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# **Configuring a Sample Avaya Aura® Call Center Elite Automatic Call Distribution (ACD) Application using Avaya Control Manager for Customer Engagement On Avaya™ Aura – Contact Center as a Service Release 1.3.2.2 Solution - Issue 1.0**

## **Abstract**

These Application Notes explain how to configure a sample Automatic Call Distribution (ACD) call center configuration using Avaya Control Manager Release 7.1.101 for the Customer Engagement On Avaya™ – Contact Center as a Service Release 1.3.2.2 solution (xCaaS R1.3.2.2). The intent of these Application Notes is not to build a complete Automatic Call Distribution application using Avaya Control Manager R7.1.101, but to create the necessary foundation using skills, vectors, vector directory numbers (VDNs), announcements, agents and other ACD resources in the xCaaS R1.3.2.2 cloud solution.

# 1. Introduction

These Application Notes explain how to configure a sample Automatic Call Distribution (ACD) call center configuration using Avaya Control Manager Release 7.1.101 for the Customer Engagement On Avaya™ – Contact Center as a Service (CCaaS) Release 1.3.2.2 solution. The intent of these Application Notes is not to build a complete Automatic Call Distribution application using Avaya Control Manager R7.1.101, but to create the necessary foundation using skills, vectors, vector directory numbers (VDNs), announcements, agents and other ACD resources in the xCaaS R1.3.2.2 cloud solution.

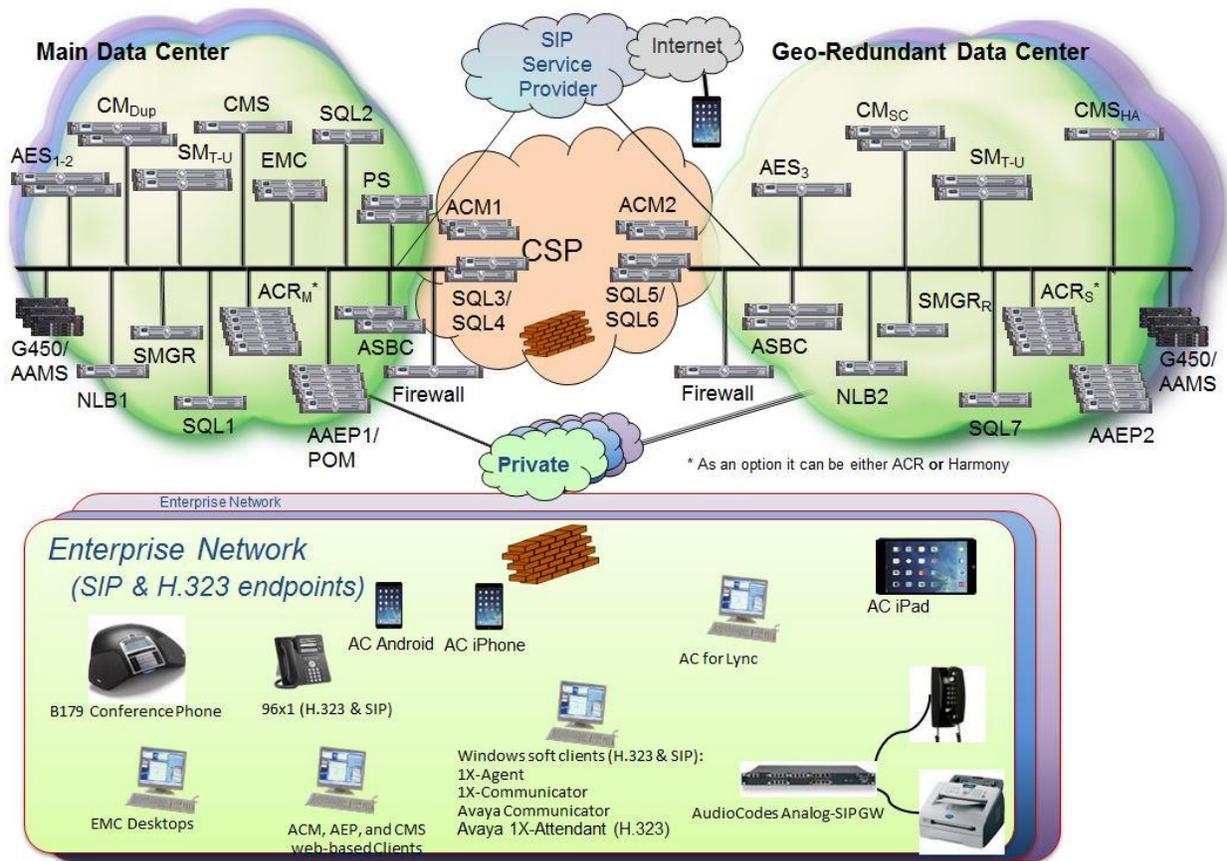
The Customer Engagement On Avaya™ Aura – Contact Center as a Service solution is a SIP-enabled solution catering to service providers (SPs) and hosting partners in the business of providing contact center services based on a utility model whose customers can vary from small-to-mid-to-large enterprises. The solution is part of the Engagement On Avaya™ Aura solution umbrella which supports both contact center and unified communication services. The Unified Communication solution is referred to Avaya Team Engagement On Avaya™ Aura – Unified Communication as a Service (Ucaas). The Engagement On Avaya™ Aura Release 1.3.2 solution introduces the following features enhancements:

- Support for new solution product lineup:
  - Avaya Aura® 7.0 Feature Pack 1.
  - Avaya Aura® Call Center Elite Multichannel (EMC) R6.5
  - Avaya Aura® Experience Portal (AAEP) R7.1.
  - Avaya Call Management System (CMS) R18.
  - Avaya SBCE R7.1.
  - New endpoint software and firmware.
- Introduction of the Avaya Aura® Media Server (AMS)
- Outbound contact center services support through Proactive Outreach Manager (POM)
- Presence Services Geo-redundancy.
- Avaya Aura® Conferencing.
- Support for call recording of UC Endpoints.
- Avaya Control Manager Support for 10 Engagement On Avaya Aura – UC/CCaaS instances.
- Avaya Control Manager R7.1.101 VMware footprints to support small and full scale deployments.
- Avaya POD Fx™ R3.0 support.
- Avaya Communicator for Microsoft Lync client side integration with Microsoft Lync Skype for Business Releases 2015 and 2016 in addition to Microsoft Lync Servers 2010 and 2013.

The solution can be deployed on virtual servers provided by hosted service providers or on Avaya POD Fx™.

The network diagram in **Figure 1** shows the Customer Engagement On Avaya – Contact Center as a Service Release 1.3.2.2 solution deployed in a partner Service Provider data center. The

cloud solution is based on Avaya Aura® Call Center Elite and other complementary contact center applications from Avaya. The solution is managed through Avaya Control Manager, which will be the configuration tool shown throughout these Application Notes. For further information on the solution, please refer to the components table below or to the solution documentation on <http://support.avaya.com/docuements> website.



**Figure 1: xCaaS R1.3.2.2 Solution Diagram**

## 2. Equipment and Software Validated

Equipment	Software
Avaya Control Manager	7.1.101 (FP) + Patches
Avaya Navigator (ANAV) * Applicable only to a multi-tenant deployment	4.1.1 (FP)
Avaya CMS Supervisor * applicable only to a dedicated instance deployment	18.0.0.2
Avaya Aura® Communication Manager w/ Call Center Elite	7.0.1.1 + Patch 23345
Avaya Aura® System Manager	7.0.1.1
Avaya Aura® Session Manager	7.0.1.1
Avaya Aura® Presence Services	6.2.6.7
Avaya Aura® Application Enablement Services (AES)	7.0.1.Super Patch 2
Avaya Aura® Call Center Elite Multichannel (EMC)	6.5
Avaya Aura® Messaging	6.3.3 SP5
Avaya Aura® Experience Portal	7.1
Avaya Call Management System (CMS)	18.0.0.2 Patch 1
Avaya Aura® Conference Server (AAC)	8.0 SP7
Avaya Proactive Outreach Manager (POM)	3.0 SP3 Patch 3
Avaya Call Recording (ACR)	15.1 FP1
Avaya Session Border Controller for Enterprise (SBCE)	7.1 SP1
Avaya G450 Media Gateway	7.0.1.1
Avaya Aura® Media Server	7.7 FP1 SP1
Avaya Security Access Link (SAL) Gateway	2.5
Avaya Breeze™	3.1.1 SP1
Avaya POD Fx™	3.0
Avaya Aura® Utility Server	7.0.1.1
Audiocodes MP11x Media gateway	6.6
Avaya One-X Agent (SIP)	2.5.9
Avaya One-X Agent (H.323)	2.5 SP8 patch 1
Avaya One-X Communicator (SIP and H.323)	6.2 SP12
Avaya One-X Attendant (H.323)	4.0 SP12
Avaya H.175 HD Video Conference Phone	1.0.2.2
Avaya B179 Conference Phone (SIP)	2.4 SP2
Avaya 96x1 Series Desk Phone (SIP)	7.0.1.2
Avaya 96x1 Series Desk Phone (H.323)	6.6.3
Avaya Communicator for Microsoft Lync	6.4 SP4
Avaya Equinox™ for Android	3.0 SP1
Avaya Equinox™ for iOS	3.0 SP1
Avaya Equinox™ for Windows	3.0 SP1

**Table 1: Solution Components**

### 3. Contact Center Application

These Application Notes will reference a fictitious company called “Acme Widgets” to better relate to the components required in building the routing.

Acme Widgets is a company providing customer service for technical support requests. They purchased the cloud contact center service from an approved Avaya partner. The service is setup to accept calls from a single toll free number.

The following scenario will be built through the step-by-step process within these Application Notes:

1. *A customer calls Acme Widgets’ toll free number to request technical assistance. The call arrives on the incoming trunks with DNIS digits that identify the Vector Directory Number (VDN) and a vector.*
2. *A standard greeting announcement is played.*
3. *Vector steps then prompt the customer for choice of either general technical support or system outage support.*
4. *The customer is routed to a general queue if no entry is made.*
5. *When a prompt is chosen, the call gets routed to the appropriate queue.*
6. *While in queue, the customer receives music and an interval announcement.*
7. *A whisper announcement is played to each agent in the outage queue who answers a call.*

### 4. Configuring Call Routing Components

All Avaya Aura® Communication Manager call routing components are configured from Avaya Control Manager web management interface.

#### 4.1. Cloud ACD - Logical Routing Flow

**Figure 2** shows the logical routing flow for the sample xCaaS R1.3.2.2 ACD solution application to be configured through Avaya Control Manager.

Acme Widgets Tech Support Line

Logical Flow Diagram

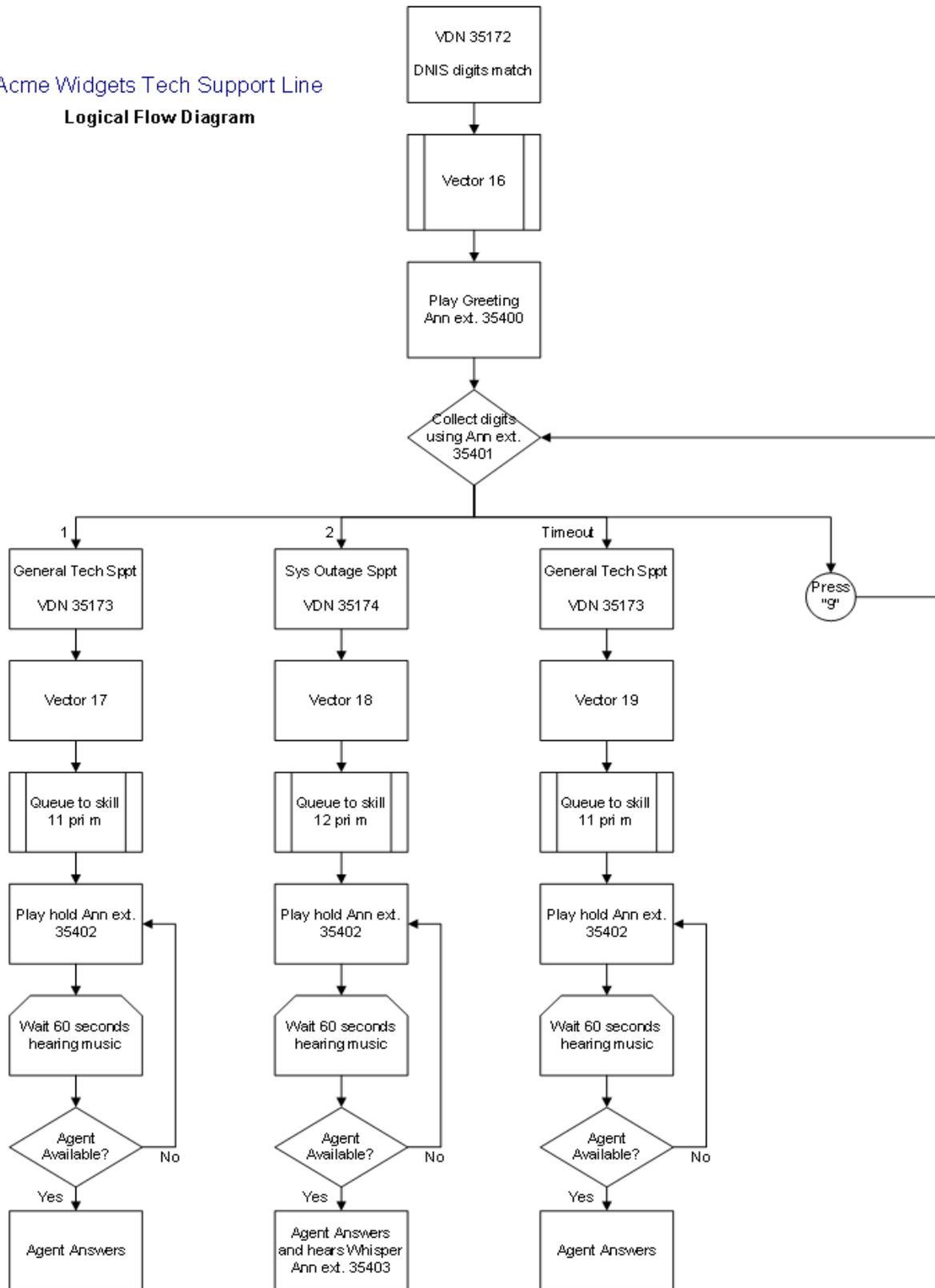


Figure 2: xCaaS Sample ACD Application Logical Flow Diagram

The following describes the sequence of events for this application.

1. Customer calls Acme Widgets' toll free number for technical support.
2. Call is received on inbound trunks at Avaya Aura® Communication Manager via Avaya Aura® Session Manager.
3. DNIS digits from toll free number are associated with defined VDNs in the Avaya Communication Manager configuration.
4. Vector steps from associated VDNs are executed.
5. Caller is greeted and prompted for a selection.
6. Caller chooses a routing option upon hearing an announcement and the call is queued to the appropriate skill with music. If an option is not picked, then the call gets queued to a general queue.
7. A wait announcement occurs every 60 seconds while the call is in queue.
8. If an agent in the outage queue answers the call, the agent receives a whisper announcement notifying the high priority call that agent is receiving.
9. The agent handles the call and disconnects.

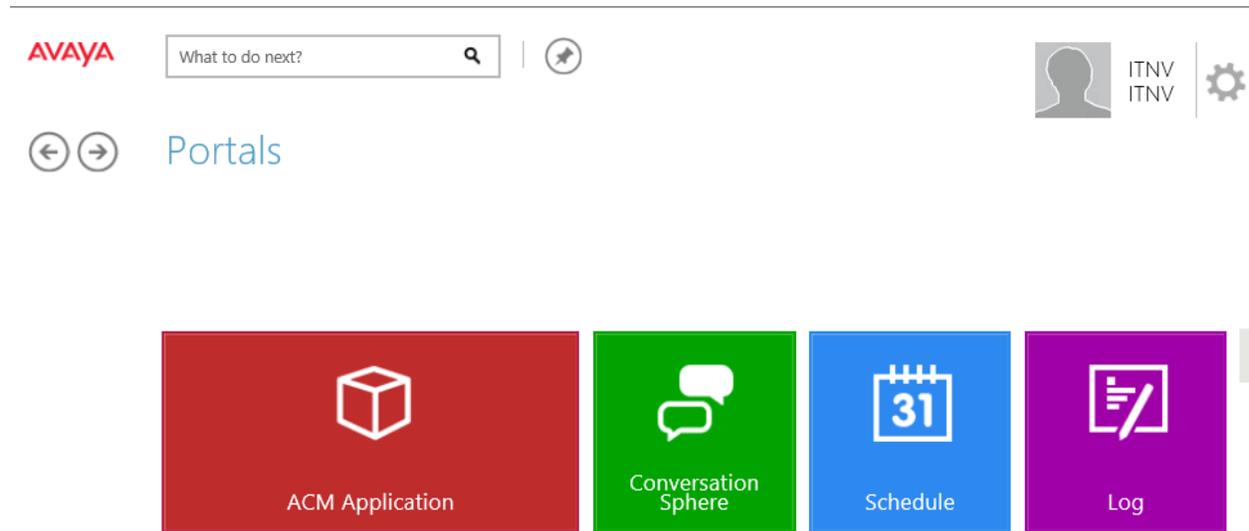
## 4.2. Creating Skills

Acme Widgets has two agent groups for which they will need to queue calls. One is a general technical support queue. The other is a system outage queue.

Configure two Avaya Aura® Communication manager skills (aka. hunt groups) through Avaya Control Manager, one for each skill group.

- Acme Widgets General Tech Support, Skill 11, Skill Extension 35201
- Acme Widgets System Outage Support, Skill 12, Skill Extension 35202

Begin by logging into Avaya Control Manager (ACM). The following portal page is displayed after logging in.



**Figure 3: ACM R7.1.101 Main Dashboard**

Click the “ACM Application” tile. The ACM Application portal screen is displayed. Navigate to the Avaya → Skill tab and create the Skill for the customer. Click on the “+” Sign to add a new skill.

The following Skill parameters are relevant for this scenario and need to be defined. See **Figure 4** for reference in completing this step.

- **Location:** Select the Customer ACM Location Name (Note: The end customer would only be able to select their customer location)
- **Name (English):** Use “Acme Widgets Tech Support”
- **Alias:** Use “Acme Widgets Tech Support”
- **Template:** Select the appropriate ACM Skill Template. One or more Skill templates can be specifically created for each customer (not covered by these application notes)
- **Skill Number:** Enter “11” for the first Skill group.
- **Extension:** Dialable extension of the skill, ext. 35201
- **Skill Description:** This is an optional field and should contain a description for the call center skill.

The screenshot shows the Avaya Control Manager interface for configuring a skill. The top navigation bar includes 'AVAYA CONTROL MANAGER', 'Home', 'Users', 'AVAYA', 'Conversation', 'Logs', 'IVR', 'CM Translation', and 'Logout'. The main content area is titled 'Skill' and contains the following fields:

- Location \***: Customer 51 | 51515151 (dropdown)
- Name (English) \***: Acme Widgets Tech Support
- Alias \***: Acme Widgets Tech Support
- Template \***: SKILL\_CM6 (dropdown)
- Skill Number \***: 11
- Extension \***: 35201
- Skill description**: Acme Widgets Tech Support - Skill 11 (Ext: 35201)

At the bottom, there are checkboxes for:  Alias Skill,  CMSkill,  Save to CMS,  Save to WFO, and  Export to external system(s).

**Figure 4: ACM Acme Widgets Tech Support Skill – Main Page**

Click the “” icon on the top right hand side of the screen to save the Skill to Avaya Control Manager and Avaya Aura® Call Center Elite running on Avaya Aura® Communication Manager. A popup window should appear stating the “Operation completed successfully”.

Edit the Skill by clicking the “” icon and selecting the “CM Options” menu option. The following Hunt Group parameters are relevant for this scenario and need to be defined. See **Figure 5** for reference in completing this step.

- **Group Type:** Type of algorithm for searching available agents. For example ead-mia.
- **COR:** Class of restriction for this hunt group.
- **TN:** Tenant Number. TN 1 is the system default assigned if there is only one customer.
- **ACD = Yes**
- **Queue = Yes**
- **Vector = Yes**

Skill





Skill

Location \*

Skill description

Template \*

Export to external system(s)

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Skill Group Number *	<input type="text" value="11"/>	ACD	<input type="text" value="Yes"/>
Name (English)	<input type="text" value="Acme Widgets Tech Support"/>	Queue	<input type="text" value="Yes"/>
Skill Group Extension *	<input type="text" value="35201"/>	Vector	<input type="text" value="Yes"/>
Group Type	<input type="text" value="ead-mia"/>		
TN:	<input type="text" value="1"/>		
COR	<input type="text" value="1"/>	Early Answer	<input type="text" value="n"/>
Security Code:	<input type="text"/>	Local Agent Preference	<input type="text" value="n"/>
ISDN/SIP caller display	<input type="text"/>		
Queue Limit	<input type="text" value="unlimited"/>		
Call Warning Threshold	<input type="text"/>	Port	<input type="text"/>
Time Warning Threshold	<input type="text"/>	Port	<input type="text"/>

**Figure 5: ACM Acme Widgets Tech Support Skill – CM Options Part 1**

Navigate to the bottom portion of the page and make sure the following parameters are set. See **Figure 6** for reference in completing this step.

- **Skill** = Yes
- **Measured** = both (This option allows CMS to collect Skill measurements.)

Skill	<input type="text" value="Yes"/>	Expected Call Handle Time	<input type="text" value="180"/>
AAS	<input type="text" value="n"/>	Service level target (% in sec)	<input type="text" value="80"/> In <input type="text" value="20"/>
Measured	<input type="text" value="both"/>		
Supervisor Extension	<input type="text"/>		
Controlling Adjunct	<input type="text" value="None"/>		
WJSTATS Objective	<input type="text"/>		
Timed ACWInterval	<input type="text"/>		
Multiple Call Handling	<input type="text" value="none"/>		
Interruptible AuxThreshold	<input type="text" value="none"/>		
Redirect On No Answer	<input type="text"/>		
Redirect on No Answer to VDN	<input type="text"/>		
Redirect on IP/OPTIM Failure to VDN	<input type="text"/>		
Forced Entry On Stroke Counts Or Call Work Codes?	<input type="text" value="n"/>		

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LWC Reception:	<input type="text" value="none"/>	AJDIX Name	<input type="text"/>
Message Center	<input type="text" value="none"/>		

**Figure 6: ACM Acme Widgets Tech Support Skill – CM Options Part 2**

Click the “” icon on the top right hand side of the screen to save the Skill changes to Avaya Control Manager and Avaya Aura® Call Center Elite running on Avaya Aura® Communication Manager. A popup window should appear stating the “Operation completed successfully”.

For reference, **Figures 7 and 8** show the details of Skill 11 on the Avaya Aura® Communication Manager System Access Terminal (SAT) configured through Avaya Control Manager.

**Note:** The hunt group number has a direct relation to skill group number.

```
display hunt-group 11                                     Page 1 of 4
                                                         HUNT GROUP
      Group Number: 11                                   ACD? y
      Group Name: Acme Widgets Tech Support             Queue? y
      Group Extension: 35201                             Vector? y
      Group Type: ead-mia
      TN: 1
      COR: 1                                             MM Early Answer? n
      Security Code:                                     Local Agent Preference? n
      ISDN/SIP Caller Display:
      Queue Limit: unlimited
      Calls Warning Threshold: Port:
      Time Warning Threshold: Port:
```

**Figure 7: Acme Widgets Tech Support Hunt Group**

```
display hunt-group 11                                     Page 2 of 4
                                                         HUNT GROUP
      Skill? y                                           Expected Call Handling Time (sec): 180
      AAS? n                                             Service Level Target (% in sec): 80 in 20
      Measured: both
      Supervisor Extension:
      Controlling Adjunct: none
      VuStats Objective:
      Multiple Call Handling: none
      Timed ACW Interval (sec):                          After Xfer or Held Call Drops? n
```

**Figure 8: Acme Widgets Tech Support Hunt Group Page 2**

Repeat the configuration process again for the second hunt group i.e., Skill Number 12. For Acme Widgets, it is called “Acme Widgets System Outages”.

**Note:** It is assumed that agents will be placed in these skill groups to test or handle call routing.

### 4.3. Creating the Announcements

Announcements play a vital role in this scenario. For Acme Widgets, they will use announcements to keep both the customer and the agent informed. For this scenario, the announcements will be:

- Acme-Widgets-Greeting → Extension 35400
- Acme-Widgets-Prompt → Extension 35401
- Acme-Widgets-Hold → Extension 35402
- Acme-Widgets-Whisper → Extension 35403

The greeting prompt, and hold announcements are self-explanatory. The “VDN Whisper” announcement tells agents what type of call they are receiving. It is a pre-recorded phrase that is played to the agent just before the customer is connected to them.

All Avaya Aura® Communication Manager Announcements shown in this document are Avaya G450 announcements administered from Avaya Control Manager. The following parameters are relevant for this scenario and need to be defined on separate lines for each announcement.

- **Location:** Select the Customer ACM Location Name
- **Name:** Use “Acme-Widgets-Greeting”
- **Alias:** Use “Acme-Widgets-Greeting”
- **Description:** Use “Acme-Widgets-Greeting”
- **Number:** This is the dialable extension number of the announcement to be used in the vector steps.
- **Type:** Since the announcement is to be stored on the Avaya G450 Media Gateway announcement module, the type is **integrated**.
- **COR:** Class of restriction for this hunt group.
- **Queue:** Yes
- **Rate:** 64
- **Protected?** Yes
- **Group/Board:** Use “Thornton2”

To add a new announcement, access Avaya Control Manager and navigate to the Avaya → Announcement tab. Click the “+” Sign to add a new Announcement. See **Figure 9** for reference in completing this step.

The screenshot shows the Avaya Control Manager interface for adding a new announcement. The navigation bar at the top includes 'AVAYA CONTROL MANAGER', 'Home', 'Users', 'AVAYA', 'Conversation', 'CM Translation', and 'Logout'. The main content area is titled 'Announcement' and contains a form with the following fields:

- Location \*  (dropdown)
- Number \*  (with play and refresh icons)
- Name \*
- Alias \*
- Description \*
- Type \*  (dropdown)
- COR
- Queue  (dropdown)
- Protected?  (dropdown)
- Rate
- TN:
- Group/Board  (dropdown)

At the bottom of the form, there is an 'Upload Announcement' section with a 'Browse...' button and an 'Upload' button.

**Figure 9: Acme Widgets Greeting Announcement**

Click the “” icon on the top right hand side of the screen to save the Announcement to Avaya Aura® Call Center Elite running on Avaya Aura® Communication Manager through Avaya Control Manager. A popup window should appear stating the “Operation completed successfully”.

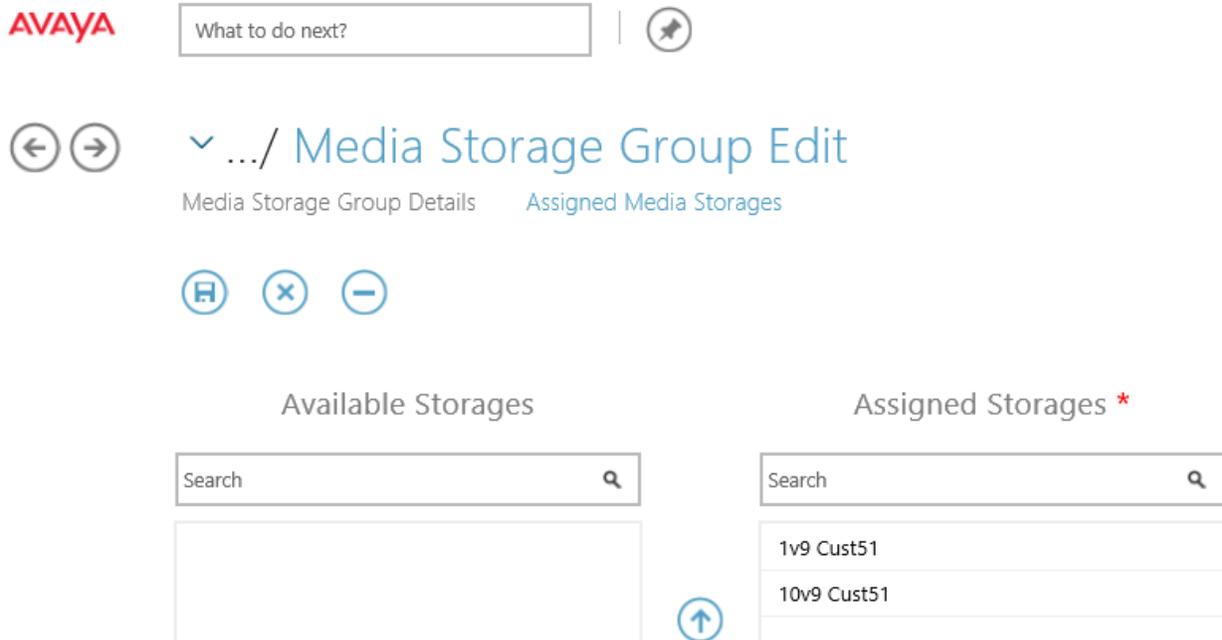
The Group/Board “Thornton2” refers to Avaya Control Manager Media Storage Group “2” configured with the Avaya Aura® Communication Manager Announcement boards for Media Gateways 1 and 10. **Figures 10** and **11** show the Avaya Control Manager Media Storage Group Configuration for Avaya Aura® Communication Manager Audio Group “2”.

The screenshot shows the Avaya Control Manager interface for editing a Media Storage Group. At the top left is the Avaya logo. A search bar contains the text "What to do next?". Below this are navigation arrows and a breadcrumb trail: ".../ Media Storage Group Edit". Underneath the breadcrumb are two tabs: "Media Storage Group Details" (selected) and "Assigned Media Storages". There are three action icons: a save icon, a delete icon, and a minus icon. The configuration form includes four fields, each with a red asterisk indicating it is required:

- Storage Type: A dropdown menu with "CM" selected.
- Group Number: A text input field containing "2".
- Group Alias Name: A text input field containing "Thornton2".
- Location: A dropdown menu with "Customer 51 | 51515..." selected.

**Figure 10: ACM Customer 51 Media Storage Group 2 Details**

Two Avaya Aura® Communication Manager G450 announcement boards were assigned to the Media Storage Group as shown in **Figure 11**. The term Avaya Control Manager Media Storage Group refers to Avaya Aura® Communication Manager Audio Groups.



**Figure 11: ACM Customer 51 Media Storage Group 2 Assigned Storage Boards**

Repeat the configuration process again for the remaining announcements listed above. See **Figure 12** for the announcements configured through Avaya Control Manager.



**Figure 12: ACM Customer 51 Configured Announcements**

For reference, **Figure 13** shows the announcements through Avaya Aura® Communication Manager System Access Terminal (SAT).

```
list announcement
```

ANNOUNCEMENTS/AUDIO SOURCES				
Announcement Extension	Type	Name	Source Pt/Bd/Grp	Num of Files
35400	integrated	Acme-Widgets-Greeting	G2	2
35401	integrated	Acme-Widgets-Prompt	G2	2
35402	integrated	Acme-Widgets-Hold	G2	2
35403	integrated	Acme-Widgets-Whisper	G2	2

**Figure 13: CM SAT Customer 51 Configured Announcements**

Next, the announcement should be recorded and uploaded to the announcement locations. There are two options to record announcements. The first is to use a professional tool to record the announcement. The second is to record the announcement through a telephone using an Avaya Aura® Communication Manager Feature Access Code (FAC).

To do the latter, the FAC for recording announcements must be known. Also, the telephone to be used to record the announcement must have **Console Permissions** enabled in the Class of Service (COS) of the station record. If it is not, an “Intercept Tone” is received when attempting to dial the FAC for announcement recording.

For the Acme Widgets sample ACD application, the following announcements are recorded:

- Acme-Widgets-Greeting

“Thank you for calling Acme Widgets Technical Support line.”

- Acme-Widgets-Prompt

“Please press one for general technical support issues. Press two if you have a system outage or a service-affecting problem. Press nine to repeat this menu. Or, you may hold for the next available technical specialist.”

- Acme-Widgets-Hold

“Thank you for your patience. At the moment, no technical specialists are available to answer your call. We want to do our best to serve you and the customers we are currently assisting. Please hold and we’ll be with you as soon as possible.”

- Acme-Widgets-Whisper

“System outage request”

To record the announcements using a professional application, use the application to record the announcements and save the announcement files. The announcement file names need to be the same as the name of the announcement names configured through Avaya Control Manager.

The professionally recorded announcement files can be uploaded to the G450 Media Gateway announcement boards from Avaya Control Manager using the steps below:

1. From the “ACM Application” tile click the “Avaya” tab followed by the “Announcement” tab. The announcements shown in **Figure 12** are displayed.
2. Double-click the desired announcement to upload. **Figure 14** shows the ACM announcement for the “Acme-Widgets-Prompt” announcement extension.

The screenshot displays the Avaya Control Manager interface for configuring an announcement. The navigation bar at the top includes 'AVAYA CONTROL MANAGER', 'Home', 'Users', 'AVAYA', 'Conversation', 'Logs', and 'IVR'. The main content area is titled 'Announcement' and contains the following fields:

- Location \*  Number
- Name \*  Alias \*  Description \*
- Type \*
- COR  TN:
- Queue
- Protected?  Rate
- Group/Board

Below the configuration fields is the 'Upload Announcement' section, which includes a 'Browse...' button and an 'Upload' button.

**Figure 14: ACM R7.1.101 ACM Avaya Announcement Upload**

- Click the browse button to select the desired announcement file and click the “Upload” button to upload the announcement. Please note that the file name needs to be the same as the name of the announcement. The window should display an “Uploaded: ..” message as shown in **Figure 15** if the announcement was successfully uploaded to the announcement boards that are part of the Avaya Control Manager Media Storage Group.

The screenshot displays the Avaya Control Manager interface for configuring an announcement. The top navigation bar includes Home, Users, AVAYA (highlighted), Conversation, Logs, and IVR. The main content area is titled 'Announcement' and contains the following fields:

- Location \*  Number
- Name \*  Alias \*  Description \*
- Type \*
- COR  TN:
- Queue
- Rate
- Protected?  Group/Board

Below the configuration fields is the 'Upload Announcement' section, which includes a 'Browse...' button and an 'Upload' button. The upload status is displayed as follows:

```

Uploaded: -> File :Acme-Widgets-Prompt.wav -> Board :1v9 Cust51
Uploaded: -> File :Acme-Widgets-Prompt.wav -> Board :10v9 Cust51

```

**Figure 15: ACM R7.1.101 ACM Avaya Announcement Upload**

**Note:** Announcements that have the Avaya Aura® Media Server as the announcement storage location will require access to the Avaya Aura® System Manager to upload. Alternatively, the Service Provider can upload the announcements to the Avaya Aura® Media Server on behalf of the end customer. Consult the Avaya Aura® System Manager documentation on the Avaya Support website for instructions on how to upload announcements to the Avaya Aura® Media Server from Avaya Aura® System Manager.

Alternatively, to record the announcements using a telephone, use the steps below. The announcement is automatically recorded in the announcement storage location:

- Dial the FAC for announcement recording, if the FAC is available, dial tone is heard.
- Dial the extension of the announcement previously defined.
- If the extension was successfully defined, dial tone is heard.
- There are three options when working with an announcement:
  - Press 1 to record the announcement and # to terminate the recording.

- b. Press 2 to playback the announcement.
- c. Press 3 to erase the announcement.
5. If satisfied with the recording, simply hang up.

To verify the announcements just recorded, directly dial the extension of the announcements. The recording should be heard without error.

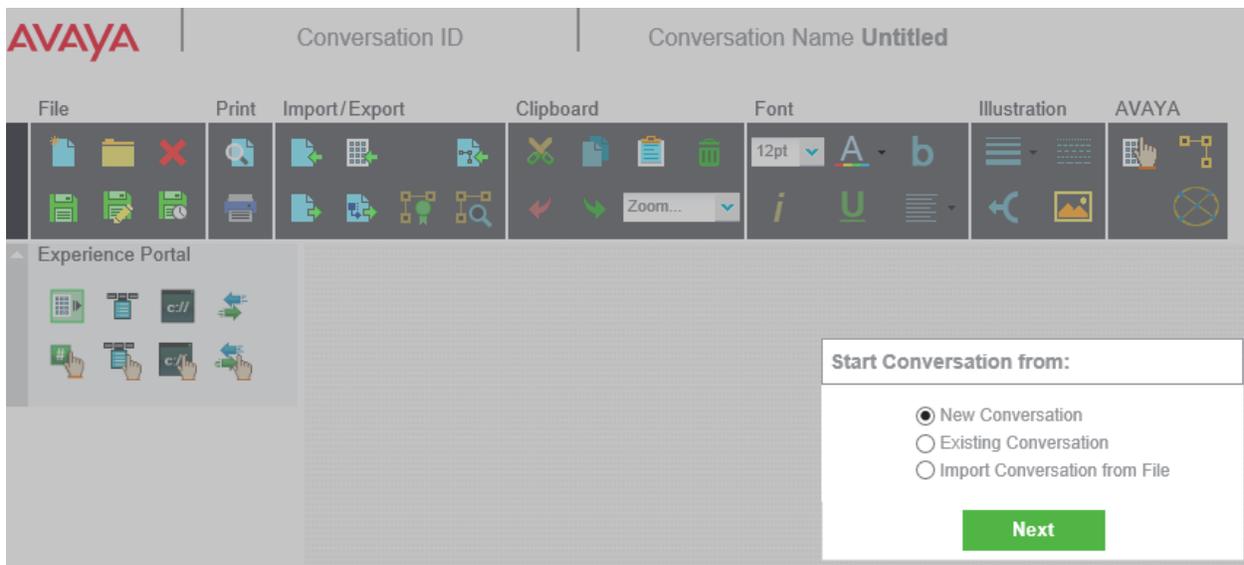
#### 4.4. ACM Conversation Sphere – CM Vector Programming

The vector is the core of the Customer Engagement on Avaya™ (a.k.a. xCaaS) routing process for contact centers. Vectors are small programs that logically execute steps in sequence.

For Acme Widgets, the routing for this scenario will be done in three vectors. Each vector will be assigned to its corresponding VDN. For Acme Widgets, provide names similar to the VDNs, and set them up as such:

- Acme TchSppt In, vector 16
- Acme Gen TchSppt, vector 17
- Acme Sys Outage, vector 18

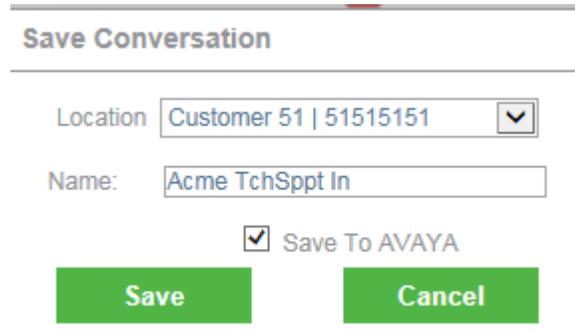
Program the vector defined within the VDN by going to ACM application Conversation tab to bring up the ACM Conversation Sphere application. **Figure 16** shows the ACM Conversation Sphere Application after logging in.



**Figure 16: ACM R7.1.101 Conversation Sphere**

Click “Next” to begin configuring a new vector. See **Figure 17** for reference in completing this step.

- **Location:** Select the customer location.
- **Name:** Enter the conversation (aka. Vector) name.
- **Save to Avaya:** Select this to indicate the Conversation should be saved to Avaya Aura® Call Center Elite when it is created.



Save Conversation

Location Customer 51 | 51515151

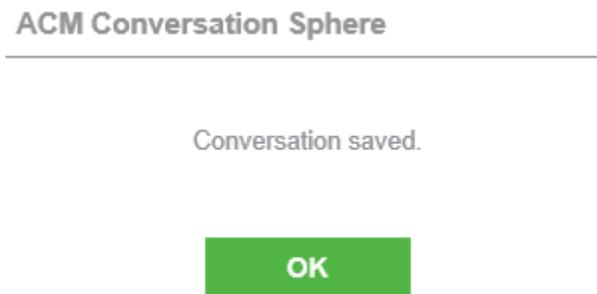
Name: Acme TchSppt In

Save To AVAYA

Save Cancel

**Figure 17: ACM R7.1.101 Conversation Sphere – New Vector Name**

Click “Save” to save the initial conversation to the ACM database and start configuring the vector.



ACM Conversation Sphere

Conversation saved.

OK

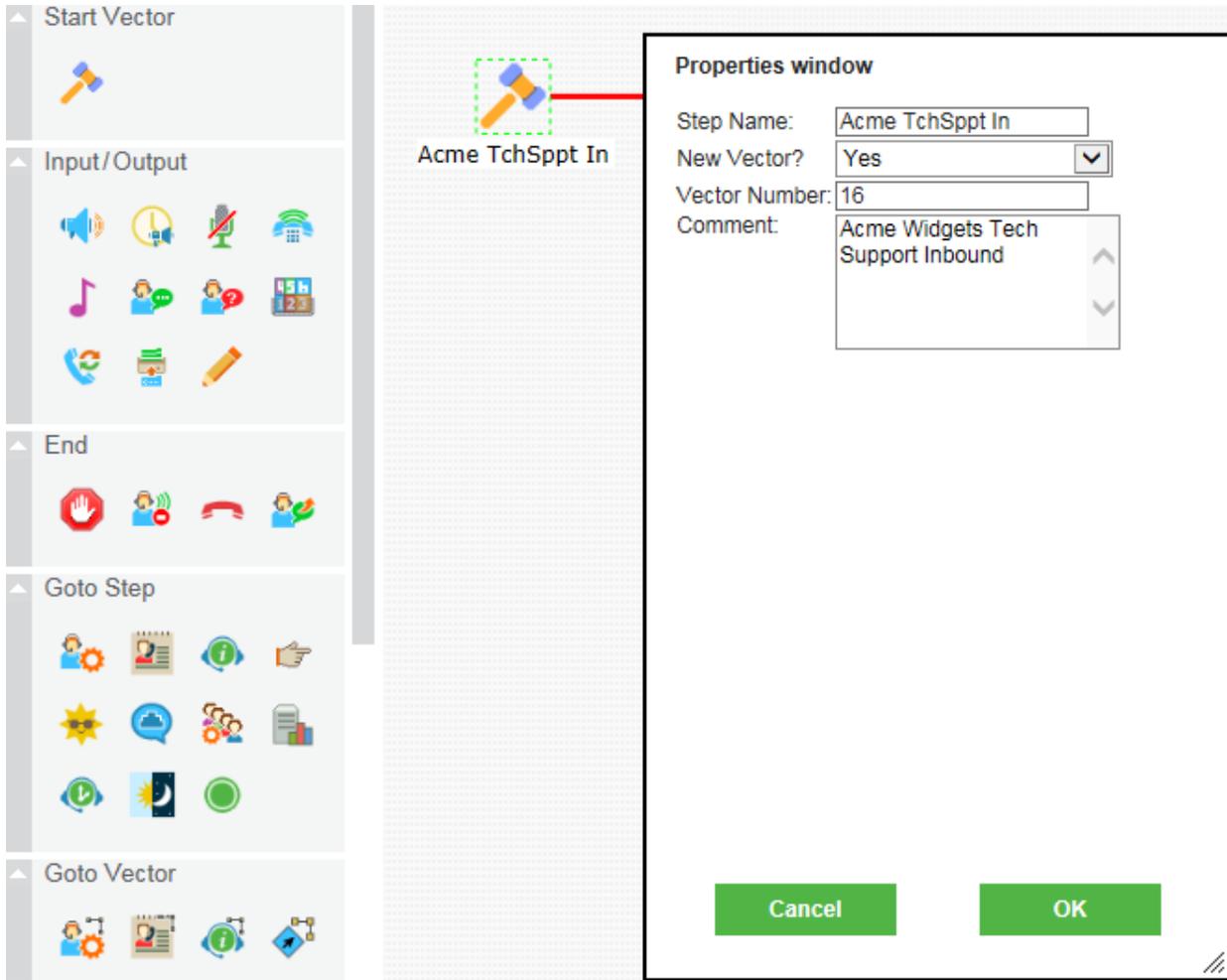
**Figure 18: ACM R7.1.101 Conversation Sphere – Save Confirmation**

Click “Ok” to start configuring the vector.

ACM Conversation Step Definitions:

1. ACM “Start vector” Icon

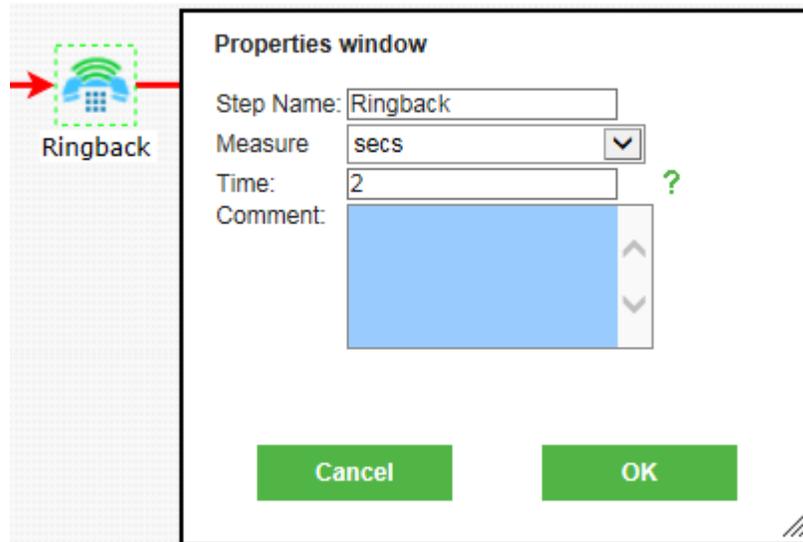
This step symbolizes the name and number of the vector in Avaya Aura® Call Center Elite. The Step also describes whether the vector is “New” or “Existing” in Avaya Aura® Call Center Elite. A Vector Comment can be added, however it will only be saved to the Avaya Control Manager database and not Avaya Aura® Call Center Elite.



**Figure 19: ACM R7.1.101 Conversation Sphere – “Start Vector” Step**

2. “wait-time 2 secs hearing ringback”

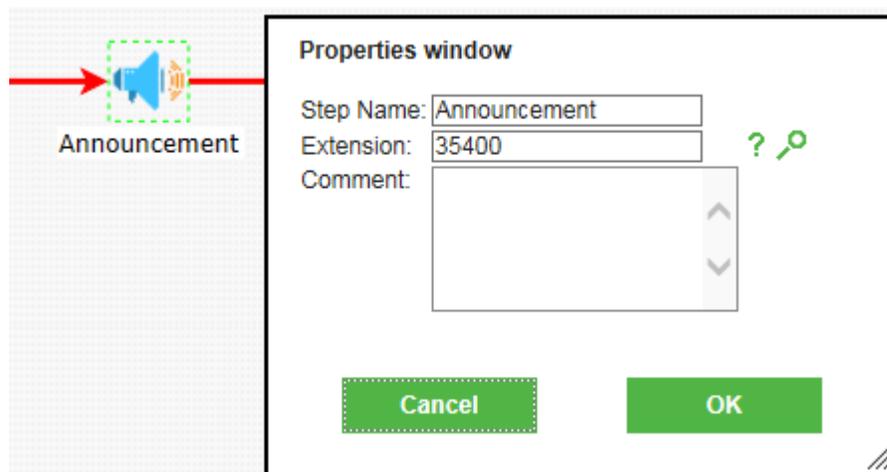
This step insures that the switch provides answer supervision to the telco provider when it executes the first step of call processing. It is good practice to include this step at the beginning of each vector that will be the first contact point of routed inbound calls.



**Figure 20: ACM R7.1.101 Conversation Sphere – “Wait Ringback” Step**

3. “announcement 35400”

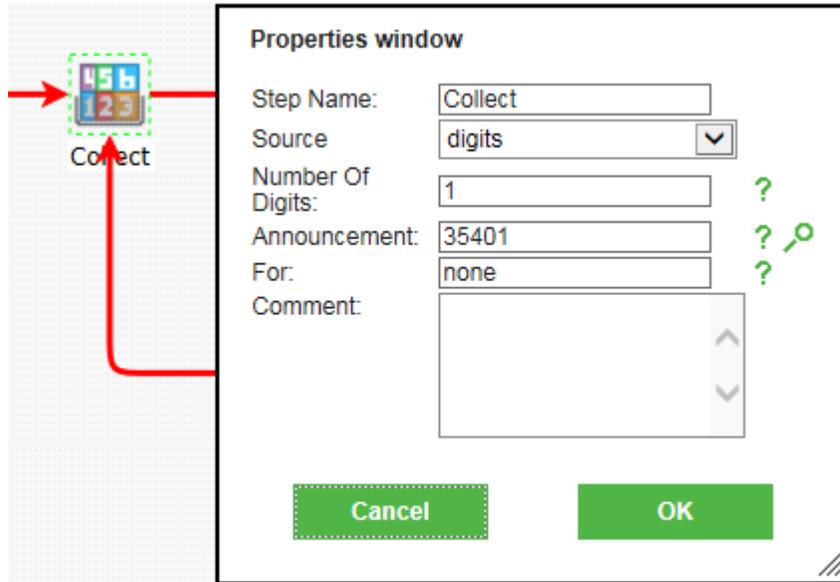
This announcement greets customers.



**Figure 21: ACM R7.1.101 Conversation Sphere – “Announcement” Step**

4. “collect 1 digits after announcement 35401”

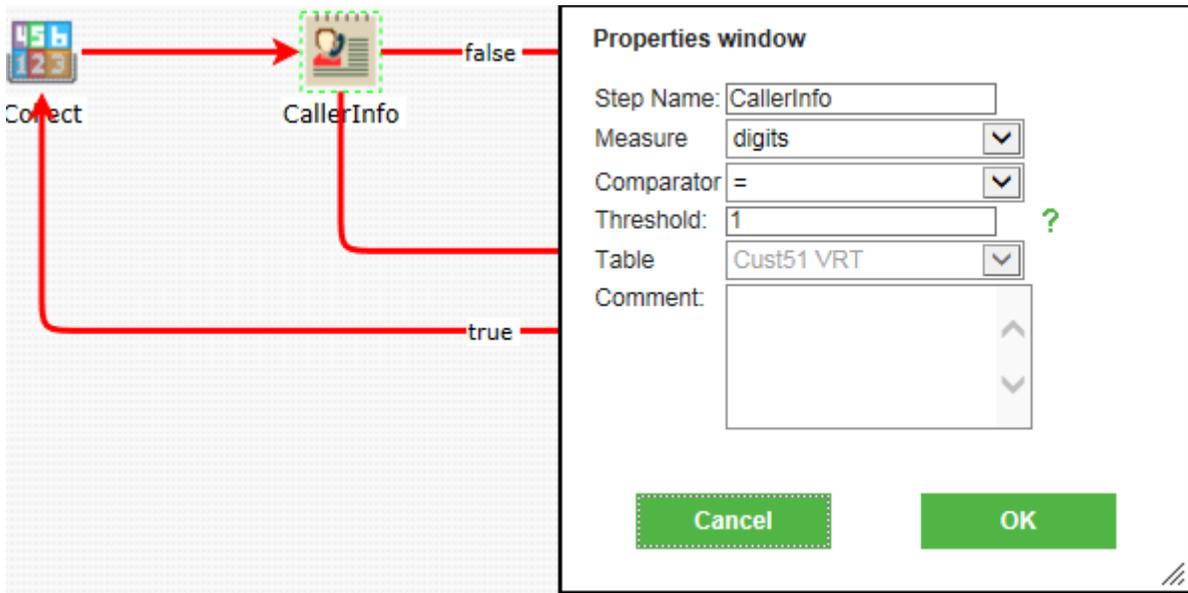
This is a “prompt and collect” step. It uses announcement 35401 to ask customers what their need is. It then stores the digits in a “digits” variable for testing to follow.



**Figure 22: ACM R7.1.101 Conversation Sphere – “Collect Digits” Step**

5. “goto step 8 (CM vector step 7) if digits = 1, otherwise go to next step”

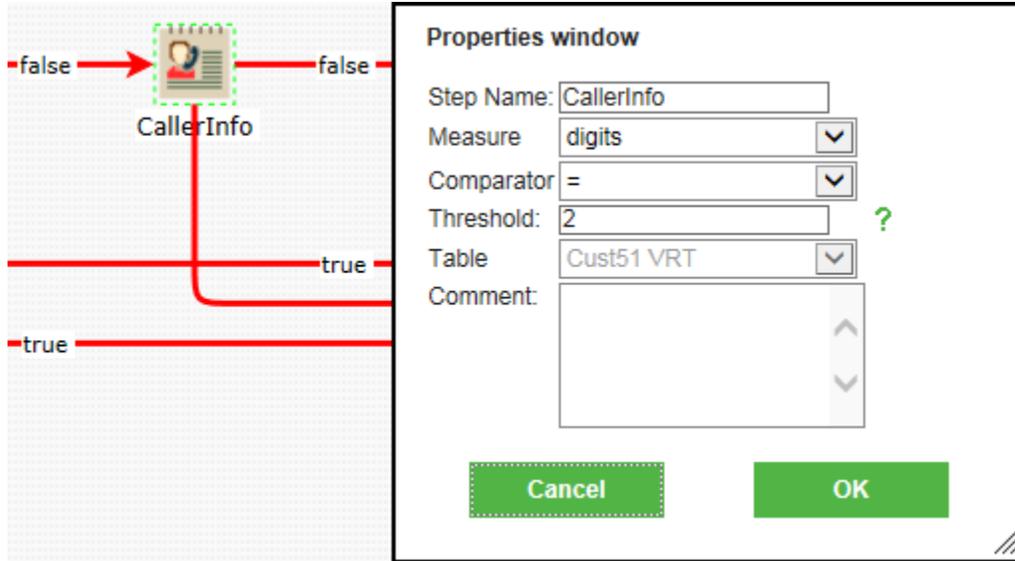
This step tests the value of the digits variable, which was populated in step 4. If the value is empty, the customer will “fall through” the goto steps to the next step in the vectors, which will queue them by default. The main purpose of this is to service customers who are not utilizing a touch-tone telephone. For Acme Widgets, this step will result in a route-to step that points to their General Tech Support queue VDN (35173).



**Figure 23: ACM R7.1.101 Conversation Sphere – “Goto” Step If Digits = 1**

- “goto step 10 (CM Vector step 9) if digits = 2, otherwise go to next step”

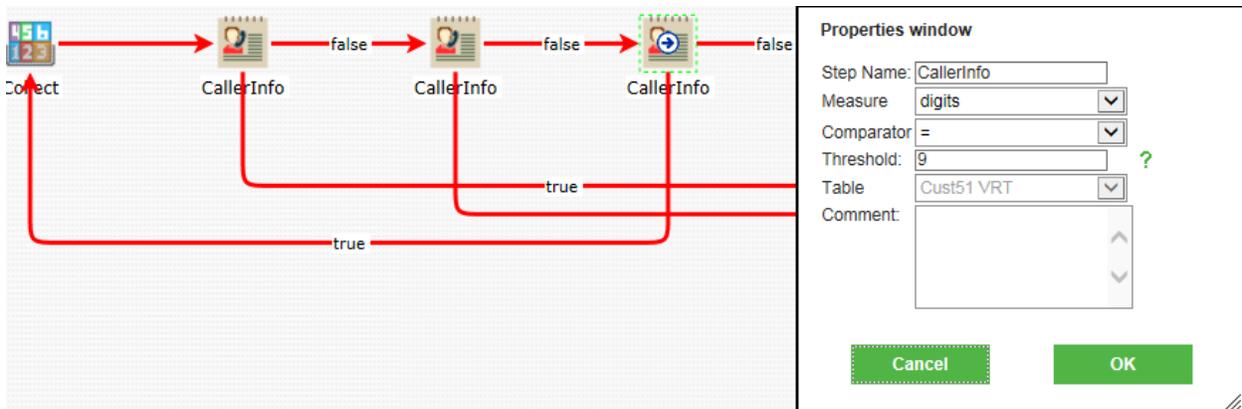
This step acts the same as step 5, except it will point to the route-to step for Acme’s System Outage queue VDN (35174).



**Figure 24: ACM R7.1.101 Conversation Sphere – “Goto” Step If Digits = 2**

- “goto step 4 (CM Vector step 3) if digits = 9, otherwise go to next step”

This step allows callers to repeat the menu choices. It points them back to the “collect” step for re-prompting.



**Figure 25: ACM R7.1.101 Conversation Sphere – “Goto” Step If Digits = 9**

8. “route-to number 35173 with cov n if unconditionally”

This segments routing among different queues with VDNs. Rather than queuing directly in this vector, this step routes callers to another VDN, which subsequently queues them. This enables features to be manipulated by call type. The administrator can change hold music, change whisper announcements, set different SLA (Service Level Agreements) for each call type, etc. It also provides the previously mentioned reporting flexibility to view callers by VDN.

For Acme Widgets, this vector step will transfer callers to the General Tech Support queue.

**Note:** This step also provides coverage for callers with rotary phones who cannot enter a choice with touch-tone. It utilizes the Prompting Timeout feature to determine if the caller has not entered digits. When the timeout threshold has passed, the next vector step is followed. In this case, callers would fall through to this step and automatically be routed to the General Support Queue.

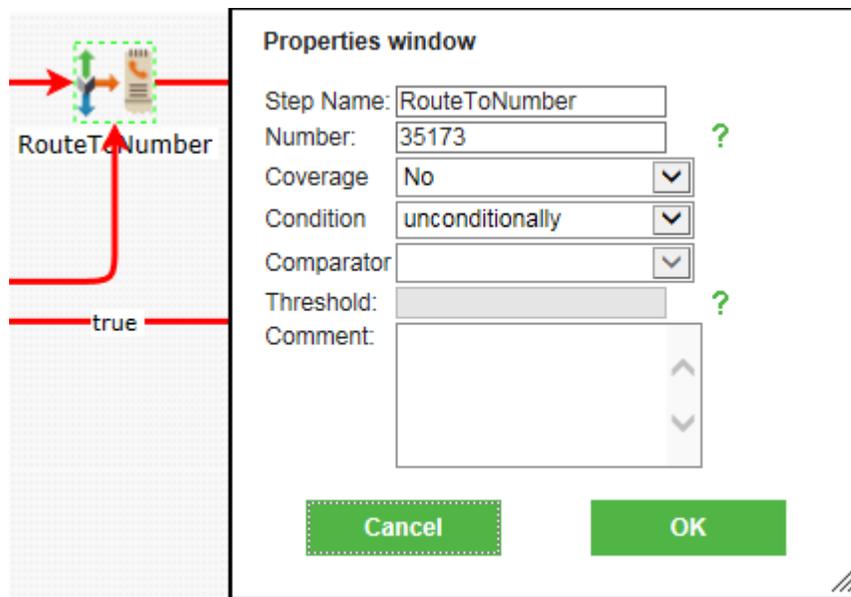


Figure 26: ACM R7.1.101 Conversation Sphere – “RouteToNumber” Step – VDN 35173

9. “stop”

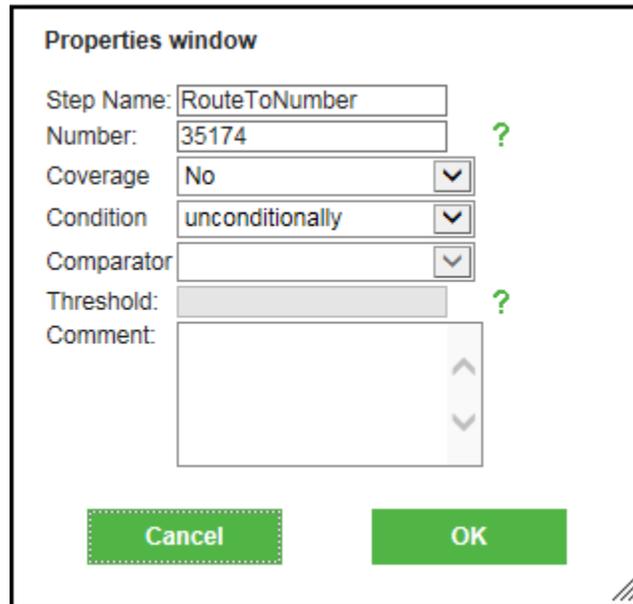
The stop step is used in this case to “segment” callers within the vector. This way the call cannot fall through to incorrect options or steps. It breaks up the routing within the vector and makes it easier to view as well.



**Figure 27: ACM R7.1.101 Conversation Sphere – “Stop” Step**

10. “route-to” number 35174 with cov n if unconditionally”

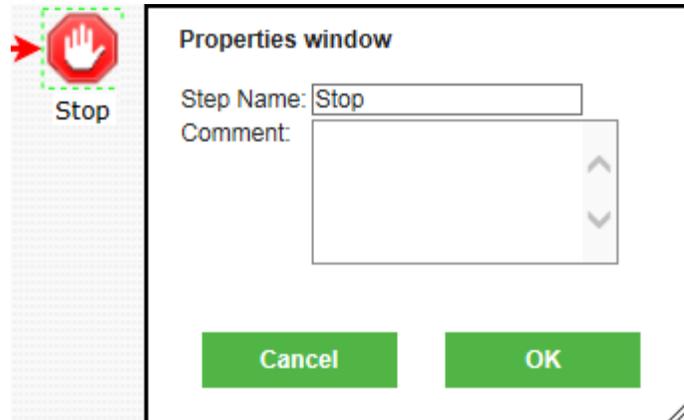
This step will transfer callers to the System Outage queue.



**Figure 28: ACM R7.1.101 Conversation Sphere – “RouteToNumber” Step – VDN 35174**

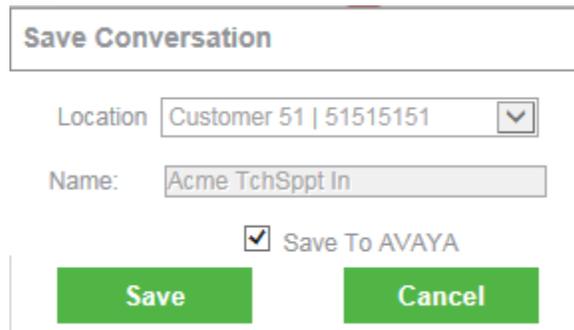
11. “stop”

This step will complete the vector processing.



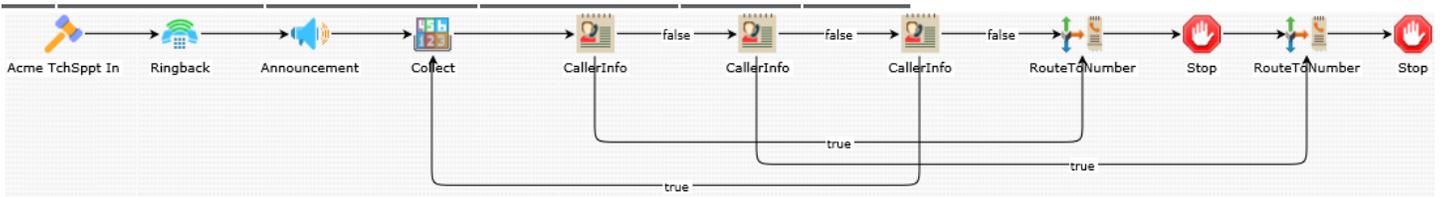
**Figure 29: ACM R7.1.101 Conversation Sphere – Final “Stop” Step**

Click the Save  icon. The following screen will appear. Select “Save to AVAYA” and click “Save”. A successful message should be displayed.



**Figure 30: ACM R7.1.101 Conversation Sphere – “Save” Conversation**

**Figure 31** shows a screenshot of the finished vector in the ACM Conversation Sphere application.



**Figure 31: ACM R7.1.101 Conversation Sphere – Conversation “Acme TchSppt In”**

For reference, **Figure 32** shows the vectors steps that are configured in Avaya Aura® Communication Manager when saved from Avaya Control Manager Conversational Sphere.

```

display vector 16                                     Page 1 of 6
                                CALL VECTOR

Number: 16                      Name: Acme TchSppt In
Multimedia? n                   Attendant Vectoring? n   Meet-me Conf? n           Lock? n
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                       3.0 Enhanced? y

01 wait-time      2   secs hearing ringback
02 announcement  35400
03 collect        1   digits after announcement 35401   for none
04 goto step      7           if digits           =       1
05 goto step      9           if digits           =       2
06 goto step      3           if digits           =       9
07 route-to      number 35173           with cov n if unconditionally
08 stop
09 route-to      number 35174           with cov n if unconditionally
10 stop
11

```

**Figure 32: CM Vector 16 - Acme Widgets Tech Support Inbound vector**

Next, configure the ACM Conversation for the Acme General Tech Support queue (Acme Gen TchSppt, vector 17).

The following ACM Conversation step definitions are relevant for this scenario and need to be defined. For brevity, a screenshot of each step will not be shown. Instead, a screenshot of the steps that have not previously been shown in the previous conversation will be shown.

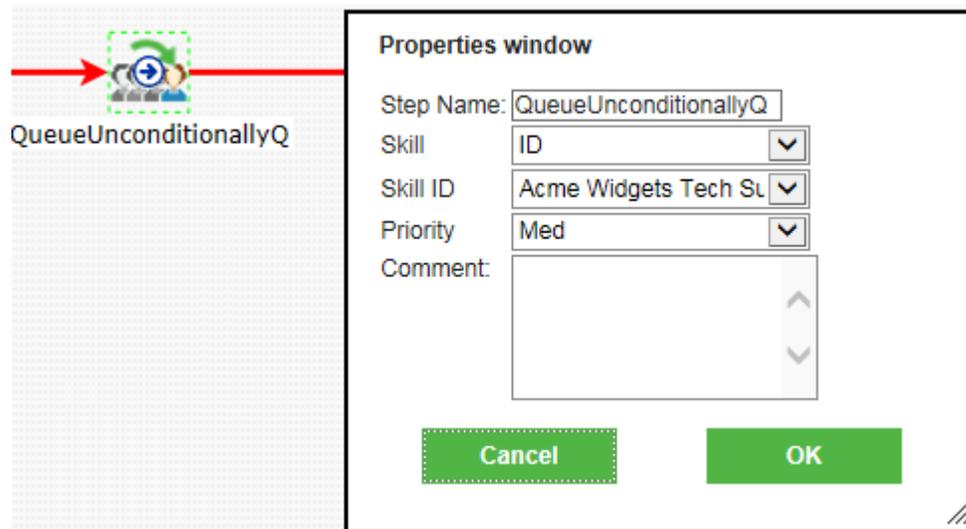
## ACM Conversation Step Definitions:

### 1. ACM “Start vector” Icon

This step symbolizes the name and number of the vector in Avaya Aura® Call Center Elite. The Step also describes whether the vector is “New” or “Existing” in Avaya Aura® Call Center Elite. A Vector Comment can be added, however it will only be saved to the Avaya Control Manager database and not Avaya Aura® Call Center Elite.

### 2. “queue-to skill 11 pri m”

This step is the queuing step. It queues callers for skill 11 “Acme Widgets Tech Support” with a priority of “Med” for medium. If an agent is available, then the call is routed to the available agent immediately.



**Figure 33: ACM R7.1.101 Conversation Sphere – “QueueUnconditionallyQ” Step**

### 3. “announcement 35402”

This announcement notifies callers that all agents are busy and asks them to hold.

4. “wait-time 60 secs hearing music”

This holds callers for 60 seconds while hearing music from a defined source in the system.

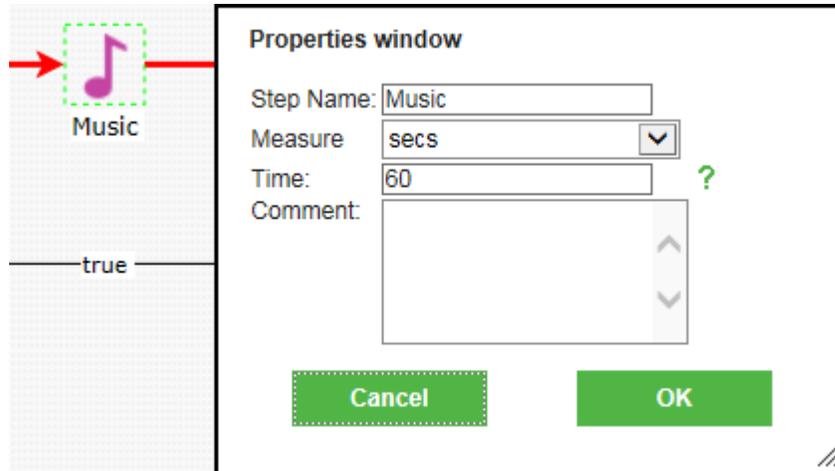


Figure 34: ACM R7.1.101 Conversation Sphere – Wait Step Using Music

5. “goto step 3 if unconditionally”

Callers are pointed back to the announcement step. This lets callers know that they have not been forgotten and agents are still busy. Note that steps 3 through 5 create an infinite loop. The result is that callers will be played the announcement every 60 seconds followed by music until their call is answered or they hang up.

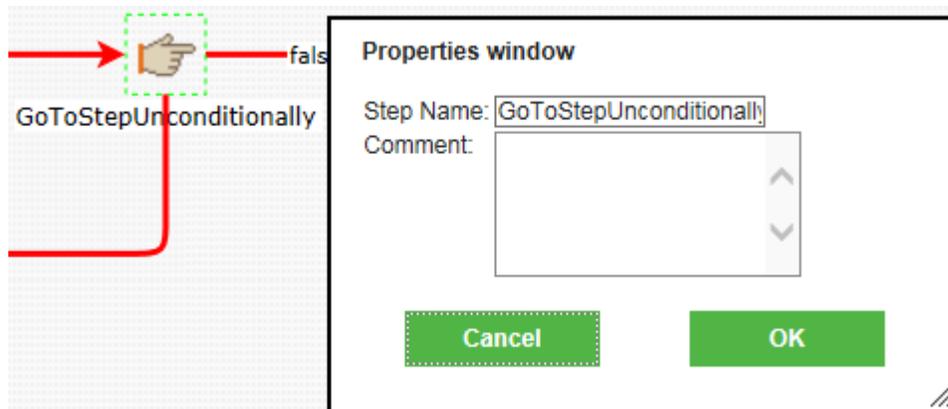


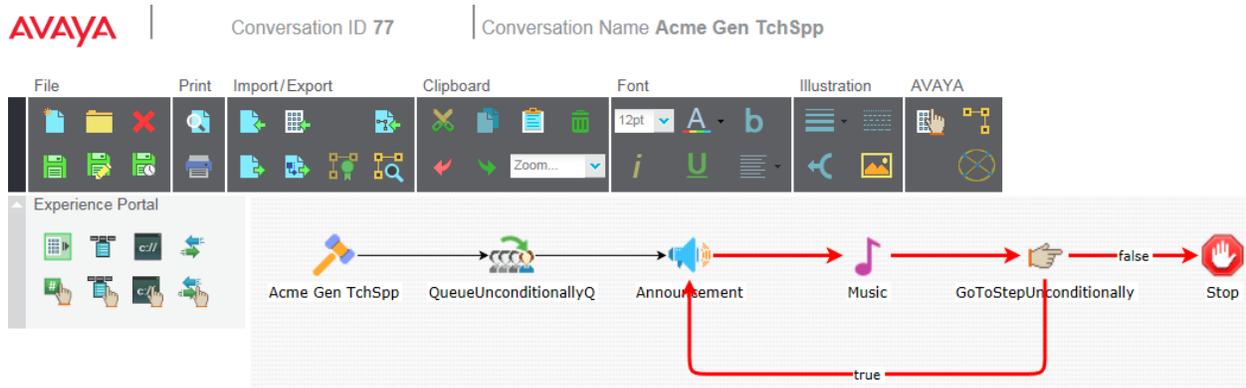
Figure 35: ACM R7.1.101 Conversation Sphere – GoToStepUnconditionally Step

6. “stop”

Again, this step completes vector processing.

Save the ACM Conversation when done and select the “Save to AVAYA” flag.

**Figure 36** shows a screenshot of the finished vector in the ACM Conversation Sphere application.



**Figure 36: ACM R7.1.101 Conversation Sphere – Conversation “Acme Gen TchSpt”**

For reference, **Figure 37** shows the vectors steps that are configured in Avaya Aura® Communication Manager when saved from Avaya Control Manager Conversational Sphere.

```

display vector 17                                     Page 1 of 6
                                CALL VECTOR

    Number: 17                               Name: Acme Gen TchSpp
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? n      Lock? n
  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      3.0 Enhanced? y
01 queue-to      skill 11      pri m
02 announcement  35402
03 wait-time     60      secs hearing music
04 goto step     2              if unconditionally
05 stop
06
  
```

**Figure 37: CM Vector 17 - Acme Widgets General Tech Support queue vector.**

Next, configure the ACM Conversation for the Acme System Outage queue (Acme Sys Outage, vector 18).

The following ACM Conversation step definitions are relevant for this scenario and need to be defined. For brevity, a screenshot of each step will not be shown as they have been covered in previous ACM Conversations.

#### ACM Conversation Step Definitions:

1. ACM “Start vector” Icon

This step symbolizes the name and number of the vector in Avaya Aura® Call Center Elite. The Step also describes whether the vector is “New” or “Existing” in Avaya Aura® Call Center Elite. A Vector Comment can be added, however it will only be saved to the Avaya Control Manager database and not Avaya Aura® Call Center Elite.

2. “queue-to skill 12 pri m”

This step is the queuing step. It queues callers for skill 12 with a priority “m” for medium. If an agent is available, then the call is routed to the available agent immediately. The agent hears whisper announcement

3. “announcement 35402”

This announcement notifies callers that all agents are busy and asks them to hold.

4. “wait-time 60 secs hearing music”

This holds callers for 60 seconds while hearing music from a defined source in the system.

5. “goto step 3 (CM vector step 2) if unconditionally”

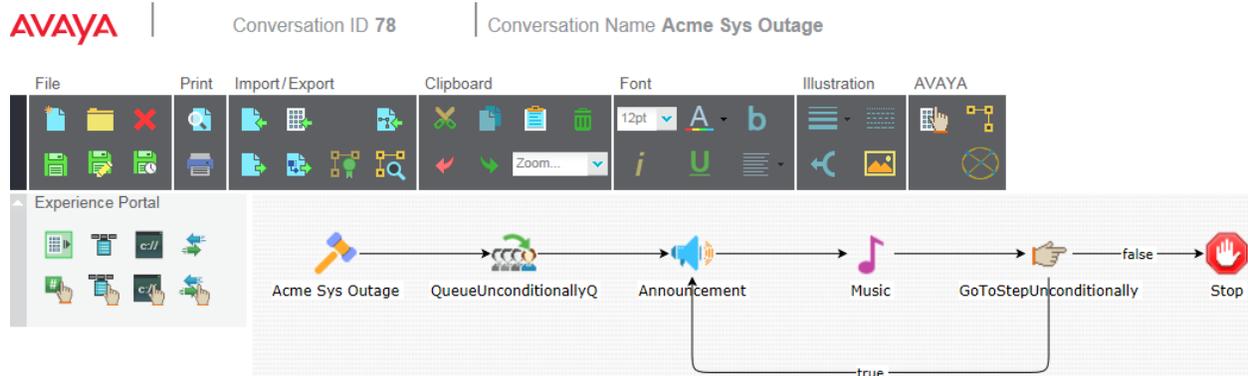
Again, an infinite routing loop is used to play the hold announcement followed by music until the call is answered or the caller hangs up.

6. “stop”

This step ends the vector processing.

Save the ACM Conversation when done and select the “Save to AVAYA” flag.

**Figure 38** shows a screenshot of the finished vector in the ACM Conversation Sphere application.



**Figure 38: ACM R7.1.101 Conversation Sphere – Conversation “Acme Sys Outage”**

For reference, **Figure 39** shows the vectors steps that are configured in Avaya Aura® Communication Manager when saved from Avaya Control Manager Conversational Sphere.

```

display vector 18                                     Page 1 of 6
                                           CALL VECTOR

Number: 18                      Name: Acme Sys Outage
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? n      Lock? n
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      3.0 Enhanced? y
01 queue-to      skill 12      pri m
02 announcement  35402
03 wait-time    60      secs hearing music
04 goto step    2              if unconditionally
05 stop
06

```

**Figure 39: CM Vector 18 - Acme Widgets System Outage Queue Vector.**

## 4.5. Voicemail Transfer

If Acme Widgets elects to extend additional options to their customers while the contact center is closed, they may wish to add a voicemail feature. This requires Avaya Aura® Messaging.

If there were an available voicemail system, the dialable extension of the voicemail box would be needed. This extension would be the target of a “route-to” step for after hours conditions. The greeting of the voicemail box would typically inform callers of the center’s closed state and offer them messaging options.

## 4.6. Vector Directory Numbers (VDNs)

The VDN is the first routing point of contact for an inbound number on the cloud ACD application. VDNs can also be dialed from the vector associated with the main VDN, therefore allowing each VDN to have its own unique attributes (e.g. whisper announcement) and reports.

The following VDNs were configured for the fictitious company “Acme Widgets”:

- Acme Widgets Tech Support Inbound, ext. 35172
- Acme Widgets General Tech Support, ext. 35173
- Acme Widgets System Outage, ext. 35174

The first VDN will be the one assigned to the toll free number’s DNIS digits. The second and third are assigned to vectors that queue to the configured skill groups.

Before adding the inbound toll free VDN, the number assigned as the DNIS for the toll free number must be known. The service provider translates the toll free number to DNIS digits before passing the DNIS digits to the switch trunks at the receiving end. Avaya Communication Manager associates the DNIS digits with its defined VDNs to determine the first routing point. The new DNIS digits should be unused by the customer dial plan so they may be associated with the new VDN. If the digits used by the DNIS are NOT free in the dial plan for the cloud solution, negotiate a new set of digits to be sent by the telco provider.

Begin by logging into Avaya Control Manager (ACM) and navigate to the Avaya → VDN tab and create the VDN for the tenant.

The following parameters need to be defined in the VDN. See **Figure 40** for reference in completing this step.

- **Location:** Select the appropriate ACM Customer Location.
- **Number:** Enter an unused VDN number. The VDN number will be the dialable extension of the VDN.
- **Name (English):** Use a descriptive name for this routing point. Usually the toll free number itself will be noted here. Use a name like “Acme18005551212”. This field is limited to 20 characters.
- **Vector Name:** Select the vector number to associate with this VDN.
- **Description:** Enter an optional description for the VDN (e.g. Acme Widgets 1-800-555-1212)
- **VDN Template:** Select a VDN template

Click the “save” icon at the top right of the screen to save the VDN to Avaya Aura® Communication Manager.

VDN

VDN

Location \* Customer 51 | 51515151

Number \* 35172

Name (English) \* Acme18005551212

Vector Name \* #16 - Acme TchSppt In

Description Acme Widgets 1-800-555-1212

VDN TEMPLATE \* VDN\_CM6

Also save to CMS  Export to external system(s)

**Figure 40: Acme Widgets Tech Support Inbound VDN – Part 1**

If the selected VDN template does not include all the desired predefined VDN attributes, select the “VDN options” menu option to bring up the VDN configuration details within Avaya Control Manager. The following screen shows the configured attributes. Make sure the following parameter is defined for our sample application.

- **Allow VDN Override:** Set this field to **y**. This will allow subsequent “queuing” VDNs to override original VDNs, such as the primary Inbound, so that the subsequent VDNs may play whisper announcements.
- **Destination:** Verify the vector number to associate with this VDN is correct.
- **VDN of Origin Annc Ext:** This field will only be used in the “Acme Widgets System Outage” VDN. Enter the extension number of the Whisper Announcement, ext.35403, created previously in the announcements section. This is how the Whisper Announcement is activated.
- **Measured:** both (This option allows CMS to collect VDN measurements.)

VDN

VDN

Extension	35172	
Name	<input type="text" value="Acme18005551212"/>	
Destination	Vector Number <input type="button" value="v"/>	16
Attendant Vectoring	No <input type="button" value="v"/>	
Meet me Conferencing	No <input type="button" value="v"/>	
Allow VDN Override	Yes <input type="button" value="v"/>	
COR	<input type="text" value="1"/>	
TN:	<input type="text" value="1"/>	
Measured	Both <input type="button" value="v"/>	
Acceptable Service Level	<input type="text" value="20"/>	
VDN of Origin Annc Ext	<input type="text"/>	
Skill 1	<input type="button" value="v"/>	
Skill 2	<input type="button" value="v"/>	
Skill 3	<input type="button" value="v"/>	

FOLLOWS VDN OVERRIDE RULES

AUDIX Name	<input type="text"/>	
Return Destination	<input type="text"/>	
VDN Timed ACW Interval	<input type="text"/>	
BSR Application	<input type="text"/>	
BSR Available Agent Strategy	<input type="text" value="1st-found"/>	
BSR Tie Strategy	System <input type="button" value="v"/>	
Delay PSTN connect message	<input type="button" value="v"/>	
Observe on Agent Answer	No <input type="button" value="v"/>	
Delay PSTN connect message on agent answer	<input type="button" value="v"/>	
Send VDN as Called Ringing Name Over QSIG?	No <input type="button" value="v"/>	
Display VDN for Route To DAC	No <input type="button" value="v"/>	
VDN Override for IDSN Trunk ASAI Msgs	No <input type="button" value="v"/>	
BSR Local Treatment	No <input type="button" value="v"/>	
Reporting for PC or POM calls	No <input type="button" value="v"/>	
Pass Prefixed CPN to VDN/Vector	System <input type="button" value="v"/>	

**Figure 41: Acme Widgets Tech Support Inbound VDN – Part 2**

Save the VDN record.

**Note:** The following options must be enabled in Avaya Aura® Call Center Elite to allow the VDN whisper announcement to play.

- **VDN of Origin Announcement:** Field is set to “y” on page 8 of the **system-parameters customer-options** screens under “Call Center Optional Features.”
- **Hear VDN of Origin Annc.?:** Field is set to “y” in the COR (Class of Restriction) record of the agent station.

Follow similar procedures for the queuing VDNs. These VDNs need not be in succession to the VDN associated with the toll free number. Normally, a “block” of VDN numbers is reserved to assign to DNIS digits from the carrier. **Figures 42** and **43** show the following queuing VDNs:

- Acme Widgets General Tech Support, ext. 35173
- Acme Widgets System Outage, ext. 35174

VDN

Extension	35173	
Name	<input type="text" value="Acme18005551213"/>	
Destination	<input type="text" value="Vector Number"/> <span style="float: right; border: 1px solid black; padding: 2px;">17</span>	<input type="button" value="v"/>
Attendant Vectoring	<input type="text" value="No"/> <input type="button" value="v"/>	
Meet me Conferencing	<input type="text" value="No"/> <input type="button" value="v"/>	
Allow VDN Override	<input type="text" value="Yes"/> <input type="button" value="v"/>	
COR	<input type="text" value="1"/>	
TN:	<input type="text" value="1"/>	
Measured	<input type="text" value="Both"/> <input type="button" value="v"/>	
Acceptable Service Level	<input type="text" value="20"/>	
VDN of Origin Annc Ext	<input type="text"/>	
Skill 1	<input type="text"/> <input type="button" value="v"/>	
Skill 2	<input type="text"/> <input type="button" value="v"/>	
Skill 3	<input type="text"/> <input type="button" value="v"/>	

FOLLOWS VDN OVERRIDE RULES

AUDIX Name	<input type="text"/>	
Return Destination	<input type="text"/>	
VDN Timed ACW Interval	<input type="text"/>	
BSR Application	<input type="text"/>	
BSR Available Agent Strategy	<input type="text" value="1st-found"/>	
BSR Tie Strategy	<input type="text" value="System"/> <input type="button" value="v"/>	
Delay PSTN connect message	<input type="text"/> <input type="button" value="v"/>	
Observe on Agent Answer	<input type="text" value="No"/> <input type="button" value="v"/>	
Delay PSTN connect message on agent answer	<input type="text"/> <input type="button" value="v"/>	
Send VDN as Called Ringing Name Over QSIG?	<input type="text" value="No"/> <input type="button" value="v"/>	
Display VDN for Route To DAC	<input type="text" value="No"/> <input type="button" value="v"/>	
VDN Override for IDSN Trunk ASAI Msgs	<input type="text" value="No"/> <input type="button" value="v"/>	
BSR Local Treatment	<input type="text" value="No"/> <input type="button" value="v"/>	
Reporting for PC or POM calls	<input type="text" value="No"/> <input type="button" value="v"/>	
Pass Prefixed CPN to VDN/Vector	<input type="text" value="System"/> <input type="button" value="v"/>	

**Figure 42: Acme Widgets General Tech Support VDN**

VDN

Extension	35174	
Name	<input type="text" value="Acme18005551214"/>	
Destination	Vector Number	18
Attendant Vectoring	<input type="text" value="No"/>	
Meet me Conferencing	<input type="text" value="No"/>	
Allow VDN Override	<input type="text" value="Yes"/>	
COR	<input type="text" value="1"/>	
TN:	<input type="text" value="1"/>	
Measured	<input type="text" value="Both"/>	
Acceptable Service Level	<input type="text" value="20"/>	
VDN of Origin Annc Ext	<input type="text" value="35403"/>	
Skill 1	<input type="text"/>	
Skill 2	<input type="text"/>	
Skill 3	<input type="text"/>	

FOLLOWS VDN OVERRIDE RULES

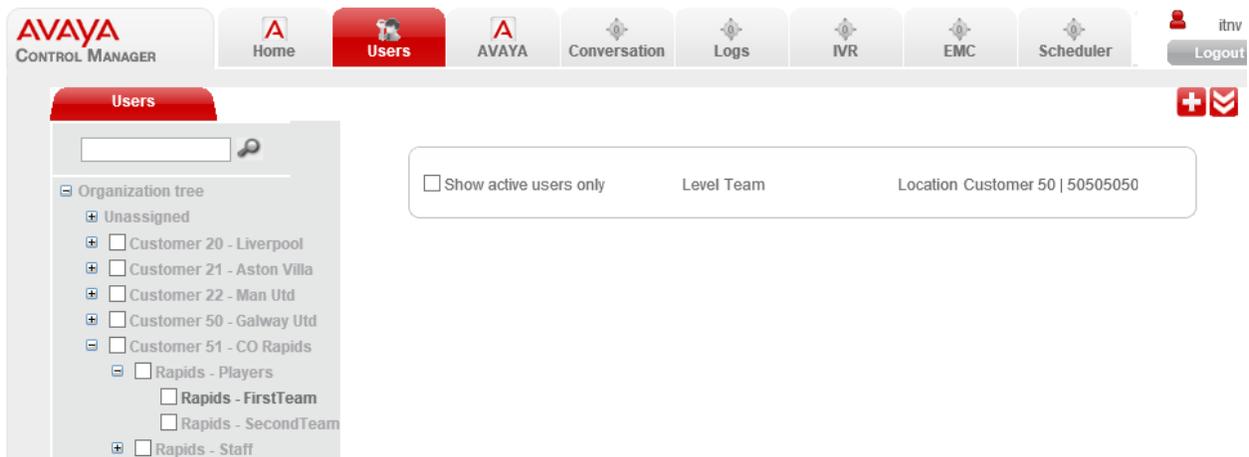
AUDIX Name	<input type="text"/>	
Return Destination	<input type="text"/>	
VDN Timed ACW Interval	<input type="text"/>	
BSR Application	<input type="text"/>	
BSR Available Agent Strategy	<input type="text" value="1st-found"/>	
BSR Tie Strategy	<input type="text" value="System"/>	
Delay PSTN connect message	<input type="text"/>	
Observe on Agent Answer	<input type="text" value="No"/>	
Delay PSTN connect message on agent answer	<input type="text"/>	
Send VDN as Called Ringing Name Over QSIG?	<input type="text" value="No"/>	
Display VDN for Route To DAC	<input type="text" value="No"/>	
VDN Override for IDSN Trunk ASAI Msgs	<input type="text" value="No"/>	
BSR Local Treatment	<input type="text" value="No"/>	
Reporting for PC or POM calls	<input type="text" value="No"/>	
Pass Prefixed CPN to VDN/Vector	<input type="text" value="System"/>	

**Figure 43: Acme Widgets System Outage VDN**

## 4.7. Agents

This section illustrates how to create Avaya Aura® Call Center Elite Agent IDs through Avaya Control Manager. The first agent (35300) is configured to take calls for the “Acme Widgets General Tech Support Skill – Skill 11” and the “Acme Widgets System Outage Support Skill – Skill 12” while the second agent (35301) is configured only to take calls from the “Acme Widgets System Outage Support”, Skill 12.

To create the agents, begin by logging into Avaya Control Manager (ACM) and navigate to the Avaya → Users tab. Select the appropriate Customer Organizational Hierarchy.



**Figure 44: ACM Main User Page**

Select the “+” Sign to bring up the ACM New User Page to add a new agent. The following parameters need to be defined in the ACM User Page. See **Figure 45** for reference in completing this step

- **First Name (English):** Enter the Agent’s first name.
- **Surname (English):** Enter the Agent’s surname.
- **Profile:** Select “Agent”
- **Username:** Enter the ACM user name.
- **Password:** Enter the ACM user password. This is not the password used by the agent. The password used by the agent is configured in the Agent ID template.
- **Confirm Password:** Enter the ACM user password again.
- **AVAYA Login:** Enter the Avaya Aura® Call Center Elite Agent ID.
- **Team:** Make sure the right Customer Team is selected.
- **Template:** Select the appropriate Agent template.

The screenshot shows the 'Agent One' user page in a web application. The page has a navigation bar with tabs: 'Users' (selected), 'Permissions', 'Skill', 'Groups to view', 'Skills to view', 'VDNs to view', and 'Vectors to view'. The main content area is titled 'Agent One' and contains a form with the following fields and values:

- First Name (English) \*: Agent
- Surname (English) \*: One
- Profile: Agent (dropdown)
- LDAP Username: (empty)
- Authentication Type: Basic (dropdown)
- Domain: (empty)
- Username: agentone
- Password: (masked with dots)
- Confirm password: (masked with dots)
- Force password reset on next login:
- AVAYA login: 35300
- Team \*: Rapids - FirstTeam (dropdown)
- Template \*: Agent Template Cust51 (dropdown)
- Description: (empty)
- Email: (empty)
- SIP URI: (empty) [SIP Properties]
- Communication Profile Password: (empty)
- Confirm Communication Profile Password: (empty)
- Extension: (empty) [SIP Properties]

On the right side of the form, there is a profile picture placeholder (a grey silhouette) and a 'Browse...' button. Below the placeholder are 'Upload' and 'Remove' buttons.

**Figure 45: ACM Agent User Page**

Click the “” icon on the top right hand side of the ACM screen to save the ACM User details for the agent. The following popup window appears to select the skills for the agent. The agent was configured with Skill Level “11” for the “Acme Widgets Tech Support” skill and Skill Level “12” for the “Acme Widgets System Outages” support skill.

**Figure 46: ACM Agent Skill Assignment**

Click the “” icon on the top right hand side of the ACM Popup window to save the skills for the agent. Click through additional popup confirmation messages to save the agent.

Repeat the steps described above to create the second agent (35301).

## 4.8. Stations

Stations (i.e. telephony extensions) can be configured through Avaya Control Manager as well. Three telephone stations are configured for the purpose of testing the application. One will be used to generate customer calls and the other two will act as agents in the skill groups created.

To create the stations, begin by logging into Avaya Control Manager (ACM), navigate to the Avaya → Users tab and select the appropriate Customer Organizational Hierarchy. The ACM page shown previously in **Figure 44** is displayed.

Select the “+” Sign to bring up the ACM New User Page to add a new station. The following parameters need to be defined in the ACM User Page. See **Figure 47** for reference in completing this step

- **First Name (English):** Enter the station’s first name.
- **Surname (English):** Enter the station’s surname.
- **Profile:** Select the station profile.
- **Username:** Enter the ACM user name.
- **Password:** Enter the ACM user password.
- **Confirm Password:** Enter the ACM user password again.
- **Team:** Make sure the right Customer Team is selected.
- **Template:** Default
- **SIP URI:** Enter the SIP URI for the user
- **Communication Profile Password:** Enter the Communication Profile password
- **Confirm Communication Profile Password:** Enter the Communication Profile password again
- **Extension:** Select the extension assigned to the user

The screenshot shows the Avaya Control Manager interface for editing a user. The user's name is Yogi Berra. The form includes fields for personal information, authentication settings, and communication details. A 'SIP Properties' button is visible next to the SIP URI field, and 'Upload' and 'Remove' buttons are located below the profile picture area.

**Figure 47: ACM Station User Page**

Click the “” icon on the top right hand side of the ACM Popup window to save user details for the station. An “Operation Completed Successfully” popup message is displayed. Click “Ok” to close the window.

Repeat the steps described above to create the remaining stations (35163 and 35164).

## 5. Verification Steps

### 5.1. Pre-Test Checklist

#### Prerequisites

The steps described in Section 4 should have been successfully completed:

#### Equipment

Three telephone sets are needed to thoroughly test the routing. One will be used to generate customer calls and the other two will act as agents in the skill groups created. These telephone sets should all be Avaya Aura® Communication Manager stations.

### 5.2. Testing Procedures

The routing in these Application Notes are broken down into the following components for testing purposes, simplifying troubleshooting:

1. Telco Connectivity
2. General Tech Support Queue
3. System Outage Queue
4. Announcements
5. Routing - Vector Prompting

#### 5.2.1. Telco Connectivity

To minimize call charges for Acme Widgets while testing, verify inbound routing through the PSTN provider, then dial internally for the remainder of the testing procedures. To completely isolate the routing and test the connectivity, dial the toll free number from a phone not residing on Avaya Aura® Communication Manager. If this is not available, simply dial the toll free number using from a phone that has an outside line.

When the number is dialed, the expected treatment should be received. If not, further testing of the programming is in sections to follow. The purpose of this step is to be sure incoming calls are at least receiving routing treatment from Avaya Aura® Communication Manager.

This procedure verifies that the DNIS to VDN association is correct. The following situations may occur when testing:

Symptom	Definition
Fast Busy	This typically suggests improper configuration with the toll free number, either with its setup, the inbound trunks, or DNIS association. Fast busy generally means something is not

	configured or operating properly. Check the switch for circuit pack errors, active LEDs, or alarms. Check the demarc equipment to be sure it is functioning properly. Finally, check the cross-connect from the demarc to the switch and insure connectivity. Verify the line status and DNIS digits for the toll free number from telco.
Slow Busy	A slower busy signal normally implies a line is in use or is a forced busy or denial of service. If a slow busy is heard, this usually means that the switch is providing the busy signal instead of the telco provider. Again, double-check DNIS digits and be sure the VDN matches them.
Ring No Answer (RNA)	Ring no answer generally means the destination resource is not answering the call. This could imply that the announcement or business hours routing is not working.

### 5.2.2. General Tech Support Queue

This section verifies the queue works properly when dialed individually. An agent must be logged in to the General Tech Support queue and in the “auto-in” state. Dial the VDN (35173) of the queue directly. The available agent must be able to answer the call. A whisper tone for this queue is not configured since it is the default queue and the one receiving the most call volume.

### 5.2.3. System Outage Queue

This queue (35174) is tested in the same method as the General Tech Support queue. Be sure to log in an agent for the System Outage queue on a separate phone and configure the agent as “auto-in.” This time, when the agent answers the call, a whisper announcement is heard in the headset / handset prior to being connected with the customer. It will be followed by a short zip tone to notify the agent the voice path is being connected.

### 5.2.4. Announcements

This section verifies all announcements are working correctly:

- Verify a standard greeting is played when calling the VDN associated with the DNIS.
- Verify vector correctly collects digits from a customer upon hearing an announcement prompt.
- Verify a hold announcement is played when there are no agents available
- Verify a VDN of Origin Announcement is played when the customer call is picked up by an agent in the outage queue.

### 5.2.5. Routing

Verify vector prompting to verify all choices are working correctly. Dial the main VDN (35172) and listen for prompting.

- Choose the option for general support first. The call should be routed to the appropriate agent.

- Hang-up, dial again and choose the option for outages. Make sure the proper agent answers.
- Finally hang-up, dial again and then do not choose an option. Test the timeout condition and be sure the call is routed to the general support queue.

## 6. Conclusion

These Application Notes describe the implementation of a basic Avaya Aura® Call Center Elite application for the xCaaS Release 1.3.x cloud solution using Avaya Control Manager Release 7.1.101. The routing is modular and will allow changes or additions to be made.

## 7. Additional References

Document Title
<i>Sample Avaya Shared Blade Server 3000 Automatic Call Distribution Routing in an Enterprise Private VPN Environment - Issue 1.0</i>
Using Avaya Control Manager for Service Providers: <a href="http://support.avaya.com/css/P8/documents/101016927">http://support.avaya.com/css/P8/documents/101016927</a>
Using Avaya Control Manager Conversation Sphere for Service Providers: <a href="http://support.avaya.com/css/P8/documents/101016929">http://support.avaya.com/css/P8/documents/101016929</a>

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