



Configuring Avaya Communication Manager Meet-me Conference Call Recording using Witness ContactStore - Issue 1.0

Abstract

These Application Notes describe how to configure a sample Avaya Communication Manager Meet-me Conference call recording configuration using Witness ContactStore. Meet-me conference call recording is accomplished using the Witness ContactStore On-Demand recording mode. In this mode, conference participants can start recording with a single button-press by administering a button on user stations. A sample configuration along with the configuration parameters for Avaya Communication Manager and Witness ContactStore is provided to help implement this capability.

1. Introduction

These Application Notes describe how to configure a sample Avaya Communication Manager Meet-me Conference call recording configuration using Witness ContactStore. Meet-me Conference call recording is accomplished using the Witness ContactStore On-Demand recording mode. In this mode, Witness ContactStore uses an Avaya Communication Manager Hunt Group to provide a shared pool of recording stations. The Avaya Communication Manager “Audix-rec” button referencing the Hunt Group extension can be configured on user stations. Conference users can then start recording with a single button-press.

The Meet-me conference feature uses Vector Directory Number (VDN) extensions. External users can access Meet-me Conference VDNs directly if the VDNs are part of a Direct Inward Dialing (DID) block. Alternatively, to conserve DIDs, a global DID Extension can be configured to map to a vector that collects the Meet-me conference VDN extension, routing callers to the appropriate Meet-me Conference.

Witness ContactStore for Communication Manager provides for the capture and storage of customer voice interactions in an Internet protocol (IP) telephony environment. Recordings can be done using G.711MU (64kbps) and compressed by Witness ContactStore to G.726 (16kbps) or directly using G.729A (8kbps), having Avaya Communication Manager compress the audio stream before Witness ContactStore receives it.

The configuration depicted in **Figure 1** illustrates the network configuration used to verify the Avaya Communication Manager Meet-me Conference call recording configuration shown in these Application Notes.

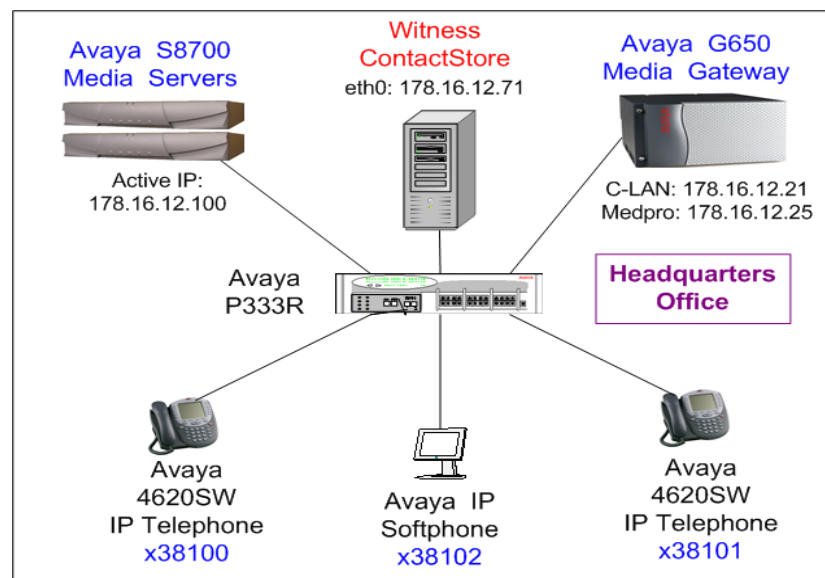


Figure 1: Avaya Communication Manager – Witness ContactStore Meet-me Conference Call Recording Configuration

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment & Software	Version
Avaya S8700 Media Servers running Avaya Communication Manager	2.1.1
Avaya G650 Media Gateway • Avaya TN2312BP IPSI Circuit Packs • Avaya TN799DP C-LAN Circuit Pack • Avaya TN2302AP MEDPRO Circuit Pack	HW03 – FW0009 HW01 – FW0011 HW03 – FW0075
Avaya 4620SW IP Telephones	2.1.1
Avaya IP Softphone	5.0
Witness ContactStore for Communication Manager	7.2

Table 1: Equipment and Software Validated

3. Avaya S8700 Media Server Configuration

The following sections describe how to configure the necessary parameters to connect to Witness ContactStore and configure Meet-me Conference.

Note: These Application Notes assume the C-LAN and IP Media Processor (also known as Prowler or MedPro) circuit packs in the Avaya G650 Media Gateway and Avaya S8700 Media Server have been previously administered. Witness ContactStore requires that Avaya Communication Manager (R1.3 or higher) be equipped with a TN2302AP Prowler card or higher. A TN799DP C-LAN card or higher is also required. Witness uses the Avaya Communication Manager Service Observing feature for Station Bulk and Executive recordings. This configuration is not described in these Application Notes.

3.1. Checking Avaya Communication Manager Licenses

To run the Witness ContactStore call capture engine and configure Meet-me Conference, certain Avaya Communication Manager licenses must be obtained and activated. The next series of steps can be performed to check if Avaya Communication Manager has sufficient licenses to run the call capture engine and configure Meet-me Conference. Contact your Avaya representative if any of the highlighted features below are not enabled.

Step	Description																																
1.	From the Avaya Communication Manager SAT screen, issue the command “display system-parameters customer-options”. Go to Page 4 and verify that the “Enhanced Conferencing” feature is set to “y”. This feature is needed for both Meet-me Conference as well as Witness ContactStore call recording. display system-parameters customer-optionsPage 4 of 11 OPTIONAL FEATURES <table><tbody><tr><td>Emergency Access to Attendant? y</td><td>ISDN Feature Plus? y</td></tr><tr><td>Enable 'dadmin' Login? n</td><td>ISDN Network Call Redirection? y</td></tr><tr><td>Enhanced Conferencing? y</td><td>ISDN-BRI Trunks? y</td></tr><tr><td>Enhanced EC500? y</td><td>ISDN-PRI? y</td></tr><tr><td>Extended Cvg/Fwd Admin? y</td><td>Local Spare Processor? n</td></tr><tr><td>External Device Alarm Admin? y</td><td>Malicious Call Trace? y</td></tr><tr><td>Five Port Networks Max Per MCC? n</td><td>Media Encryption Over IP? y</td></tr><tr><td>Flexible Billing? y</td><td>Mode Code for Centralized Voice Mail? n</td></tr><tr><td>Forced Entry of Account Codes? y</td><td>Multifrequency Signaling? y</td></tr><tr><td>Global Call Classification? y</td><td>Multimedia Appl. Server Interface (MASI)? y</td></tr><tr><td>Hospitality (Basic)? y</td><td>Multimedia Call Handling (Basic)? y</td></tr><tr><td>Hospitality (G3V3 Enhancements)? y</td><td>Multimedia Call Handling (Enhanced)? y</td></tr><tr><td>IP Trunks? y</td><td>Multinational Locations? n</td></tr><tr><td>IP Attendant Consoles? y</td><td>Multiple Level Precedence & Preemption? y</td></tr><tr><td>IP Stations? y</td><td>Multiple Locations? y</td></tr><tr><td>Internet Protocol (IP) PNC? y</td><td>Personal Station Access (PSA)? y</td></tr></tbody></table> (NOTE: You must logoff & login to effect the permission changes.)	Emergency Access to Attendant? y	ISDN Feature Plus? y	Enable 'dadmin' Login? n	ISDN Network Call Redirection? y	Enhanced Conferencing? y	ISDN-BRI Trunks? y	Enhanced EC500? y	ISDN-PRI? y	Extended Cvg/Fwd Admin? y	Local Spare Processor? n	External Device Alarm Admin? y	Malicious Call Trace? y	Five Port Networks Max Per MCC? n	Media Encryption Over IP? y	Flexible Billing? y	Mode Code for Centralized Voice Mail? n	Forced Entry of Account Codes? y	Multifrequency Signaling? y	Global Call Classification? y	Multimedia Appl. Server Interface (MASI)? y	Hospitality (Basic)? y	Multimedia Call Handling (Basic)? y	Hospitality (G3V3 Enhancements)? y	Multimedia Call Handling (Enhanced)? y	IP Trunks? y	Multinational Locations? n	IP Attendant Consoles? y	Multiple Level Precedence & Preemption? y	IP Stations? y	Multiple Locations? y	Internet Protocol (IP) PNC? y	Personal Station Access (PSA)? y
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Step	Description																														
2.	Go to Page 10 and verify that Communication Manager has the appropriate number of “IP_API_A” licenses for each Communication Manager CMAPI station used by the Witness call capture engine. The “IP_API_A” licenses field is equal to the number of simultaneous recordings supported by the server. display system-parameters customer-options Page 10 of 11 MAXIMUM IP REGISTRATIONS BY PRODUCT ID <table><tr><th>Product ID</th><th>Rel. Limit</th><th>Used</th></tr><tr><td>IP_API_A</td><td>: 200</td><td>10</td></tr><tr><td>IP_API_B</td><td>: 200</td><td>0</td></tr><tr><td>IP_API_C</td><td>: 200</td><td>0</td></tr><tr><td>IP_Agent</td><td>: 1000</td><td>0</td></tr><tr><td>IP_Phone</td><td>: 1000</td><td>2</td></tr><tr><td>IP_ROMax</td><td>: 1000</td><td>0</td></tr><tr><td>IP_Soft</td><td>: 1000</td><td>0</td></tr><tr><td>IP_eCons</td><td>: 28</td><td>0</td></tr><tr><td></td><td>: 0</td><td>0</td></tr></table> (NOTE: You must logoff & login to effect the permission changes.)	Product ID	Rel. Limit	Used	IP_API_A	: 200	10	IP_API_B	: 200	0	IP_API_C	: 200	0	IP_Agent	: 1000	0	IP_Phone	: 1000	2	IP_ROMax	: 1000	0	IP_Soft	: 1000	0	IP_eCons	: 28	0		: 0	0
Product ID	Rel. Limit	Used																													
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IP_API_B	: 200	0																													
IP_API_C	: 200	0																													
IP_Agent	: 1000	0																													
IP_Phone	: 1000	2																													
IP_ROMax	: 1000	0																													
IP_Soft	: 1000	0																													
IP_eCons	: 28	0																													
	: 0	0																													

3.2. Enabling Communication Manager Features

The following features must be assigned for Witness ContactStore to work with Avaya Communication Manager:

Step	Description
1.	From the Avaya Communication Manager SAT screen, issue the command “change system-parameters features”. Go to Page 4 and verify that the “Create Universal Call ID (UCID)?” feature is set to “y”. <pre>change system-parameters features Page 4 of 14 FEATURE-RELATED SYSTEM PARAMETERS SYSTEM PRINTER PARAMETERS System Printer Endpoint: Lines Per Page: 60 Emergency Extension Forwarding (min): 10 SYSTEM-WIDE PARAMETERS Switch Name: s8700 Emergency Numbers - Internal: External: 911 No-License Incoming Call Number: MALICIOUS CALL TRACE PARAMETERS Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group: Delay Sending RElease (seconds)? 0 SEND ALL CALLS OPTIONS Send All Calls Applies to: station Auto Inspect on Send All Calls? y UNIVERSAL CALL ID Create Universal Call ID (UCID)? y UCID Network Node ID: 1</pre>

3.3. Administering Feature Access Codes

Administer Communication Manager Features Access Codes for Meet-me Conference.

Step	Description
1.	From the Avaya Communication Manager SAT screen, issue the command “change system-parameters features”. Administer the “Announcement Access Code” to record the vector announcements for Meet-me Conference. <pre>change feature-access-codes Page 1 of 9 FEATURE ACCESS CODE (FAC) Abbreviated Dialing List1 Access Code: Abbreviated Dialing List2 Access Code: Abbreviated Dialing List3 Access Code: Abbreviated Dial - Prgm Group List Access Code: Announcement Access Code: 142 Answer Back Access Code: Auto Alternate Routing (AAR) Access Code: 8 Auto Route Selection (ARS) - Access Code 1: 9 Access Code 2: Automatic Callback Activation: Deactivation: Call Forwarding Activation Busy/DA: All: 145 Deactivation: 146 Call Park Access Code: Call Pickup Access Code: CAS Remote Hold/Answer Hold-Unhold Access Code: CDR Account Code Access Code: Change COR Access Code: Change Coverage Access Code: Contact Closure Open Code: Close Code: Contact Closure Pulse Code:</pre>

Step	Description
2.	Go to Page 2 and administer the “Meet-me Conference Access Code Change” for Meet-me Conference hosts to change the Meet-me Conference access code. change feature-access-codes Page 2 of 9 FEATURE ACCESS CODE (FAC) Data Origination Access Code: Data Privacy Access Code: Directed Call Pickup Access Code: Emergency Access to Attendant Access Code: Access Code 2: Enhanced EC500 Activation: 130 Deactivation: 131 Extended Call Fwd Activate Busy D/A All: Deactivation: Extended Group Call Pickup Access Code: Facility Test Calls Access Code: Flash Access Code: Group Control Restrict Activation: Deactivation: Hunt Group Busy Activation: Deactivation: ISDN Access Code: Last Number Dialed Access Code: Leave Word Calling Message Retrieval Lock: Leave Word Calling Message Retrieval Unlock: Leave Word Calling Send A Message: Leave Word Calling Cancel A Message: Malicious Call Trace Activation: Deactivation: Meet-me Conference Access Code Change: 144

3.4. IP Interface and Node-Names Configuration

Step	Description																																																		
1.	Assign node names and IP addresses to each node in the network. At the terminal command prompt, enter “change node-names ip” and configure the node names and IP Addresses for the C-LAN, MedPro, and Witness server. Then apply the changes. Note: The C-LAN and MedPro circuit packs must have unique names and IP addresses assigned in the node-names list. Remember to use the specified names consistently throughout the remaining tasks. <table><tr><td colspan="4">change node-names ip</td><td>Page</td><td>1 of</td><td>1</td></tr><tr><td colspan="2"></td><td colspan="2">IP NODE NAMES</td><td colspan="3"></td></tr><tr><td>Name</td><td>IP Address</td><td>Name</td><td>IP Address</td><td colspan="3"></td></tr><tr><td>clan</td><td>178.16 .12 .21</td><td></td><td>.</td><td>.</td><td>.</td><td></td></tr><tr><td>medpro</td><td>178.16 .12 .25</td><td></td><td>.</td><td>.</td><td>.</td><td></td></tr><tr><td>witness</td><td>178.16 .12 .71</td><td></td><td>.</td><td>.</td><td>.</td><td></td></tr></table>	change node-names ip				Page	1 of	1			IP NODE NAMES					Name	IP Address	Name	IP Address				clan	178.16 .12 .21		.	.	.		medpro	178.16 .12 .25		.	.	.		witness	178.16 .12 .71		.	.	.									
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medpro	178.16 .12 .25		.	.	.																																														
witness	178.16 .12 .71		.	.	.																																														
2.	Define the IP interface for the C-LAN and MedPro circuit packs being used for Witness ContactStore. At the terminal command prompt, enter “change ip-interface” and configure the appropriate information for each IP interface. Then apply the changes. The window below shows a list of configured IP interfaces. <table><tr><td colspan="10">list ip-interface</td></tr><tr><td colspan="10">IP INTERFACES</td></tr><tr><td>ON Type</td><td>Slot</td><td>Code</td><td>Sfx</td><td>Node Name</td><td>Subnet Mask</td><td>Gateway Address</td><td>Net Rgn</td><td>VLAN</td><td></td></tr><tr><td>y C-LAN</td><td>01A04</td><td>TN799</td><td>D</td><td>clan</td><td>255.255.255.0</td><td>178.16.12.1</td><td>1</td><td>n</td><td></td></tr><tr><td>y MEDPRO</td><td>01A05</td><td>TN2302</td><td></td><td>medpro</td><td>255.255.255.0</td><td>178.16.12.1</td><td>1</td><td>n</td><td></td></tr></table>	list ip-interface										IP INTERFACES										ON Type	Slot	Code	Sfx	Node Name	Subnet Mask	Gateway Address	Net Rgn	VLAN		y C-LAN	01A04	TN799	D	clan	255.255.255.0	178.16.12.1	1	n		y MEDPRO	01A05	TN2302		medpro	255.255.255.0	178.16.12.1	1	n	
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3.5. Tone Detection Configuration

Witness ContactStore supports “out-of-band” and “in-band” tone detection. The configuration depicted in these Application Notes uses “out-of-band” tone detection.

Step	Description
1.	At the terminal command prompt, enter “change system-parameters ip-options” to configure intra-system tone detection. Make sure the “Intra-system IP DTMF Transmission Mode” parameter is set to “out-of-band”. <pre>change system-parameters ip-options Page 1 of 1 IP-OPTIONS SYSTEM PARAMETERS IP MEDIA PACKET PERFORMANCE THRESHOLDS Roundtrip Propagation Delay (ms) High: 800 Low: 400 Packet Loss (%) High: 40 Low: 15 Ping Test Interval (sec): 20 Number of Pings Per Measurement Interval: 10 RTCP MONITOR SERVER Default Server IP Address: . . . Default Server Port: 5005 Default RTCP Report Period(secs): 5 IP DTMF TRANSMISSION MODE Intra-System IP DTMF Transmission Mode: out-of-band Inter-System IP DTMF: See Signaling Group Forms H.248 MEDIA GATEWAY H.323 IP ENDPOINT Link Loss Delay Timer (min): 5 Link Loss Delay Timer (min): 5 Primary Search Time (sec): 75</pre>

3.6. IP Services Configuration

The Witness ContactStore server connects to Communication Manager via the Communication Manager API (CMAPI) interface.

Step	Description
1.	Use the “change ip-services” command to administer a DAPI interface to the Witness ContactStore server. <pre>change ip-services Page 1 of 3 Service Enabled Local IP SERVICES Remote Remote Type y Node Local Node Port DLG y clan 5678 DAPI y clan 0 witness 0</pre>

3.7. IP Codec-Set and Network Region/Map Configuration

The Communication Manager API (CMAPI) and Witness ContactStore stations must be in an IP network region that supports the G.729A and/or G.711MU codecs. The IP network region must also have the media encryption feature disabled and contain at least one media processor card.

Step	Description																				
1.	Specify the type of codec used for voice encoding and compression/decompression. The main difference between codecs is in the compression algorithm used. Compression results in lower bandwidth requirements but also introduces delay and lowers voice quality. Witness ContactStore supports G.711MU and G.729A. Make sure “Silence Suppression” is set to “n”. At the terminal command prompt, enter “change ip-codec-set 1” and match the parameters shown below. Then apply the changes. Note: Please make sure to use this codec set number as the codec set configured for the Witness ip-network region. Administrators may need to use a different codec set, if codec set 1 is already being used. If this is the case, the Administrator must be sure to set the codec set value to G.711MU and G.729A. change ip-codec-set 1Page 1 of 1 IP Codec Set Codec Set: 1 <table><thead><tr><th></th><th>Audio Codec</th><th>Silence Suppression</th><th>Frames Per Pkt</th><th>Packet Size(ms)</th></tr></thead><tbody><tr><td>1:</td><td>G.711MU</td><td>n</td><td>2</td><td>20</td></tr><tr><td>2:</td><td>G.729A</td><td>n</td><td>2</td><td>20</td></tr><tr><td>3:</td><td></td><td></td><td></td><td></td></tr></tbody></table> Media Encryption 1: none		Audio Codec	Silence Suppression	Frames Per Pkt	Packet Size(ms)	1:	G.711MU	n	2	20	2:	G.729A	n	2	20	3:				
	Audio Codec	Silence Suppression	Frames Per Pkt	Packet Size(ms)																	
1:	G.711MU	n	2	20																	
2:	G.729A	n	2	20																	
3:																					

Step	Description
2.	Define the IP Network Region for the Witness IP stations used for call recording. At the terminal command prompt, enter “change ip-network-region 1” and match the parameters shown below. Then apply the changes. Note: Administrators may need to use a different network region number depending on the configuration used. Be sure the parameters for both servers are configured as follows to allow each system the ability to establish media paths. S8700 Media Server ip-network-region: <i>Codec Set = 1</i> <i>Intra-region IP-IP Direct Audio = yes</i> <i>Inter-region IP-IP Direct Audio = yes</i> <i>IP Audio Hairpinning = n</i> <pre> change ip-network-region 1 Page 1 of 19 IP NETWORK REGION Region: 1 Location: 1 Home Domain: Name: Domain 1 Intra-region IP-IP Direct Audio: yes Inter-region IP-IP Direct Audio: yes IP Audio Hairpinning? n AUDIO PARAMETERS Codec Set: 1 UDP Port Min: 2048 UDP Port Max: 65535 RTCP Reporting Enabled? y RTCP MONITOR SERVER PARAMETERS Use Default Server Parameters? y DIFFSERV/TOS PARAMETERS Call Control PHB Value: 34 Audio PHB Value: 46 802.1P/Q PARAMETERS Call Control 802.1p Priority: 7 Audio 802.1p Priority: 6 AUDIO RESOURCE RESERVATION PARAMETERS H.323 IP ENDPOINTS RSVP Enabled? n H.323 Link Bounce Recovery? y Idle Traffic Interval (sec): 20 Keep-Alive Interval (sec): 5 Keep-Alive Count: 5 </pre>
3.	Add the IP address range used by the Witness stations to the network region administered in Step 2. <pre> change ip-network-map Page 1 of 32 IP ADDRESS MAPPING Subnet From IP Address (To IP Address or Mask) Region VLAN Emergency 178.16 .12 .1 178.16 .12 .254 1 n Location n Extension </pre>

3.8. IP Station Configuration for Witness ContactStore

Each Witness ContactStore port must have a corresponding station configured on Avaya Communication Manager. All stations should be administered identically since Witness uses the same administration page for all stations.

Step	Description
1.	Add the stations used by Witness ContactStore. At the terminal command prompt, enter “add station” to add a station for Witness ContactStore. Enter “4624” for the station type, enter a station name, enter a numeric security code, and set the “IP Softphone” parameter to “y”. <pre>add station 38230 Page 1 of 5 STATION Extension: 38230 Lock Messages? n BCC: 0 Type: 4624 Security Code: 1234 TN: 1 Port: IP Coverage Path 1: COR: 5 Name: CC Port 38230 Coverage Path 2: COS: 1 Hunt-to Station: STATION OPTIONS Loss Group: 19 Personalized Ringing Pattern: 1 Message Lamp Ext: 38230 Speakerphone: 2-way Mute Button Enabled? y Display Language: english Media Complex Ext: IP SoftPhone? Y</pre> Note: The same security code must be used for all stations used by Witness for call recording.
2.	Go to Page 3 and assign the “conf-dsp” feature button. Then apply the changes. <pre>add station 38230 Page 3 of 5 STATION SITE DATA Room: Headset? n Jack: Speaker? n Cable: Mounting: d Floor: Cord Length: 0 Building: Set Color: ABBREVIATED DIALING List1: List2: List3: BUTTON ASSIGNMENTS 1: call-appr 7: 2: call-appr 8: 3: conf-dsp 9: 4: 10: 5: 11: 6: 12:</pre>
3.	Repeat Steps 1-2 to add more stations. Stations 38230 through 38239 were configured for these Application Notes.

3.9. Hunt Group Configuration for Witness On Demand Recording

Witness On Demand Recording mode also uses a Hunt Group to provide a shared pool of recording stations. Users can access this recording mode by providing an “Audix-rec” button on an Avaya phone with the Hunt Group extension.

Step	Description
1.	Use the “add hunt-group” command to administer a Hunt Group for the Witness On Demand Recording. Enter the “Group Name” and “Group Extension”. <pre> add hunt-group 2 Page 1 of 60 HUNT GROUP Group Number: 2 ACD? n Group Name: Witness On Demand Recording Queue? y Group Extension: 38320 Vector? n Group Type: ucd-mia Coverage Path: TN: 1 Night Service Destination: COR: 1 MM Early Answer? n Security Code: ISDN Caller Display: Calls Warning Threshold: Port: Time Warning Threshold: Port: </pre>
2.	Go to Page 3 and enter the Hunt Group stations. These stations were previously assigned in Section 3.8, Steps 1-3. <pre> change hunt-group 2 Page 3 of 60 HUNT GROUP Group Number: 2 Group Extension: 38320 Group Type: ucd-mia Member Range Allowed: 1 - 1500 Administered Members (min/max): 1 /10 Total Administered Members: 10 GROUP MEMBER ASSIGNMENTS Ext Name (24 characters) Ext Name (24 characters) 1: 38230 CC port 38230 14: 2: 38231 CC port 38231 15: 3: 38232 CC port 38232 16: 4: 38233 CC port 38233 17: 5: 38234 CC port 38234 18: 6: 38235 CC port 38235 19: 7: 38236 CC port 38236 20: 8: 38237 CC port 38237 21: 9: 38238 CC port 38238 22: 10: 38239 CC port 38239 23: 11: 24: 12: 25: 13: 26: At End of Member List </pre>

3.10. Meet-me Conference Configuration

The following configuration shows how to administer the Meet-me Conference feature on Avaya Communication Manager:

Step	Description																																																																																																												
1.	Administer the Meet-me Conference announcements. The following announcements need to be configured. • WelcomeMeetme, extension 20001 – Welcome to the Meet-me Conferencing service. Please enter your access code. • WelcomeMeetme2, extension 20002 – The access code entered is not valid. Please enter the access code again. • MeetmeInvalidCode, extension 20003 – This access code is invalid. Please contact the conference call coordinator to make sure you have the correct telephone number and access code. • MeetmeInProgress, extension 20004 – Your conference call is already in progress. • MeetmeFirstParty, extension 20005 – You are the first party to join the conference. • MeetmeFull, extension 20006 – The Meet-me Conference is filled to capacity. Please contact the conference call coordinator for assistance. Goodbye. All announcements in Avaya Communication Manager are administered by typing the “change announcements” command. The following screen shows the administered Meet-me Conference announcements. <table><tr><td colspan="10">change announcements</td><td colspan="2">Page 1 of 16</td></tr><tr><td colspan="12">ANNOUNCEMENTS/AUDIO SOURCES</td></tr><tr><td>Ann. No.</td><td>Ext.</td><td>Type</td><td>COR</td><td>TN</td><td>Name</td><td>Q</td><td>QLen</td><td>Pr</td><td>Rt</td><td>Port</td><td></td></tr><tr><td>1</td><td>20001</td><td>integrated</td><td>1</td><td>1</td><td>WelcomeMeetme</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr><tr><td>2</td><td>20002</td><td>integrated</td><td>1</td><td>1</td><td>WelcomeMeetme2</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr><tr><td>3</td><td>20003</td><td>integrated</td><td>1</td><td>1</td><td>MeetmeInvalidCode</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr><tr><td>4</td><td>20004</td><td>integrated</td><td>1</td><td>1</td><td>MeetmeInProgress</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr><tr><td>5</td><td>20005</td><td>integrated</td><td>1</td><td>1</td><td>MeetmeFirstParty</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr><tr><td>6</td><td>20006</td><td>integrated</td><td>1</td><td>1</td><td>MeetmeFull</td><td>n</td><td>NA</td><td>n</td><td>64</td><td>01A09</td><td></td></tr></table>	change announcements										Page 1 of 16		ANNOUNCEMENTS/AUDIO SOURCES												Ann. No.	Ext.	Type	COR	TN	Name	Q	QLen	Pr	Rt	Port		1	20001	integrated	1	1	WelcomeMeetme	n	NA	n	64	01A09		2	20002	integrated	1	1	WelcomeMeetme2	n	NA	n	64	01A09		3	20003	integrated	1	1	MeetmeInvalidCode	n	NA	n	64	01A09		4	20004	integrated	1	1	MeetmeInProgress	n	NA	n	64	01A09		5	20005	integrated	1	1	MeetmeFirstParty	n	NA	n	64	01A09		6	20006	integrated	1	1	MeetmeFull	n	NA	n	64	01A09	
change announcements										Page 1 of 16																																																																																																			
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Ann. No.	Ext.	Type	COR	TN	Name	Q	QLen	Pr	Rt	Port																																																																																																			
1	20001	integrated	1	1	WelcomeMeetme	n	NA	n	64	01A09																																																																																																			
2	20002	integrated	1	1	WelcomeMeetme2	n	NA	n	64	01A09																																																																																																			
3	20003	integrated	1	1	MeetmeInvalidCode	n	NA	n	64	01A09																																																																																																			
4	20004	integrated	1	1	MeetmeInProgress	n	NA	n	64	01A09																																																																																																			
5	20005	integrated	1	1	MeetmeFirstParty	n	NA	n	64	01A09																																																																																																			
6	20006	integrated	1	1	MeetmeFull	n	NA	n	64	01A09																																																																																																			

Step	Description
2.	Record the Meet-me Conference announcements. To do this, use the following procedure: Note: The phone used to record the announcements must have Console Permissions enabled in the COS (Class of Service) of the station record. If it is not, “Intercept Tone” will be received when attempting to dial the FAC for announcement recording. • Dial the FAC for announcement recording. Dial tone will be received. • Dial the extension of an announcement previously defined. • If the extension was successfully defined, dial tone will be received. • There are three options when working with an announcement: ○ Press 1 to record the announcement and # to terminate the recording. ○ Press 2 to playback the announcement. ○ Press 3 to erase the announcement. • Once satisfied with the recording, simply hang up. Repeat this procedure for all announcements.
3.	Create a Meet-me Conference vector. From the Avaya Communication Manager SAT screen, issue the command “change vector x”, where “x” is the number of the vector to create or change. In the “Meet-me Conf” field, type “y” to designate the vectors as a Meet-me Conference vector. Use the numbered fields to create the Meet-me Conference vector as shown below. change vector 10 Page 1 of 3 CALL VECTOR Number: 10 Name: MeetMe Conf Background BSR Poll? n Multimedia? n Attendant Vectoring? n Meet-me Conf? y Lock? y Basic? y EAS? y G3V4 Enhanced? y ANI/II-Digits? y ASAI Routing? y Prompting? y LAI? y G3V4 Adv Route? y CINFO? y BSR? y Holidays? y Variables? y 01 collect 6 digits after announcement 20001 02 goto step 6 if digits = meet-me-access 03 collect 6 digits after announcement 20002 04 goto step 6 if digits = meet-me-access 05 disconnect after announcement 20003 06 goto step 11 if meet-me-idle 07 goto step 14 if meet-me-full 08 announcement 20004 09 route-to meetme 10 stop 11 announcement 20005 Press 'Esc f 6' for Vector Editing

Step	Description
4.	Go to Page 2 to finish the Meet-me Conference vector configuration. <pre> change vector 10 CALL VECTOR Page 2 of 3 12 route-to meetme 13 stop 14 disconnect after announcement 20006 15 stop 16 </pre>
5.	Create a Meet-me Conference VDN. From the Avaya Communication Manager SAT screen, issue the command “add vdn x”, where “x” is the VDN extension. In the “Name” field, type a name to identify the VDN. In the “Vector Number” field, type the Meet-me Conference vector configured in Step 2. Set the “Meet-me Conferencing” field to “y”. <pre> add vdn 38140 VECTOR DIRECTORY NUMBER Page 1 of 2 Extension: 38140 Name: MeetMe Conference Vector Number: 10 Meet-me Conferencing? y COR: 1 TN: 1 </pre>
6.	Go to Page 2 and set the Meet-me Conference VDN parameters. In the “Conference Access Code” field, assign a six digit access code for the Meet-me Conference. In the “Conference Controller” field, type the extension of the conference host responsible for controlling the Meet-me Conference access code. The host can use the Feature Access Code (FAC) assigned in Section 3.3, Step 2 to change the Meet-me Conference access code. <pre> add vdn 38140 VECTOR DIRECTORY NUMBER Page 2 of 2 MEET-ME CONFERENCE PARAMETERS: Conference Access Code: 123456 Conference Controller: 38100 </pre>

3.11. “Audix-rec” Station Configuration

The following configuration shows how to create stations with an “Audix-rec” button for Witness On Demand recording.

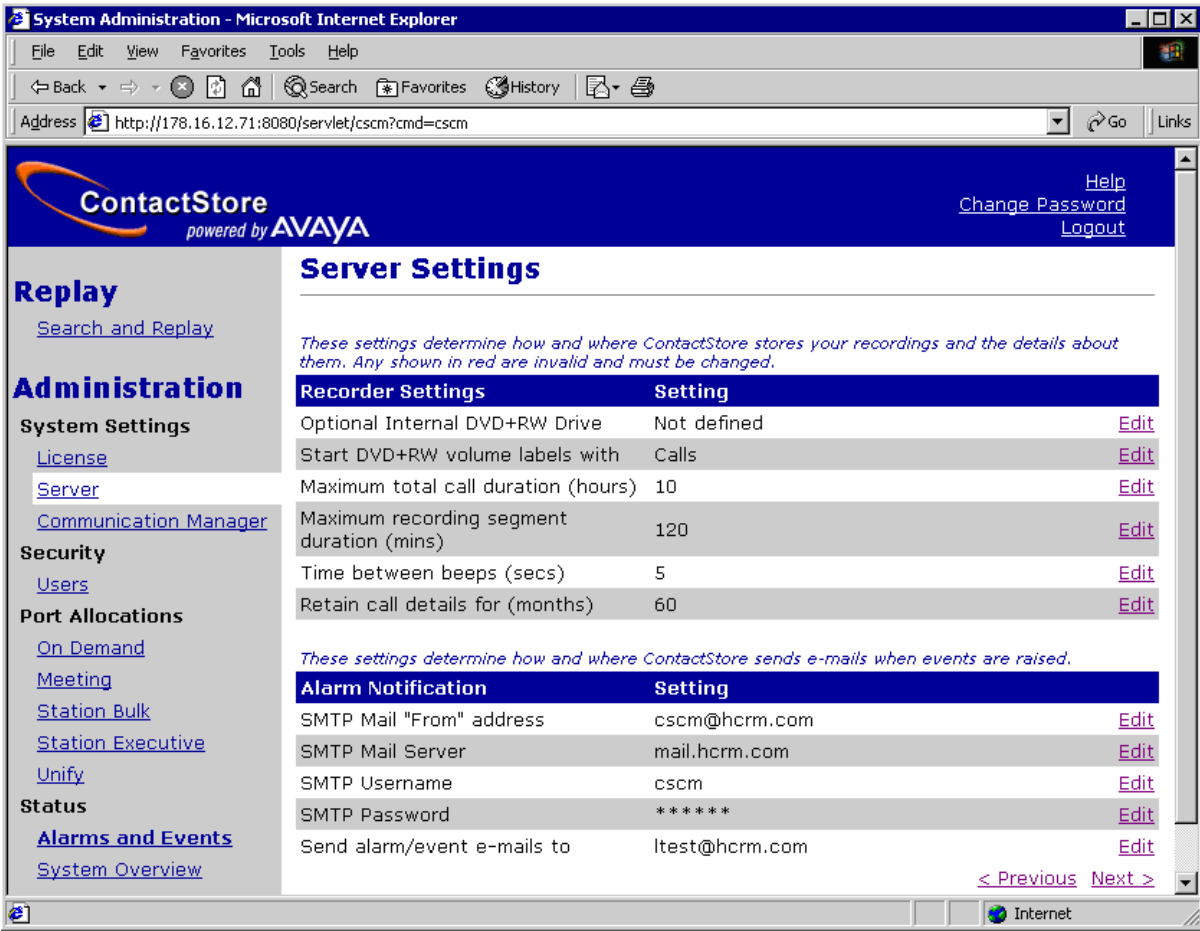
Step	Description
1.	Create stations used to initiate the recordings. Please refer to the example below: change station 38100 Page 1 of 4 STATION Extension: 38100 Lock Messages? n BCC: 0 Type: 4620 Security Code: 1234 TN: 1 Port: IP Coverage Path 1: COR: 1 Name: Telephone 1 Coverage Path 2: COS: 1 Hunt-to Station: STATION OPTIONS Loss Group: 19 Personalized Ringing Pattern: 1 Message Lamp Ext: 38100 Speakerphone: 2-way Mute Button Enabled? y Display Language: english Expansion Module? n Media Complex Ext: IP SoftPhone? n
2.	Go to Page 3 and assign an “audix-rec” button with the Witness On Demand Hunt Group extension. change station 38100 Page 3 of 4 STATION SITE DATA Room: Headset? n Jack: Speaker? n Cable: Mounting: d Floor: Cord Length: 0 Building: Set Color: ABBREVIATED DIALING List1: List2: List3: BUTTON ASSIGNMENTS 1: call-appr 5: 2: call-appr 6: 3: call-appr 7: 4: audix-rec Ext: 38320 8:

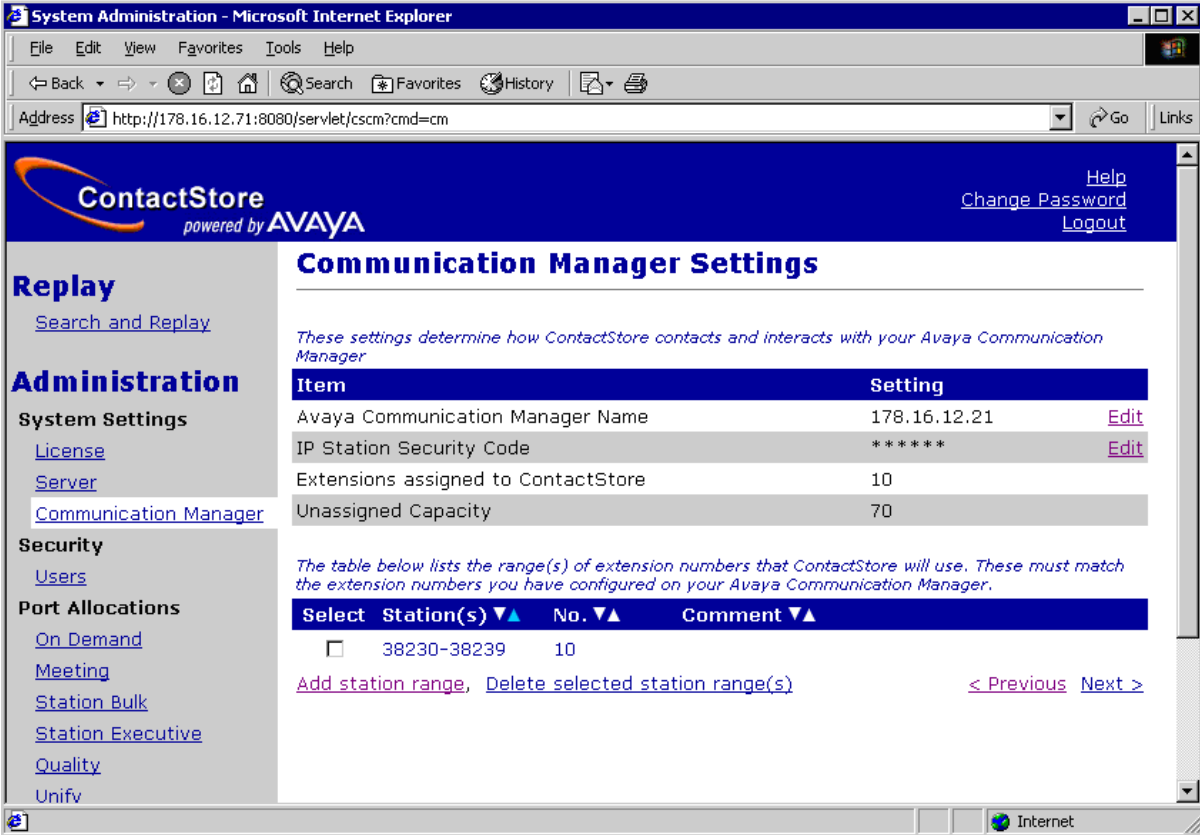
4. Witness ContactStore Call Recording Configuration

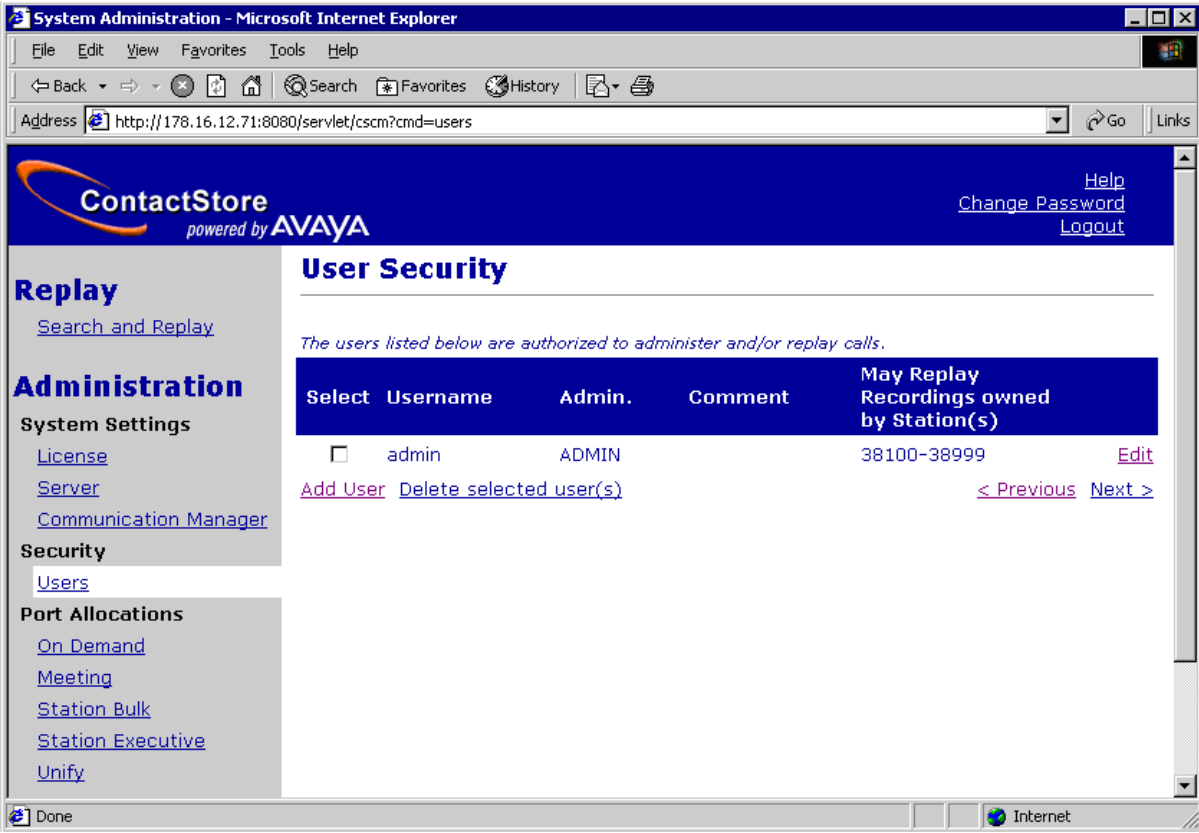
The following Witness ContactStore On Demand call recording configuration was done through a web browser.

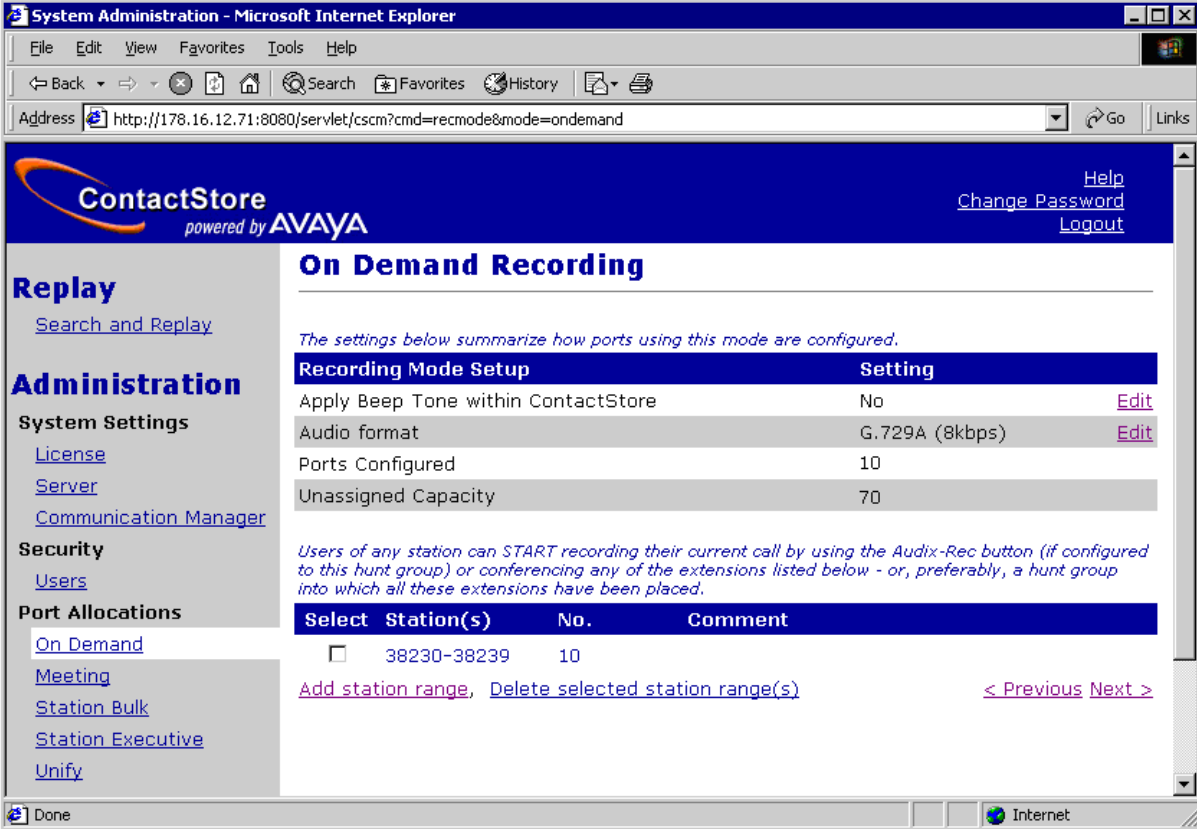
Note: Witness ContactStore configuration assumes that a license has been previously installed.

Step	Description
1.	Bring up a web browser and navigate to http://Witness-Server:8080 (where Witness-Server is the host name or IP address of the Witness ContactStore server). Log in using a username and password with administrator credentials.  The “ContactStore System Administration” page is displayed.

Step	Description
2.	Configure the Witness ContactStore Server Settings. These settings determine how the ContactStore recorder operates and how to forward alarms and events via e-mail. The window below shows the default recorder settings and alarm notification configuration. The window is displayed by navigating to “Administration” → “System Settings” → “Server”.  Click “Next >” on the bottom right side of the page to continue. The “Communication Manager Settings” window is displayed.

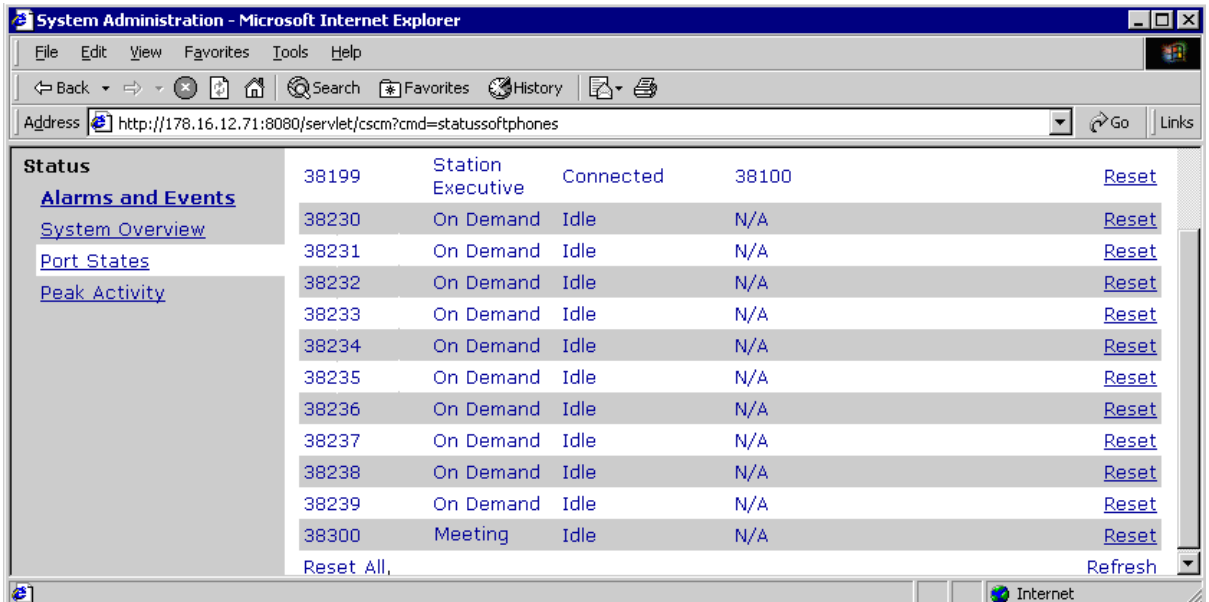
Step	Description
3.	Communication Manager Configuration: This page lets users specify how Witness ContactStore interacts with Avaya Communication Manager. • Avaya Communication Manager Name – Enter the IP address of the C-LAN card configured in Section 3.4. • IP Station Security Code - Enter the password for the stations assigned to work with the ContactStore server. • Station Range(s) – Add the station ranges that were previously configured in Section 3.8, Steps 1-3 to work with Witness ContactStore.  Click “Next >” to continue. The “User Security” page is displayed.

Step	Description
4.	User Configuration: The “User Security” page manages the access rights of each authorized user. The configuration below shows that the “admin” user is allowed to replay recordings owned by stations 38100-38999.  Click “Next >” to continue. The “On Demand Recording” page is displayed.

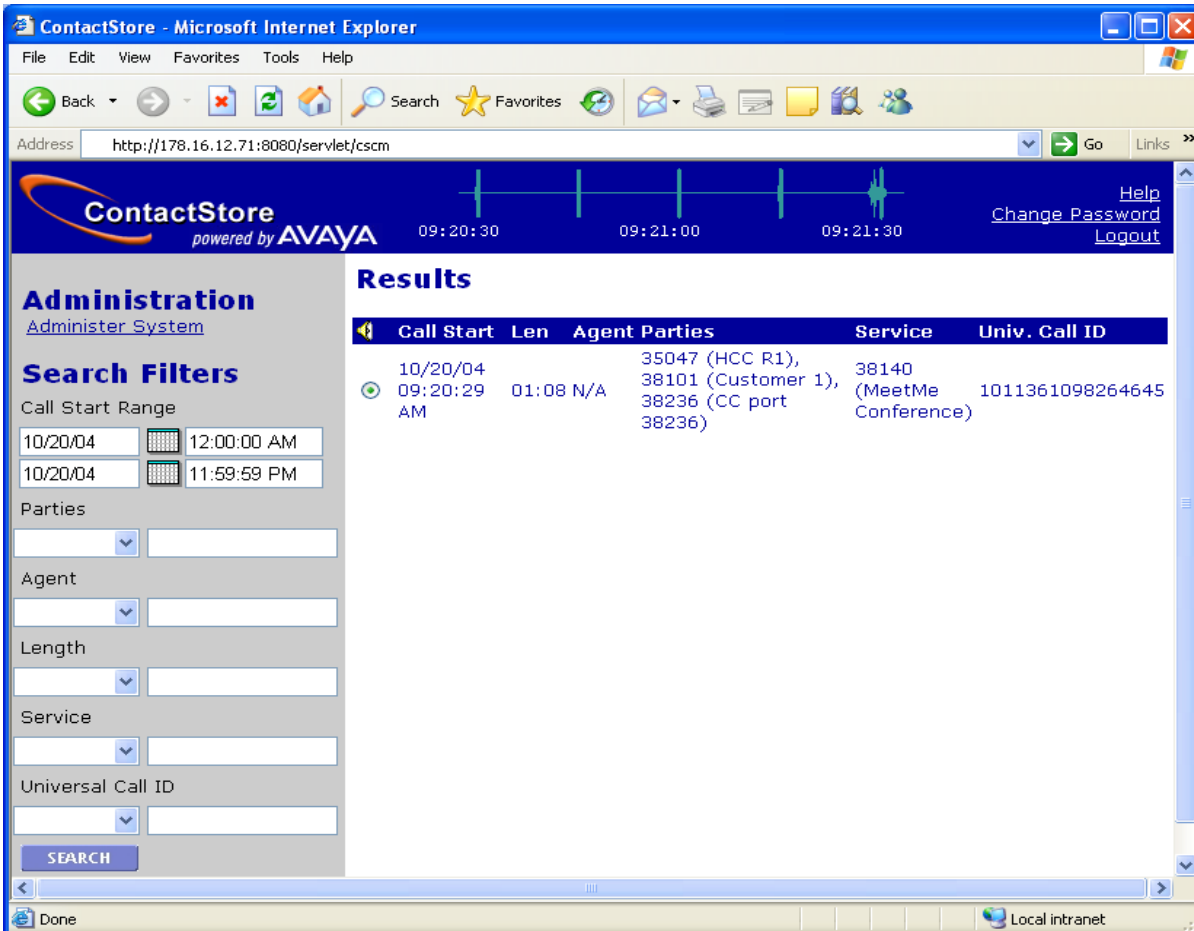
Step	Description
5.	On Demand Recording Configuration: The default recording parameters were used. The “Apply Beep Tone within ContactStore” was left as “No” since the “Warning Tone” defined for the Avaya Communication Manager “Audix-rec” button was used to generate the beep tone. G.729A was used as the audio recording format. The stations specified for the “On Demand” Hunt Group (38320) were configured as the station range. The station range was added by clicking the “Add station range” link on the bottom left side of the page.  Click “Next >” to continue. The “Meeting Recording” page is displayed.

5. Verification Steps

The following tests can be performed in the field to verify that Witness ContactStore is properly configured to record Avaya Communication Manager Meet-me Conferences.

Step	Description																																																																	
1.	Using a web browser, log in to Witness ContactStore using a username and password with administrator credentials. Navigate to “Administration” → “Status” → “Port States” and verify the state of the ports connected to Avaya Communication Manager. The Figure below shows the state of the “On Demand” recording mode ports. For the “On Demand” recording mode, the “Recording” column (4th column) shows the station number that invoked the on demand recording and the owner of the meeting.  <table><tr><th>Station</th><th>Station</th><th>Connected</th><th>38100</th><th>Reset</th></tr><tr><td>38199</td><td>Executive</td><td>Connected</td><td>38100</td><td>Reset</td></tr><tr><td>38230</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38231</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38232</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38233</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38234</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38235</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38236</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38237</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38238</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38239</td><td>On Demand</td><td>Idle</td><td>N/A</td><td>Reset</td></tr><tr><td>38300</td><td>Meeting</td><td>Idle</td><td>N/A</td><td>Reset</td></tr></table>	Station	Station	Connected	38100	Reset	38199	Executive	Connected	38100	Reset	38230	On Demand	Idle	N/A	Reset	38231	On Demand	Idle	N/A	Reset	38232	On Demand	Idle	N/A	Reset	38233	On Demand	Idle	N/A	Reset	38234	On Demand	Idle	N/A	Reset	38235	On Demand	Idle	N/A	Reset	38236	On Demand	Idle	N/A	Reset	38237	On Demand	Idle	N/A	Reset	38238	On Demand	Idle	N/A	Reset	38239	On Demand	Idle	N/A	Reset	38300	Meeting	Idle	N/A	Reset
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38239	On Demand	Idle	N/A	Reset																																																														
38300	Meeting	Idle	N/A	Reset																																																														
2.	Dial the Meet-me Conference VDN extension and enter the access code when prompted by the recorded announcement. Verify Avaya Communication Manager verifies the access code and connects the call to the Meet-me conference. An entry tone lets the caller know that he joined the conference.																																																																	
3.	Repeat Step 2 to add additional conference users.																																																																	

Step	Description
4.	Use the “status meet-me vdn” command to verify the status of the Meet-me Conference. The screen below shows two active users. <pre> status meet-me-vdn 38140 GENERAL STATUS Service State: active Extension: 38140 Connected Ports: T00001 01A0501 </pre>
5.	Press the “Audix-rec” button from an internal network phone in the Meet-me Conference. Verify a “warning tone” is heard letting the conference users know that the conference is being recorded.
6.	Use the “status meet-me vdn” command to verify the status of the Meet-me Conference. The Meet-me Conference should now show three conference users. Bridged “Audix-rec” appearances count against the total number of conference participants and are not prompted for access codes. <pre> status meet-me-vdn 38140 GENERAL STATUS Service State: active Extension: 38140 Connected Ports: T00001 01A0501 S00063 </pre>
7.	Hang-up all conference parties.

Step	Description												
8	From the Witness web browser, navigate to “Replay” → “Search and Replay” and click on “Search”. Verify the call was successfully recorded and that the conference can be replayed.  <table><thead><tr><th>Call Start</th><th>Len</th><th>Agent</th><th>Parties</th><th>Service</th><th>Univ. Call ID</th></tr></thead><tbody><tr><td>10/20/04 09:20:29 AM</td><td>01:08</td><td>N/A</td><td>35047 (HCC R1), 38101 (Customer 1), 38236 (CC port 38236)</td><td>38140 (MeetMe Conference)</td><td>1011361098264645</td></tr></tbody></table>	Call Start	Len	Agent	Parties	Service	Univ. Call ID	10/20/04 09:20:29 AM	01:08	N/A	35047 (HCC R1), 38101 (Customer 1), 38236 (CC port 38236)	38140 (MeetMe Conference)	1011361098264645
Call Start	Len	Agent	Parties	Service	Univ. Call ID								
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6. Conclusion

These Application Notes provide administrators with the basic steps necessary to configure Avaya Communication Manager Meet-me Conference call recording using Witness ContactStore. The steps provided should be helpful for implementing most deployments, but they do not address all possible configuration scenarios.

7. Additional References

- [1] “*Administration for Network Connectivity for Avaya Communication Manager*”, Document ID: 555-233-504.
- [2] “*Feature Description and Implementation for Avaya Communication Manager*”, Document ID: 555-245-205, June 2004.
- [3] “*ContactStore for Communication Manager Release 7.2 Installation and Configuration Guide*”.

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