Routing) application numbers are limited to 511, and location numbers are limited to 255.
21	Simultaneous 3-way Conference Calls. For non-IP endpoints on systems using port networks, the limit equals the number of time slots for voice per port network (484) divided by 3, then rounded down, then multiplied by the number of Port Networks. See the *Maximum Port Networks* row. For non-IP endpoints on systems using H.248 media gateways, the limit equals the number of time slots for voice per media gateway divided by 3, then rounded down, then multiplied by the number of media gateways. See endnote 61 and the *System-wide Maximum H.248 media gateways* row. If IP endpoints are involved, a VoIP resource is used up. The available number of VOIP resources limits the number of such calls with IP endpoints. For the CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates, the number of simultaneous 3-way conference calls depends on the gateway the S8300D is embedded in. The following numbers do not include subtending media gateways. • S8300D embedded in a G430 or G350 or G250: 157 • S8300D embedded in a G450 or G700: 137
22	Simultaneous 6-way Conference Calls. For non-IP endpoints on systems using port networks, the limit equals the number of time slots for voice per port network (484) divided by 6, then rounded down, then multiplied by the number of Port Networks. See the *Maximum Port Networks* row. For non-IP endpoints on systems using H.248 media gateways, the limit equals the number of time slots for voice per media gateway divided by 6, then rounded down, then multiplied by the number of

Endnote	*Detailed Description*
	media gateways. See endnote 61 and the *System-wide Maximum H.248 media gateways* row. If IP endpoints are involved, a VoIP resource is used up. The available number of VOIP resources limits the number of such calls with IP endpoints. For the CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates, the number of simultaneous 6-way conference calls depends on the gateway the S8300D is embedded in. The following numbers do not include subtending media gateways. • S8300D embedded in a G430 or G350 or G250: 78 • S8300D embedded in a G450 or G700: 68
23	In practice, customers with RLT trunks also have DCS trunks, which limit them to 63 RLT nodes and 63 RLT trunk groups at the main server.
24	The Maximum Extensions limit is the total number of defined extensions for any use. Included in this count are station extensions, miscellaneous extensions, data extensions, PRI endpoint extensions and terminating extension groups.
24.1	Station extensions consist of attendant extensions, station set assignments (including ACD agent physical sets), AWOH (administration without hardware) and administered Logical Agent IDs extensions.
25	Miscellaneous extensions consist of VDNs, hunt groups, announcements, LDNs, PCOL groups, common shared extensions, access endpoints, administered TSCs, Code Calling IDs, TEGs, Paging zones, and Phantom ACAs. Access Endpoints are tied to the number of trunks, not the number of trunk groups.
26	Special Application SA8993 increases Music on Hold Sources to 250 for all templates.
27	Integrated Directory Entries = stations + attendant consoles.
28	Number of Names = number of stations + attendant consoles + trunk groups + digital data endpoints + miscellaneous extensions.
28.1	Total of the administered Login ID skill-pair members (for agents and AAS ports).
28.2	Endnote removed.

Endnote ***Detailed Description***

28.3 Number of agent-skill combinations supported. Agent-skill pairs is the total combination used by ACD agents, Auto-Available Skills (AAS) ports (for example, VRUs), non-ACD hunt groups (groups with or without queues, Message Center Service, INTUITY AUDIX®, Remote AUDIX®, etc.). Each non-ACD hunt group member and AAS skill member is counted when administered. Each skill assigned to an EAS agent is counted as an ACD member when the EAS agent logs in, not when administered.

28.4 This limit may not be reachable depending on how many skills are assigned per Login ID due to the ACD Members Administered (Login ID-skill pair) limits. Login ID limits for different numbers of skills per Login ID are:

Maximum Login IDs with	**CM_Duplex, CM_Simplex, and CM_SurvRemote[140] templates**	**CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates**
1 Skill Each	30,000	1,500
20 Skills Each	30,000	300
60 Skills Each	16,666	N.A.
120 Skills Each	8,333	N.A.

Max Administered ACD Members (login ID / Agent-Skill pairs) shows the Login ID-Skill pair limit for each server.

28.5 Hunt group members include non-ACD (hunting, Message Center Service, INTUITY AUDIX®, Remote AUDIX®, etc.) and ACD uses (splits or skills including Auto-Available Splits/Skills). Each ACD agent-split/skill assignment counts as a hunt group member.

28.6 This capacity is supported only **with ucd-mia** and **ead-mia** hunt group types and optionally with **ucd-loa** and **ead-loa** using the bucket occupancy algorithm. Otherwise the capacity is 1,500 agents in a skill. The bucket algorithm changes the occupancy selection to a more granular/coarse approach. When the option is active and more than 3K agents have assigned to the same skill, the algorithm for agent selection based on LOA switches over to a bucket algorithm (with 5% increment buckets). Note that **PAD** and **SLM** types are still limited to 1,500.

28.7 SIP Contact Center (SIP EAS agent) is a new functionality introduced in 6.3. The limit of 5,000 SIP agents is within the system limit of agents (row 1655). SIP agent is treated as a normal agent and is subjected to existing capacity limitations of the system.

29 Last Number Dialed Entries = stations + digital data endpoints + attendant consoles.

31 INTUITY® supports 20 DCS nodes.

Endnote	*Detailed Description*
32	These numbers are node number addresses.
33	Special Application SA8927 increases the number of speakerphone paging groups to 999 on the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates, and to 256 on the onlyEmbed template.
34	Only port slots are included in this count. For example, there are 100 slots per MCC EPN cabinet with 99 port slots and one slot dedicated for the Tone Clock circuit pack. There may be other service circuits required that would further reduce the number of port slots available.
35	Special Application SA9096 increases the members per speakerphone paging group to 127 for all templates.
36	"Simultaneous calls in CM" is equal to the number of call record data structures allocated for the server platform. This was traditionally determined using 242 Simultaneous Circuit Switched Calls per port network. Multimedia calls tend to be multi-party calls. Calls involving circuit switched endpoints will also be limited by the *Total Time Slots in CM* row. For example, the maximum number of calls between two circuit switched endpoints on a CM_onlyEmbed or CM_SurvRemoteEmbed[140] template running embedded in a G450 would be 512/2 = 256. Calls involving only IP endpoints would not have this limitation if CM is configured to use IP-IP direct media. See *Communication Manager Hardware and Traffic Guidelines* for further details.
37	Special Application SA8911 increases Public/Unknown Numbering entries to 20000 on the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates, but leaves it at 240 on the CM_onlyEmbed template.
38	484 time slots for voice and data per port network.
39	The system uses the port network TN744 Call Classifier/Detector for basic TTR use as well as call prompting/call classification/MFC. With H.248 IP gateways (for example, G450) the embedded processor circuit pack provides local tone detectors. The number of TN744 circuit packs is limited by the number of available slots. There is a single limit on the total number of tone receiver (classifier) ports for the system. • TN744 has 8 ports for call prompting/call classification/MFC/TTR/GPTD use. • The IPSIs (TN2312BP IP server interface) have 8 TTR resources embedded within them. • The G250 TTR limits are in endnote 124 Current Gateway Capacities

Endnote	*Detailed Description*
	• The G350 TTR limits are in endnote 124 Current Gateway Capacities • The G700 TTR limits are in endnote 124 Current Gateway Capacities • The G430 TTR limits are in endnote 124 Current Gateway Capacities • The G450 TTR limits are in endnote 124 Current Gateway Capacities The TTR capacity of the G700 affects the Busy Hour Call Capacity, especially the Call Center call mix. In an IP-Connected configuration, TTRs can only be used to serve calls local to the gateway. They can not be shared across media gateways /PNGs.
40	Counts towards the total number of DS1 circuit packs.
41	Call Associated Temporary Signaling Connections (CA-TSCs) are associated with DCS and older AUDIX® integration methods. They are not used by QSIG or SIP. QSIG uses Non Call Associated TSCs.
42	The TN2185 BRI Trunk circuit pack, the MM720 and MM721 provide 8 ports. The TN556B and TN2198 provide 12 ports. Each port (2B + D) provides 2 BRI trunks.
42.1	Endnote removed
42.2	More information regarding BRI trunks (including TN2185, TN556 (suffix C and later), MM722, MM721, and MM720 that are administered with the **add bri trunk** command). CM supports the number of BRI trunk circuit packs shown in the *BRI Trunk Circuit Packs* row. This includes TN2185, TN556 (suffix C and later), MM722, MM 721, and MM720 that are administered with the **add bri trunk** command. The TN720 can be either NT or TE mode, but as long as it is administered as a trunk circuit pack it counts towards that maximum. CM limits media gateways to the numbers shown in the *System-wide Maximum H.248 media gateways* row. This can be any combination of G700, G450, G430, G350, and G250. BRI board limits are also based on the types of media gateway and how many Media Modules (MM) they can support. • G450 supports a maximum of 8 MMs per gateway. • G430 supports a maximum of 3 MMs per gateway. • G700 supports a maximum of 4 MMs per gateway. • G350 supports a maximum of 6 MMs per gateway • G250-BRI supports no MMs, but has 2 native BRI interfaces (4B + 2D) per gateway. • CM will likely run into the BRI trunk circuit pack limits before running into the maximum BRI trunks limits. With a MM720, if you use all 16 ports on each MM you get up to 250 x 16 = 4000

trunks on the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates, and 50 x 16 = 800 trunks on the CM_onlyEmbed template. These are less than the limits on the *Administered BRI Trunks in CM* row.

42.3 The 6,000 maximum is based on the following. Each TN556 BRI circuit pack supports 12 ports; each port supports 2 B-Channels per port. 250 x 24 = 6,000.

If BRI trunks are used to connect to the PSTN, TN2185, MM720 or MM721 is more commonly used, which support 8 ports (16 B-Channel), giving a total of 4000 (250 x 16) trunks.

If MM722 or the MM721 (2-port BRI circuit pack) is used, the capacity is further reduced.

The MM721 capacities per media gateway are as follows:

Gateway	G450	G430	G700	G350
Max MM721s	7	4	4	3[1]

43 The following items use extensions, and so can reduce the total number of available extensions on a switch:

- Analog Music-On-Hold
- Attendants
- Modem Pool Conversion Resources
- TAAS Port
- Stations (Digital, display, BRI, etc.)
- Analog Announcements
- Analog External Alarm Port
- EAS Agent Login Ids
- ACD Agents

44 All BRI stations can be display stations.

MM720 and MM721 support 8 ports (on G450 gateway), and multipoint configuration with 2 B-channels per port. Thus the MM720 and MM721 can support 16 BRI stations. The multipoint configuration

[1] To avoid changing the Channel Block Management (large blocks vs small blocks) strategy, this will be left as 3 slots.

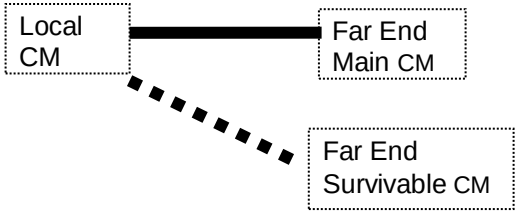
Endnote	*Detailed Description*
	requires an external data module.
45	Capacities depend upon the version of IP phones.
45.1	The **Logged-In IP Softphone Agents** field on the System-Parameters Customer-Options form, which counts the ACD agents (either non-EAS or EAS) logging in with IP softphones for display purposes, is set to the lesser of the two by the RFA/License File on the **Logged-in ACD Agents** field or the **Maximum Concurrently Registered IP Stations** field.
46	Including extensions administered without associated hardware. See the Dial Plan section of the *Capacities Table* for more details.
47	An H.323 Softphone operating in shared control with a H.323 telephone with the same extension will consume two IP station registrations.
48	Endnote removed. It was replaced by endnote 95.1.
49	Endnote removed.
50	Due to a downlink buffer overflow problem, Group Page with Speakerphone does not work with TN754A or TN754B. Minimum vintage of TN754C is required. Earlier vintage circuit packs may cause lost messages, pages not terminating, phantom ringing, invalid displays, etc.
51	There are 2 Polycom SpectraLink® in-building wireless offers: the 900 MHz system and the 24GHz system called the IP Wireless Telephone System. The 900 MHz phone (3410) is administered on CM as 8410; the 2.4GHZ phone (3606) is administered as 4606. The Polycom SpectraLink® wireless user maximum is based on the station user maximum.
52	A SIP station-to-station call counts as one call towards the *Simultaneous Calls in CM* row. However, the SIP half-call model means that each SIP station on the call is using two SIP trunks. This limits simultaneous SIP call capacity. The limits shown already have taken this into account. A SIP to H.323 call would use only half as much SIP resources.
53	Endnote removed.
54	There are two ways to collect CDR records: Legacy CDR and Survivable CDR. In the Legacy method, the CM switch outputs the CDR data records in a near real time stream via an IP link to an external CDR collection devices such as a third party CDR adjunct device or a terminal

Endnote	*Detailed Description*
	server. When outputting to the third party adjunct, the data can be transmitted using standard TCP/IP or via the Avaya propriety Reliable Session Protocol (RSP). In the Survivable CDR method, the CDR data records are stored in data files on the CM server's hard drive and then collected by a third party CDR adjunct using Secure File Transfer Protocol (SFTP). The Survivable CDR method provides encrypted transfers of the CDR data records from the server to the adjunct.
54.1	CM servers can buffer the number of records shown on the *Max Number of CDR Records That Can Be Buffered in the Switch* row. The second number, 1,900 is a watermark number. Assume both primary and secondary CDR devices are up, then if the buffered records (there is one buffer only) reaches 1900 or higher, the secondary CDR is dropped down for 2 minutes. The primary CDR continues to be up and sending records. This indicates that secondary CDR device should not be used for sending records, but for debug, etc. In most cases, only the primary CDR device is used.
55	The Survivable CDR feature allows CDR records to be stored on the hard disk of the server (main, survivable remote (formerly LSP), or survivable core (formerly ESS) rather than being transmitted to the CDR adjunct through an IP link. Once the CDR data is stored on the local hard drive the CDR adjunct must login to the server and retrieve the CDR data files that are saved there. Each server is capable of saving up to 20 CDR data files, each with up to 20 megabytes per file. When the twenty-first file is created, the oldest CDR data file is automatically deleted thereby maintaining the twenty file maximum. Individual CDR record length may vary from 59 characters per record in the LSU formats up to 155 characters per record in the maximum size customized format. Customers select the format that best meets their needs. The most popular CDR format is the unformatted format which contains 107 characters. A single CDR data file can hold anywhere from a little over 76.5K records per file up to 355.4 records per file depending on the selected format.
56	Special Application SA8993 increases the number of music sources to 250 for all platforms.
56.1	Endnote removed.
57	H.235.5 (Annex H) Stations are limited by offer. They are not limited by CM software nor by CM license software, other than the *Maximum Concurrently Registered H.323 Stations* and *Offer Limit: Maximum Concurrently Registered H.323 Stations* rows. If you administer more H.235.5 (Annex H) stations than the H.235.5 (Annex H) offer limit, recovery re-registration delays after an outage can be significant.

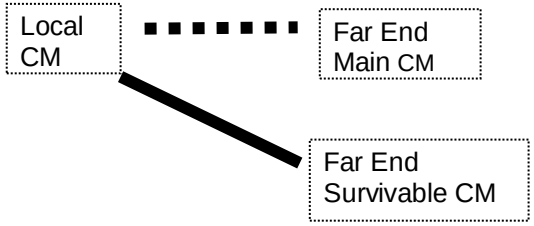
Endnote	*Detailed Description*
58	Endnote removed.
59	Endnote removed.
60	The signaling connections are shared by ISDN, H.323, and SIP signaling groups.
61	For the CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates, the number of time slots depends on the gateway the S8300D is embedded in. The following numbers do not include subtending media gateways. Total Time Slots: • S8300D embedded in a G430 or G250: 256 • S8300D embedded in a G450, G700, or G350: 512 Total Time Slots for Voice & Data • S8300D embedded in a G430 or G250: 234 • S8300D embedded in a G450: 412 • S8300D embedded in a G700 or G350: 472
62	**If the 12,000 trunk administration limit is ever exceeded for fault tolerance, the configuration must prevent more than 12,000 trunks from ever being active on calls simultaneously.** **For non-Session configurations designed for fault tolerance:** For IP (H.323 or SIP) trunks to continue to work when the far end of the IP trunk switches to a survivable server, the near end CM server needs to have twice as many IP trunks configured as will be in service at any one time. Half of those IP trunks go to the far end main server, and the other half of those IP trunks go to the far end survivable server. This effectively reduces the maximum number of administered IP trunks on the near end CM server by a factor of two. Here is an example.

Endnote ***Detailed Description***

4000 total trunks, normal operation
2000 trunks to far end main in use
2000 idle trunks to far end survivable



4000 total trunks, far end in survivable mode
2000 idle trunks to far end main
2000 trunks to far end survivable in use



For Session Manager configurations designed for fault tolerance:

In order to provide for SIP-only trunk configurations that can provide fault tolerant service, an exception to the Administered trunk Limit for the CM-ES is allowed for configurations such as the following. Customer requires N+1 redundancy for all critical components including: PSTN Access, Session Border Controller (SBC), CM (Main and Survivable). Trunking typically is to one or the other data center but each data center and subtending components must be able to handle the full load. For a CM-ES that includes one or more Survivable Servers with co-located Session Managers, the number of administered SIP trunks is allowed to exceed the nominal 12,000 trunk limit up to the maximum of 24,000 to accommodate the Session Managers at multiple sites.

No more than 12,000 trunks can be active on calls at one time. In the following example each Session Manager must be able to handle the full load which means that CM must have full load trunking to each SM. To enforce this limit, call traffic from the SIP Provider cannot exceed 12K active trunks. The assumption is that the SIP trunks are distributed across the Session Managers in each Data Center in this configuration. This restriction on traffic must be enforced outside of the SM/CM configuration. For example, this can be enforced by a Session Border Controller (SBC) feeding traffic into normally active the Session Managers in Data Center 1 or Data Center 2.

This relaxation of the trunk administration capacity limit for a CM-ES is driven by customers with multiple data centers with N+1 requirements to provide for the geographic separation of the Main CM and its Survivable Servers that have co-located Session Managers.

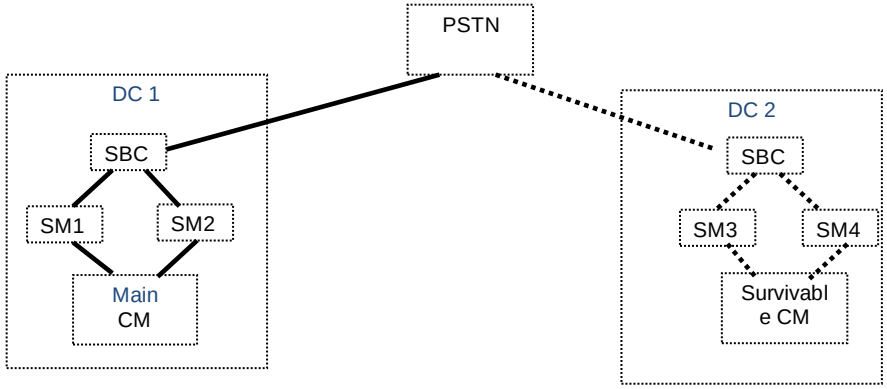
Endnote ***Detailed Description***

The Following diagram shows a case where there are no more than 6K active trunks but requires 24K CM trunks to support the N+1 requirement

- 6000 total trunks, normal operation to Data Center 1
- SBC load balances traffic between SBC1 and SBC 2 (3000 to each)
- In event of SM failure remaining SM must take all 6000 calls
- CM needs 6000 trunks to each SM in DC1

- 6000 total trunks, in disaster mode to Data Center 2
- SBC load balances traffic between SBC3 and SBC 4 (3000 to each)
- In event of SM failure remaining SM must take all 6000 calls
- CM needs 6000 trunks to each SM in DC2

Endnote ***Detailed Description***



Need total of 24K trunks to support this N+1
Survivable Configuration that uses 6K PSTN SIP trunk

63 The overall system limit is not restricted by the type of underlying transport that is used. For example, either a single Processor Ethernet connection or 10 CLANs will be able to reach 2000 messages per second on the CM_Duplex, CM_Simplex, and CM_SurvRemote[140] templates.

64 Endnote removed.

65 This is for tracking features like send all calls, call forwarding, and station busy status. The limit is 64 if the buttons doing the tracking are on J24 (SUSHI) DCP sets, and as shown in the *Buttons per Tracked Resource* row if the buttons doing the tracking are on other set types. Communication Manager can administer more than these, but call processing won't use more than these.

66 Logged-in Agent capacity is limited by the offer through the Logged-In Agent customer option. See the respective Product Definitions for details.

67 Endnote removed.

68 Includes personal lists + group lists + system list + enhanced lists.

69 This amount allows users to have 20,000 Enhanced AD entries (implemented as 2 lists), 10,000 personal lists with 20 entries each rather than 100, a System list of 100, and 100 Group lists with 100 entries each. This creates a maximum of 230,100 entries instead of 250,000.

Endnote ***Detailed Description***

70 Enhanced Abbreviated Dialing consists of 2 lists of 10,000 entries each, rather than one Enhanced AD list of 20,000 entries. This allows 4-digit dialing via FAC to remain as before. A 20,000 entry list would have required users to enter 5 digits when dialing via FAC.

71.0 Communication Manager software-based limits may not apply to features because their maximums are scaled by their associated capacities, set by the License File, or based on the hardware/platform limitations (boot-time configurations). Some capacities available on the main server may be different from capacities on a survivable server.

Call Capacities (such as simultaneous 2-way, 3-way or 6-way calls) in the table are for non-IP endpoints. If IP endpoints are involved, a VoIP resource is used. The available number of VOIP resources limits the number of such calls with IP endpoints. See endnotes 21 and 22.

The CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates don't use the TN-pack based IP Media Resources TN2302AP and TN2602AP. This is because TN packs need port networks, but S8300D does not support port networks. The CM_onlyEmbed and CM_SurvRemoteEmbed[140] templates' IP Media Resources depend on the gateways that the S8300D is embedded in. The sub-sections below contain gateway-specific information.

71.0 continued Media Gateways supported by Avaya Media Servers

Connect → Gateways↓	**IP-Connect**	**Fiber (CSS) Connect [1]**	**Comments**
G250	Yes	No	Counts towards H.248 MGs
G350	Yes	No	Counts towards H.248 MGs
G430	Yes	No	Counts towards H.248 MGs
G450	Yes	No	Counts towards H.248 MGs
G650	Yes	Yes	Counts towards max PNs; see *Maximum Port Networks*
G700	Yes	No	Counts towards H.248 MGs
IG550	Yes	No	Counts towards H.248 MGs
SCC/MCC	Yes	Yes	Counts towards max PNs; see *Maximum Port Networks*

1. Fiber connect is only for federal government use.

Endnote ***Detailed Description***

71.0
continued VOIP resources

Each IP Phone requires one channel. TN circuit packs can go on G650, MCC and SCC Media Gateways.

- TN2602AP (IP Media Resource 320, a.k.a. standard IP Media Resource)
  - 320 channels for G.711 and G.726A
  - 280 channels for G.729A/AB
  - It does not support G.723

  These capacities are the same with either AEA or AES encryption.
- TN2602AP (a.k.a. Low Density IP Media Resource) supports
  - 80 channels for G.711 and G.726A.
  - 80 channels for G.729A/AB.
  - It does not support G.723.

  These capacities are the same with either AEA or AES encryption
- TN2302AP (IP media processor): Capacities impacted if AES encryption algorithm is used.
  - 64 G.711 audio channels with AEA (48 with AES).
  - 32 G.729A/B and G.723 audio channels with AEA (24 with AES).
- G430 channel capacity is described by endnote 124 Current Gateway Capacities
- G450 channel capacity is described by endnote 124 Current Gateway Capacities.
- G350 channel capacity is described by endnote 124 Current Gateway Capacities.
- G250 channel capacity is described by endnote 124 Current Gateway Capacities.

71.1 **G700**

The VOIP engine on the G700 support 64 channels for G.711, and 32 channels for G.729 or G.723. The MM760 media module also supports 64 channels for G.711 and 32 channels for G.729 or G.723.

VOIP Capacity of a Single G700 Media Gateway (MG) with and without Internal Call Controller						
Description	**VOIP Engine and Call Capacities** The column with ( ) applies to Without ICC Configuration only, which supports 5 MGs					**Constraining Factor**
Number of VOIP Engines Installed in a Single MG →	1	2	3	4	(5)	

Endnote ***Detailed Description***

Type of call ↓						
IP Phone to Legacy Station, Analog Trunk or E1/T1 Facility	32	64	96	128	(160)	Simultaneous G.711 equivalent non-encrypted 2-Way Conversations limited by the VoIP Engine (Note B) Includes call progress tones
IP Phone to IP Phone 2-Way Conversations						Dependent on (1) Ability of the IP phones to Shuffle (2) Performance of the LAN
IP Phone to IP Phone 2-Way Conversations that require Hair Pin capability	64	128	192	256	(320)	(1) Limited by the VoIP Engine (2) Performance of the LAN
IP Phone to IP Phone 3-Way Conference	10	21	32	42	(53)	Simultaneous 3-Way Conversations Limited by VoIP Engine (Note A)
Transcoding IP to IP phone (from G711, G729 and G723)	32	64	96	128	(160)	Simultaneous 2-Way Conversations Limited by the VoIP Engine (Note A)

Note A: Calls between IP Phones depend on the ability of IP Phones to shuffle and the performance of the LAN.
Note B: The maximum cannot be reached simultaneously with all types of calls that require a VOIP Port.

On each G700 media gateway, 512 Time-Slots are available, out of which 40 time-slots are used for Call Progress Tones. Each G700 media gateway can support a maximum of 236 simultaneous non-IP connections (472 total time-slots divided by 2 time-slots per call). Each G700 media gateway supplies 15 Call Classifiers.

G700 supports stacked media gateways, 10 media gateways/stack.

71.2 Endnote removed.

71.3 Endnote removed.

Endnote ***Detailed Description***

71.4 **G350** is targeted at small branch offices of large distributed systems. In a standalone configuration, an S8300 server on a G350 Media Gateway provides WAN, LAN and PSTN connectivity. Call Center applications are supported. Embedded AUDIX® (IA770) is supported. G350 has 6 physical slots for Media Modules.

The following are configuration guidelines, not software-defined capacity limits. See Communication Manager Hardware and Traffic Guidelines for more details.

- Recommend using 4 slots for voice, 2 for WAN connectivity: 1 slot for High-Density Media Module (HDMM), 1 slot for Call Controller (S8300), and 4 slots for other media modules. No more than 2 MM710. No more than 3 MM716.
- G350 can support up to 5 other subtending G350/G250 gateways. The G700 gateway subtending to a G350 is not recommended.
  - Stations per G350 gateway
    - Up to 72 users in any combination of IP, analog, and DCP stations.
  - Trunks per G350 gateway
    - Up to 60 trunks total
    - 40 analog trunks
    - 2 T1/EI for digital trunks
    - 32 IP trunks at G711
    - Up to a total of 132 TDM stations and trunks

71.5 **G860**

G860 R1 supports a maximum of 40,000 calls BHCC of medium call center traffic terminating on IP endpoints, using a CM server with the latest GA version of TN2602AP (IP Media Resource 320, a.k.a. High Density). G860 R1 supports a minimum 2,688 VoIP channels with a single T3 PSTN interface. The G860 R1 supports a maximum 4 active TP-6310 modules which serve as many as 4xDS-3 interfaces. This carrier-grade platform supports redundancy to avoid any single point of failure.

G860 R2 increases capacity to 6000 channels and 40,000 BHCC of medium call center traffic terminating on IP endpoints per CM server with the latest GA version of TN2602AP. When many G860s are added, the level of availability and scalability is increased, the capacity increases with multiple Communication Manager servers to provide a solution with G860 to offer more than the 40K BHC. New solution configurations include a many-to-many mapping of Communication Manager servers to G860. This multiple mapping is implemented by assigning each T3 circuit pack (TP6310) to a different Communication Manager server. As many as three active TP6310s may be used in a single G860 in a 9+3 configuration along with one standby redundant TP6310 (N+1 configuration). Achieve load balancing by distributing incoming calls based on ANI/DNIS information.

A 9 + 3 configuration refers to nine active T3 interfaces supported by three hot standby TP6310 circuit

packs in which each TP6310 circuit pack supports three x T3 interfaces. The G860 has total of 10 slots. Four slots are used by primary and redundant shelf controller circuit packs, and Ethernet circuit packs. Slot 10 is reserved for a redundant standby TP circuit pack, leaving 5 slots for active TP circuit packs.

G860 R2 supports high bandwidth optical interfaces including OC3 (Optical Carrier at 155.52 Mbps) and STM (Synchronous Transfer Mode) in a 3+1 configuration. This configuration is three T3/OC-3/STM-1 PSTN interfaces supported by one active TP6310. TP-6310 supports either a single OC-3 interface or 3xDS-3 interfaces. A 3+3 configuration requires one active and one redundant TP-6310 modules. A standby TP6310 may be used in slot 10. This configuration allows G860 R2 to support data connections in addition to TDM voice calls.

71.6 **Avaya IG550 Integrated Gateway**:
The IG550 Integrated Gateway is based on the Juniper routers that host an Avaya TGM550 card functioning as a H.248 gateway, and some TIM cards that provide interfaces for legacy TDM interfaces. This solution is focused on branches of 2-100 users.

The TGM550 can support 10, 20, or 80 concurrent VoIP calls, depending on which DSP option is installed. It provides 32 ports of touch tone detection and call classification, 16 announcement ports, 20 minutes of announcements or music, and 256 announcement files. Each gateway provides 120 timeslots.

	J2320	**J2350**	**J4350 / J6350**
Slots in the platform	3	5	6
Max number of interface TIM (excluding TGM)	2	4	4
Max # of Avaya TIM516 (Analog)	1	2	3
Max # of Avaya TIM514 (Analog)	2	4	4
Max # of Avaya TIM508 (Analog)	1	3	3
Max # of Avaya TIM518 (Analog)	1	3	3
Max # of Avaya TIM521 (BRI)	2	4	4
Max # of Avaya TIM510 (E1/T1)	2	4	4
Max # of Juniper BRI cards	1	1	2
Max # of Juniper T1/E1 cards	1	1	2
Max # of analog ports (trunks and lines)	16	16	J4350 - 35 J6350 – 40

71.7 Endnote removed

Endnote	*Detailed Description*
72	Using multiple subtending gateways allows CM embedded on S8300D to reach the system-wide capacities. Use the traffic configurator to determine the number of gateways needed per system and to build a system with the proper configuration.
73	QSIG integrated nodes are not limited by a fixed node capacity. However, the size of a QSIG network is limited by physical connectivity and the inter-switch dial plan limitations based upon the customer configuration. With AAR dialing, it is possible to address another user within a QSIG network with up to a 20-digit number, so it is possible to have large QSIG networks.
74	Endnote removed.
75	The TN799 C-LAN circuit pack supports 300 sockets. This value is configured as default by ASD.
76	Applies to hybrid QSIG/DCS networks. The QSIG portion of the network is unrestricted with respect to the number of nodes (see note 73). The DCS portion is restricted to the DCS node limitations that already exist. A switch that acts as a gateway (both DCS and QSIG links) deducts from the overall DCS node limit.
77	Video calls utilize an internal CM video system resource. Video-enabled stations and trunks whose signaling groups support video that participate in a video call, each consume units of this internal CM video system resource for the life of the call. The particular video resource consumption for a call, depends on the call-flow and is a function of the number of H.323 stations and the number of H.323/SIP trunks used. As an example, a video call between two video-capable H.323 stations that use the same CM-ES, consumes two units of the Video Call Resource, because there are two H.323 stations in use on the call. The resulting system limit for such calls is described in the row "Number of Simultaneous Video Calls on a CM-ES". As another example, a video call between two video-capable SIP stations that use the same CM-FS, consumes fours units of the Video Call Resource, because there are four SIP trunks in use on the call. The resulting system limit for such calls is described in the row "Number of Simultaneous VIceo Calls on a CM-FS."
78	System maximum for all simultaneous in-use IP ports, including stations and trunks. These can be H.323, SIP, or any combination of H.323 and SIP that does not exceed these limits nor the separate limits for H.323 and SIP, and the separate limits for stations and trunks.

Endnote	*Detailed Description*
	A system configured to support the maximum numbers of IP ports requires that the signaling groups for the H.323 trunks be administered to use shared signaling. SIP trunks always use shared signaling. See Communication Manager Hardware and Traffic Guidelines for further details.
79	Endnote removed.
80	If the capacity of CMS exceeds the capacity of the DEFINITY® server or Communication Manager server for a single ACD configuration, the server capacity takes precedence. Additional capacity is provided to support the optional Multi-ACD CMS configuration. The capacities shown for CMS represent the total capacity across all ACDs (total of 8) supported in a Multi-ACD configuration. ACD Member/Agent Login capacities reflect the maximum number of CMS measured agent-split/skill pairs, including AAS ports that can be logged-in across 8 ACDs. Capacities for R3V11 or later CMS assume a limit of 100K agent-skill pairs. Increased agent-skill pair capacity on CMS increase CMS platform requirements.
81	Endnote removed.
81.1	Endnote removed. It was replaced by endnote 78.
82	The CM 6.0 servers and H.248 media gateways do not support the TN750C announcement circuit pack. Customers must upgrade to the VAL (Voice Announcement on LAN) circuit pack, and/or use the Embedded VAL announcement sources on the media gateways.
83	AAS ports are included in the ACD Members, Logged-In Agents and Logged-In IDs Staffed counts on the Communication Manager Server system. Only measured logged-in ACD agent-split/skill pairs (including AAS ports) are counted towards the CMS limits.
84	CMS requires allocation of trunk data structures called unmeasured trunks for tracking of agent-to-agent, bridging, conference, and transfer call sequences that use capacity from the total. The maximum values for measured trunks and unmeasured trunk facilities are specified for each ACD in the CMS Data Storage Allocation window on CMS. Prior to CMS Release 14, the unmeasured trunks were counted along with the measured trunks toward the system and ACD allocated trunk limit of a total of 40,000 across all ACDs. The recommended assignment per ACD for unmeasured trunks was 25% of the measured trunks. With CMS Release 14 and later the measured trunks and unmeasured trunks are treated separately. Unmeasured trunks are not subtracted from the maximum measured trunks. Data Storage Allocation

Endnote	*Detailed Description*
	recommends that unmeasured trunks be set at 50% of the measured trunks allocated. The unmeasured system limit is 20,000 (50% of the measured trunk system limit over all ACDs which is 40,000) and the unmeasured limit for an ACD is 6,000 (50% of the measured trunk CM limit for a single ACD). All trunks supported on the Communication Manager platform can be assigned as externally measured by CMS.
85	Maximum call work codes is the number that can be stored in the call work code tables on CMS. This is not the maximum number that can be collected in call records.
86	Each Supervisor client session may include CMS ASCII terminals, Supervisor, Visual Vectors and Network Reporting clients.
87	With Communication Manager Release 4.0 and later, a second pair of MIS TCP/IP links is provided for connecting Avaya IQ, a reporting adjunct. The first pair of links connects CMS, and the second pair connects Avaya IQ. You can connect a Communication Manager system to both CMS and Avaya IQ, with both running the same SPI language. High Availability (HA) is supported on both pairs of MIS links. HA operation on the first pair runs on 2 CMS systems and HA operation on the second pair runs on 2 Avaya IQ systems. HA between CMS and Avaya IQ is not supported. All reporting adjunct systems connected to the same Communication Manager system must be running the same SPI language. CC 6.0 provides SA9090 that will allow assigning up to 4 of the MIS links for use as CMS links instead of IQ links.
88	Endnote removed.
89	Endnote removed.
90	The TN2501AP VAL circuit packs and vVAL media gateway sources do not use compression to store announcements. All announcement files are recorded as wave files (64 Kbps PCM wave files *.wav, CCITT u-law/a-law, 8 KHz sampling, 8-bit mono). Announcement file storage requires 8 Kbytes per second of recording time plus approximately 30 bytes for the header.
91	To save the announcement files to a PC, use LAN connectivity and FTP to backup and restore all active TN2501 VAL circuit packs and Media Gateway embedded vVAL sources. Transfer the announcements per file to and from the source and a client PC.
92	BRI Link capacity limited to 8.

Endnote	*Detailed Description*
93	The system requires a fixed length account code between 1 and 15 unless SA7991 Variable Length Account Codes is enabled.
94	On the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates with SA7491 enabled, an additional 166 DS1 interfaces are supported. Use the additional DS1 interfaces for Line Side DS1 connections and not as trunks.
94.1	Limits on other vital system resources such as VoIP resources and tone detectors can block some media gateway configurations. Traffic engineering should take this into account. The following are configuration guidelines, not software-defined capacity limits. See Communication Manager Hardware and Traffic Guidelines for more details. Total recommended DS1 Circuit Packs, including DS1s on all subtending gateways, for a S8300D embedded in a gateway. ○ G450, G700, G430: 80 ○ G350: 10 ○ G250-DS1: 1
95	Station Busy Indicators (SBI) maximum when SA7994 is enabled: 25,000 SBIs are available for the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates.
95.1	The following button features share a common resource in memory: • Call Forwarding All • Call Forward Busy Don't Answer • Send Extension Calls (SAC with extension) • Station Busy Indicators • Trunk Group Status • Hunt Group Status • Loudspeaker Paging Zone Status • PCOL Group Status • Data Module • Terminating Extension Group Status • Announcement Status • Attendant Group Status/DXS • Remote Trunk Group Select This resource is called Facility Status tracking buttons (Facility Busy Indicators or FBIs). It includes the

Endnote	*Detailed Description*
	following. Maximum SBIs on stations + Maximum Queue status buttons + total DTGS buttons on Attendants + SBIs on attendants (2 SBIs per attendant). For the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates, the FBI maximums are: • Standard offer: 32,726 =(10,000 + 12000 + (24 DTGS x 414 attds) + (2 x 414 attds) • With SA7994: 47,726 = (25,000 + 12000 + (24 DTGS x 414 attds) + (2 x 414 attds) For the CM_onlyEmbed template, the FBI maximums are: • Standard offer: 5,868 = 3600 + 500 + (24 DTGS x 68 attds) + (2 x 68 attds). • No Special Application for the smaller systems. Each of these individual maximums can not be exceeded when arriving at total FBIs on the system. For example, maximum queue status buttons can not exceed the system maximum, although the SBI maximum may not be reached in a system.
96	Endnote removed.
97	Endnote removed.
98	Endnote removed.
99	Prefixed extensions can take any length between 2 and 6 digits. Only regular extensions can be the length specified in the *Maximum Extension Size* row. The prefixed extension length refers to the number of dialed digits, not the true extension length. For prefixed extensions of length 2-6, the corresponding administered true extension lengths range from 1-5.
100	In the code base, this number is known as MAXDAC, the maximum number of dial access codes that are commonly referred to as Feature Access Codes.
101	This is also limited by license, but that limit is also 41,000.
102	This is the total number of trunks permitted in the system. IP trunks are part of this overall maximum. However, the maximum number of circuit switched trunks, H.323 trunks, and SIP trunks differ. See rows *Administered ISDN+IP Trunks (pool of ISDN, IP, and SIP trunk Ports)*, *Maximum administered H.323 trunks* and *Administered SIP Trunks* for details.
103	Endnote removed.
104	Extension to Cellular maximums are based on the limits for the station maximums for the specific templates

Endnote	*Detailed Description*
	The number of station records can run out before the limit is reached if EC500 users are configured in a bridging arrangement that requires 3 station records per EC500 user (1 Principal desk set, and 2 XMOBILE stations as bridges of the 2 Call Appearances of the Principal).
105	EC500 / EC500 OPTIM Station users administered with EC500 count towards the station user maximums set by the template-specific limits. This limit does not include XMOBILE mappings. XMOBILE mappings are limited by the software-defined station user capacity. On CM 6.0, the EC500 OPTIM user capacity is the same as the station user maximum for each of the platforms.
106	Location administration allows: • Remote Port Networks and Remote Offices and Gateways to have different administration than the main server • Different settings for Time of Day Offset, Area Code, and Daylight Savings Rules for different locations • Specific route selection in AAR/ARS administration Starting 6.3, Location parameters is no longer a single form, a single set of parameter values, for the entire system. Now, up to 50 location parameter sets can be configured and assigned to locations.
107	Endnote removed.
108	Endnote removed.
109	Endnote removed.
110	Endnote removed.
111	Endnote removed.
112	In CM 6.0, the Increased Adjunct Route Capacity RTU is automatically enabled in licensing for every switch that has ASAI enabled. While this RTU is OFF in the fixed feature masks for survivable servers (formerly LSP/ESS), if the feature is ON for the main server, it will be turned ON for any survivable server subtending the main server.
113	Endnote removed.
114	The Remote Office Feature group, introduced in Communication Manager Release 9.2, provides connectivity over the WAN.

Endnote	Detailed Description
	The maximum Remote Office Gateways is separate and independent from the H.248 Media Gateway maximum. A system can be configured with all of the following. • PNs as stated on *Maximum Port Networks*" • H.248 media gateways (mix of G430, G450, etc.) as stated on *System-wide Maximum H.248 media gateways*. • Remote Offices (MultiTech gateways) as stated on *Remote Office Gateways*. The MultiTech gateway is an H.323 managed gateway. From an engineering calculation point-of-view, one can start with the capacity limits regarding the number of gateways per platform. There is some interplay to consider. Check Communication Manager server resources for the allowed limits of H.323 endpoints and H.323 trunks. • The MultiTech gateway's stations are managed as H.323 stations that count as IP stations. • The MultiTech gateway's trunks are managed as H.323 trunks. Communication Manager does not perceive the MultiTech gateway to be a gateway for building tables and associating stations and trunks together for maintenance, administration, and call processing. Signaling Groups are supported on the Communication Manager platform. The signaling group limitation is often encountered as the first hard limit. Customers who add gateways to systems that are heavily loaded with existing stations and trunks sometimes run into limitations on IP station or trunks. Each customer is different and Avaya account teams must work with customer engineers on system configuration.
115	Endnote removed.
116	The VSX Video station usually registers to 3 separate extensions as if it were 3 separate stations. • .
117	Auto/Remote Message Waiting. A Special Application, SA8558, allows a capacity increased to 11,000.
118	VUSTATS: A Special Application, SA8558, allows a maximum of up to 5,000 VUSTATS buttons on the large servers and increases the number of simultaneously updating displays limit from 500 to 2,000.
119	Intra-Switch CDR: individually administer the endpoints for intra-switch CDR on the intra-switch CDR form. SA8202 (Intra-switch CDR by COS) extends the limit to include all the stations supported on a platform. All phones with the same COS are included in intra-switch CDR reporting.
120	SIP Enablement Services is no longer supported in CM 6.0. Instead, CM 6.0 works with Session Manager. The Session Manager capacities document, to be written, contains Session Manager

capacities.

A Communication Manager server can be connected to multiple Session Manager servers.

- TLS Links on Communication Manager: Communication Manager supports a maximum of 49 TLS sessions of any kind
  - 17 max may be allocated to AES
  - 32 max may be used by SIP/Session Manager and other servers such as Meeting Exchange ®. Theoretically there can be a maximum of 32 Session Manager Servers per Communication Manager server. The actual number is smaller if the Session Manager servers are duplicated servers. A signaling connection between a Communication Manager and a Session Manager pair requires 2 such TLS sessions (one each for Session Manager-originated and CM-originated traffic) These 2 TLS sessions together, forming the signaling connection between Communication Manager and Session Manager is called a TLS link, hence a 16 TLS link maximum because of the max 32 sessions. A network can have at most 6 core Session Manager servers; the remainder would be local Branch Session Manager servers.
  - TLS links for SIP are independent of AES TLS sessions

121 An Audio Group defines a list of VAL/vVAL sources (circuit pack locations) from which announcement files are played. An audio group can be assigned to an announcement extension as the source location instead of a specific single source circuit pack location. When the announcement is to be played, the closest working source in the list of sources assigned to the audio group is selected to play the named file assigned to the announcement extension. The same audio group can be assigned as the location for many announcement extensions, limited by the number of announcement files that can be stored on any given source. Each file for the announcement extensions must be duplicated in each of the sources listed for the audio group.

122 The administered announcement files limit is a count of all the sources assigned to defined announcement extensions that contain an announcement file. With all single-sourced announcements, the total equals the total extensions defined. (This is the same as without Locally Sourced Music and Announcements (LSMA)). With group sourced announcements, each source included in the group defined for the extension is counted towards the limit (i.e., each source a file is in is counted). In a system with a combination of single sourced and group sourced extensions, each of the single sourced extensions and the individual sources in the assigned groups are counted towards the limit. For example, a configuration with 5 single sourced announcement extensions and 2 audio group sourced extensions with each group listing 10 sources uses 7 announcement extensions and 25 administered announcement files. The display capacity screen shows both the announcement extensions and administered files system limits along with the current Used and Available quantities.

Endnote ***Detailed Description***

123 For Call Center applications, an increase of extension length beyond 8 digits requires an R16 or later CMS and CM 5.2.1 or later, or use of Avaya IQ.

124

Gateway	TDM Timeslots[1] (pairs)	TTR	Announcement			VoIP Channels
			Ports[11]	Time	Files	
G250 (analog, BRI)	113/117	8	7	15 min.	256	10 [10]
G250 (DCP, DS1)	113/117	16	7	15 min.	256	16 [10]
G350	234/238	16	7	15 min.	256	32 [2]
G430	229/237	32	16	45/240 min[8].	256	25[9]
G450	206/238	64	64	45/240 min[8]	1024	80 to 320 [7]
G700	230/238	15	16	20 min.	256	64[3,5]
IG550	128[6]	32	16	20 min.	?	10/20/80 [2,4]

124 continued

NOTES:

1. Available timeslot *pairs* for voice calls (number of simultaneous 2-party calls); first number is with announcements enabled on the gateway, requiring reserved TDM timeslots (hence G450 with more announcement ports, ends up with fewer available timeslots for voice calls); second number is available timeslots with no announcement
2. Same number of channels for all Codec and encryption options
3. Number of G.711 unencrypted; for other Codecs and encryption options, refer to CID 123531
4. Capacity depends on VoIP DSP configuration options
5. VoIP channels expandable via MM760, each with 64 additional G.711 channels
6. 128 timeslot pairs to backplane and separate 128 pairs to media processors.
7. Each MP20 provides 25 channels for G.711 or G.726 but only 20 channels for G.729. Each MP80 provides 80 channels independent of codec. There are four slots for MP boards. The maximum of 320 active channels requires 4 MP80s.
8. The announcement capacity of the G430 and G450 is 240 minutes (4 hours) when the system is equipped with compact flash. The announcement capacity is 45 minutes for systems that have internal flash.
9. G430 is equipped with an on-board DSP that has the capacity to support 25 VoIP channels for

G.711 or G.726, 20 VoIP channels for G.729, or a combination of both. There is an option to add more DSP resources by using add-on boards:

a. MP10 to increase the channel allotment by 10 for G.711, G.729, and G.726 codecs.
b. MP20 to increase the channel allotment by 25 channels for G.711 or G.726 codec or 20 channels for G.729 codec
c. MP80 to increase the channel allotment by 80 for G.711, G.729, and G.726 codecs

The maximum G430 channel allotment with the 25 channels on the motherboard and 80 channels on the optional MP80 is 105.

10. G250 supports VoIP channels for G729/G723 and G.711 with or without Encryption.
    - G250-and G250-BRI support
        - 10 VoIP channels for G729/G723 and G.711
        - 10 VoIP channels with AES encryption
        - 8 VoIP channels with SRTP encryption
    - G250-DS1 and G250-DCP support
        - 16 VoIP channels for G729/G723 and G.711
        - 12 VoIP channels with AES encryption
        - 10 VoIP channels with SRTP encryption
11. One port is reserved for recording.

125 When the **Allow Two Observers in Same Call** field on the **Feature-Related System-Parameter** form is set to **y**, two service observers can be in a merged conference call, where the service observers may be monitoring an EAS LoginID, station extension, or VDN (1 observing the VDN and 1 another type). Multiple service observers will be counted as conferees in a conference call, but they will not be included in the actual number of conferenced parties that is shown for the **Conference *<n>*** station display.

This capability allows automated Agent Quality Recording via switch-adjunct products (for example, Witness or NICE) that use the Service Observing feature to continue recording EAS agents or stations after two service-observed agents are merged by a call conference (previously the one doing the recording was stopped) or to be able to have an observer monitor EAS agents or stations for quality while being observed for recording.

If more than 2 service observers are about to be merged for a call-conference operation and a call-conference occurs with more than two service observers in both call legs, this feature allows the conference to take place, but only 2 observers will be left in the merged call with an observer in each call leg.

Endnote	*Detailed Description*
	In this instance, the highest preference is given to keeping the service observer with a Class of Restriction (COR) with the **Service Observing by Recording Device** field set to **y**. This feature applies to activation using any of the SO FACs (Listen-Only, Listen/Talk and No-Talk) or SO buttons towards stations/agents. It can not be applied towards VDNs for VDN service observing so no more than one VDN observer can be on the same call in vector processing. When the call is connected to an agent, both the VDN observer and the agent observer (or conferenced agent observer) can be connected.
126	If the number of parties will exceed 6, an observer or additional observer will not be added and/or the agents are denied adding another conference party. Capacities with DMCC/CMAPI call recording: 1. **Using Service Observe or Single Step Conference** – Each observer (recording or manual observer) counts towards the 6 party limit per call. Example: Only 2 additional conferenced parties can be added along with the caller and agent with multiple observers (2 recording ports, or one recording port plus the manual observer). 2. **Using Multiple Registrations** – Only one party is considered towards the 6 party limit per call. Example: up to two recording ports register on the agent's station as additional endpoints. Communication Manager will not consider these as additional parties on a call, so up to 4 additional parties can be added to a call. Note: as of January, 2008, none of the recording vendors have demonstrated the ability to use this method which requires Communication Manager Release 5.0 and AES Release 4.1 or later.
127	There is no process limit to the number of Service Observing associations that can be active in the system. What will limit service observing is the number of bridged connections involved with an observed call, the number of observers of the same call (limited to one observer except when the **Allow Two Observers In The Same Call** system option is active) and system resources that include timeslots, inter-gateway connections/links and VoIP resources.
128	Special Application SA8993 allows a maximum of 250 Multiple Listed Directory Numbers.
129	Endnote removed
130	Support for 250 tenants has been made a standard feature in FP4. Special Application SA8993 is no longer necessary and has been removed from the system.
131	Special Application SA9035 allows a maximum of 1024 Intercom Groups on the CM_Duplex, CM_Simplex, CM_SurvRemote[140], and CM_SurvRemoteEmbed[140] templates. Special Application SA9035 allows a maximum of 128 Intercom Groups on the CM_onlyEmbed template.

Endnote	*Detailed Description*
132	There is no limit on the maximum number of auto dial buttons, other than the system limit on button capacity. See row 'Station Button Capacity' for system button limitations.
133	The CM offer limit on SIP trunks simultaneously in use on the CM_Duplex and CM_Simplex templates is 12,000 for CM Evolution Server (ES) configurations and is up to 24,000 for CM Feature Server (FS) configurations.
134	With one exception, Communication Manager Messaging for Federal Markets (CMM-FM) has the same capacities as CMM on the Avaya Aura® Main / Avaya Aura® for Survivable Core (Simplex configuration) template. That exception is Subscriber Mailboxes. CMM-FM supports 15,000 mailboxes.
135	Survivable remote platforms in CM 6.0 are expected to only support SIP trunking to the SM core. Service provider PSTN SIP trunks are not yet planned to be supported on survivable remote platforms in CM 6.0. They are planned to be supported in a future release.
136	The capacities shown in these columns assume a large core survivable server backing up a large main server. In other words, they assume the following settings on the Server Role page's "Configure Memory" fields. • The "This Server's Memory Setting" field is set to Large. • If the server role field is set to one of the survivable roles (formerly LSP and ESS) then the server also has the "Main Server's Memory Setting" field set to Large.
137	The capacities shown in this column assume a small main server. In other words, they assume the following settings on the Server Role page. • The server's role is set to Main. • The "This Server's Memory Setting" field under "Configure Memory" is set to Small.
138	The capacities shown in this column assume a small survivable server backing up a remote part of a large core server. In other words, they assume the following settings on the Server Role page. • The "This Server's Memory Setting" field under "Configure Memory" is set to Small. • The server role field is set to one of the survivable roles (formerly LSP or ESS) • The "Main Server's Memory Setting" field under "Configure Memory" is set to Large. If you want to know what the capacities would be for a small survivable backing up a small main, read the (CM_onlyEmbed) column immediately to the left. In other words, if "This Server's Memory Setting"

Endnote	*Detailed Description*
	is Small, and "Main Server's Memory Setting" is also Small, the resulting survivable server's capacities are the same as those of a small main server.
139	For survivable remote server software capacities, this document uses the term 'administered' as seen from two different points of view. 1. The way people and marketing offers commonly use the term. 2. The way CM software uses the term. For example, suppose a CM system has a large main server at headquarters and two small survivable servers, one at each of two distant remote branches. Person A moves from one phone to another phone, both within branch A. 1. From a marketing offer point of view, person A's station is only used in branch A. From a marketing offer point of view, the only survivable server that needs to have this station counted towards the station limits is the survivable server in branch A. 2. However, from CM software's point of view, CM station translations, including A's phone move, are updated through the headquarters main server. That main server downloads the complete set of revised station translations to all survivable remote branches. The survivable server in branch B receives that complete set of translations. From CM server B's point of view, those translations include person A's extension information. Server B counts that extension towards server B's administered station capacity limit. That is why this document's software capacity limits for some items in the survivable remote server columns are higher than similar limits in the adjacent marketing Offer Limit rows.
140	Endnote removed.
141	IP Soft Consoles are included in the Maximum Concurrently Registered IP stations limit.
142	When tenant partitioning is enabled for the system, you can administer up to 100 COS groups, each with 16 Classes of Service. The command line changes from “change cos x” to “change cos-group n”.
143	Implementing End-to-End SIP, Issue 1, December 2011, Compas ID 154835
144	SA9115 increases the number of entries in the ip-network-map table from 500 to 4000.
145	CAG capacity has been increased for LARGE systems and members in a CAG has been increased across the board for all platforms. The SA9123 allows CAGs that are adjacent in a coverage path to have the same extensions.
146	CM 6.2.5 (6.2 FP1) is now available as a virtual appliance on VmWare. This is called CM VE (Virtual Enablement). During installation of CM-VE, the memory footprint can be configured as LARGE, MEDIUM or SMALL. The capacities of CM-VE is same as that of CM deployed over System Platform.

Endnote	*Detailed Description*
147	CM can be deployed using a LARGE, MEDIUM or SMALL footprint. HW requirements and capacity of the system are dependent on the memory footprint / size. Please note that there are additional factors that determine the capacity of a CM – including whether it is operating as a Main server or survivable server.
148	IP Network regions and Locations have been increased from 250 to 2000 to support Large enterprises that have multiple branch sites. It is available only with LARGE memory footprint. The existing network regions 1 to 250 are referred to as CORE network regions, the new ones 251 to 2000 are referred to as STUB network regions. The Core network regions can have media resources and endpoints. The Stubs can only have endpoints and act as far-end of a signaling group. They cannot have any media resource. Every stub region MUST be connected to a core region for its media requirements.A stub region can be connected to only 1 core region.
149	Number of switch classified calls is not platform dependent, but to classify a call, call classification resources are needed. Number of call classification resources in a system is dependent on the platform. See footnote 39 and 124.
150	Offline call log feature stores call log entries for H.323 users who are not registered. When they register back to Communication Manager, Communication Manager pushes the call log entries to the endpoint. The buffer holds up to 10 entries per user subject to the system limit mentioned in the capacity table. The offline call log entries are stored on FIFO (First In, First Out) basis. At a user level, if the buffer is full with 10 log entries and another call activity takes place, Communication Manager removes the oldest entry to make room for the latest entry. At the system level, if the buffer is full with call log entries and another call activity takes place, Communication Manager removes the oldest record at the system level to make room for the latest entry. The entry to be removed may belong to a user who has not yet reached the individual max call log entries limit.
151	The maximum number of simultaneous calls where out-of-band DTMF is received and needs to be re-transmitted to the far end either as in-band DTMF or out-of-band DTMF counts against this limit. The parties involved in the call can be stations or trunks of any protocol, such as DCP, H.323 or SIP.