Avaya Solution & Interoperability Test Lab

Application Notes for Pronet Dynamic IVR 1.0 with Avaya Experience Portal 8.0 and Avaya Aura® Contact Center 7.1.2 - Issue 1.1

Abstract

These Application Notes describe the configuration steps for Pronet Dynamic IVR 1.0 to interoperate with Avaya Experience Portal 8.0 and Avaya Aura® Contact Center 7.1.2. Pronet Dynamic IVR is developed using Avaya Orchestration Designer (OD). This application will interact with middleware through Webservices to perform self-services routines and to get required information used for dynamic flow and routing.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1**, as well as observations noted in **Section 2.2** to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for Pronet Dynamic IVR 1.0 to interoperate with Avaya Experience Portal 8.0 and Avaya Aura® Contact Center 7.1.2. This application will interact with middleware through Webservices to perform self-services routines and to get required information used for dynamic flow and routing.

The scope of testing excluded the middleware and any CRM (Customer Relationship Management) applications on client side for self-service transaction. Pronet applications were developed using Avaya Aura® Orchestration Designer (AAOD) and run-on Avaya Experience Portal. The applications point to the Pronet Application Server running in Tomcat on Windows Server 2016.

2. General Test Approach and Test Results

Interoperability testing contained functional tests mentioned in **Section 2.1**. All test cases were performed manually. The general test approach was to validate successful handling of inbound calls to Pronet Dynamic IVR and communicate with Avaya Aura® 8.1, Avaya Experience Portal 8.0 and Avaya Aura® Contact Center 7.1.2. See **Figure 1** for network diagram. The interoperability compliance test included both feature functionality and serviceability tests.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor- supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and the Pronet Dynamic IVR did not include use of any specific encryption features as requested by Pronet.

2.1. Interoperability Compliance Testing

The interoperability compliance test included both feature functionality and serviceability testing. The scope of testing includes the feature functionality testing below:

- Monitoring of inbound calls to IVR.
- Transfer of calls to AACC Control Directory Number (CDN).
- Codec that includes G.711 and G.729.
- Announcement provided on the applications.

2.2. Test Results

The testing was successful. All test cases passed.

2.3. Support

Technical support on Pronet Dynamic IVR can be obtained through the following:
Phone: +92 (21) 582 2401-4
Email: info@pronet-tech.net
Web : https://pronet-tech.net

3. Reference Configuration

Figure 1 illustrates a sample configuration that consists of Avaya products and Pronet's Dynamic IVR.

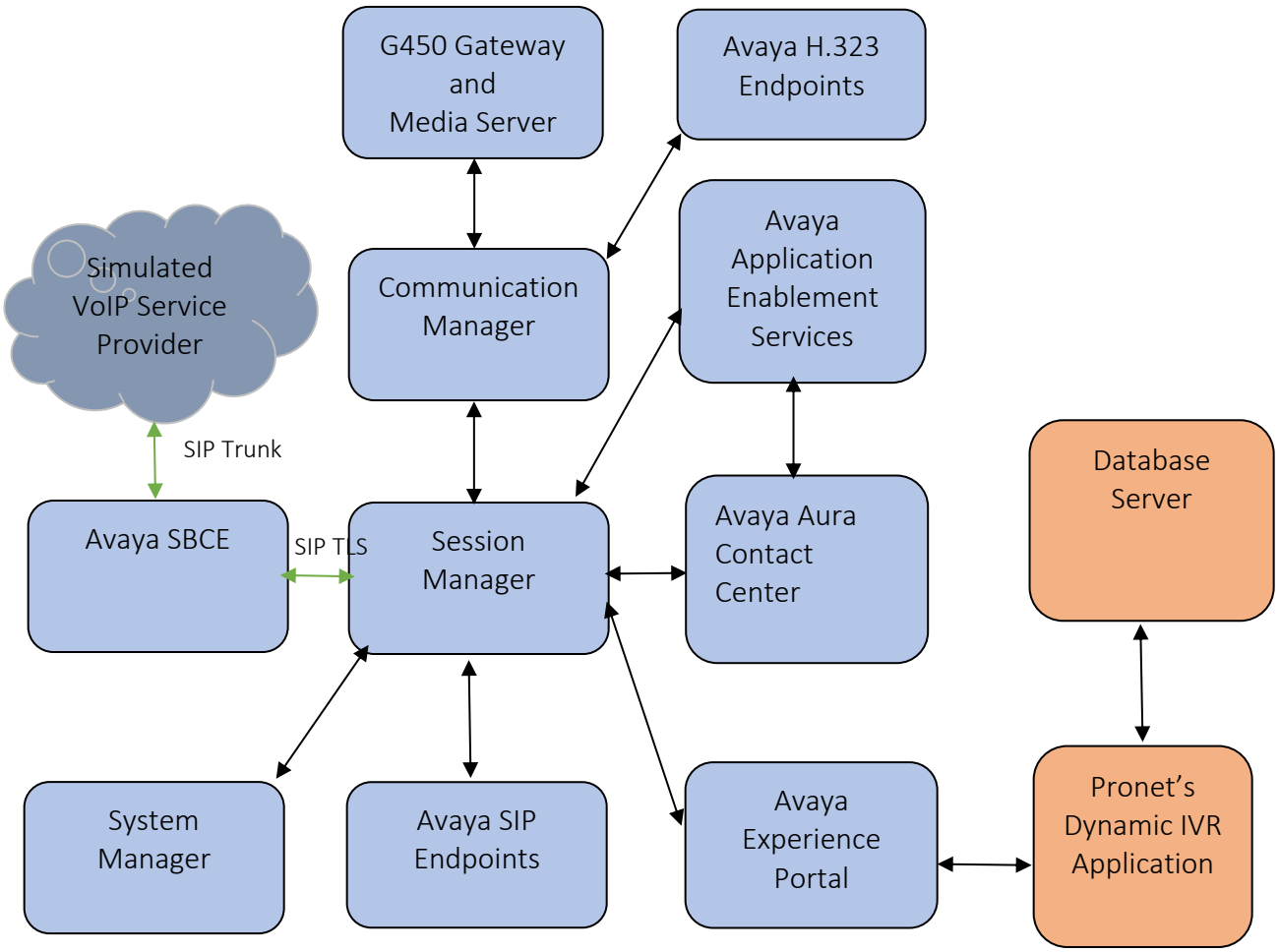


Figure 1: Test Configuration for Pronet's Dynamic IVR and the Avaya Platform

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® System Manager in Virtual Environment	8.1.3.3
Avaya Aura® Session Manager in Virtual Environment	8.1.3.3
Avaya Aura® Communication Manager in Virtual Environment	8.1.3.3
Avaya G450 Media Gateway	41.34.1
Avaya Aura® Media Server in Virtual Environment	8.0 SP2
Avaya Aura® Application Enablement Services in Virtual Environment	8.1.3.3
Avaya Session Border Controller for Enterprise	8.1.3
Avaya Aura Contact Center	7.1.2
Avaya Experience Portal	8.0.0
Avaya Workplace SoftClients on Windows 10	3.22.0
Avaya 9621G & 9641G IP Desk Phone (SIP)	7.1.8
Avaya J159 and J179 SIP Desk Phone	4.0.9
Avaya J139 & J159 IP Desk Phone (H.323)	6.8.5
Pronet Dynamic IVR Application	1.0

5. Configure Avaya Aura® Contact Center

This section shows the steps required to add a new CDN and skill on Avaya Aura® Contact Center associated with an agent. Agent can use agent desktops for handling incoming and outgoing calls. The following sections give step by step instructions on how to add the following.

- Log into Avaya Aura® Contact Center Manager
- CDN (Route Point) Configuration
- Add a Skillset and associate new CDN with this Skillset
- Add Agents and assign new Skillset to Agents

It is implied that a working Avaya Aura® Environment, which includes System Manager, Session Manager, Communication Manager, Media Server, Contact Center, is already in place with the necessary licensing. For all other provisioning information, such as initial installation and configuration, please refer to the product documentation in **Section 10**.

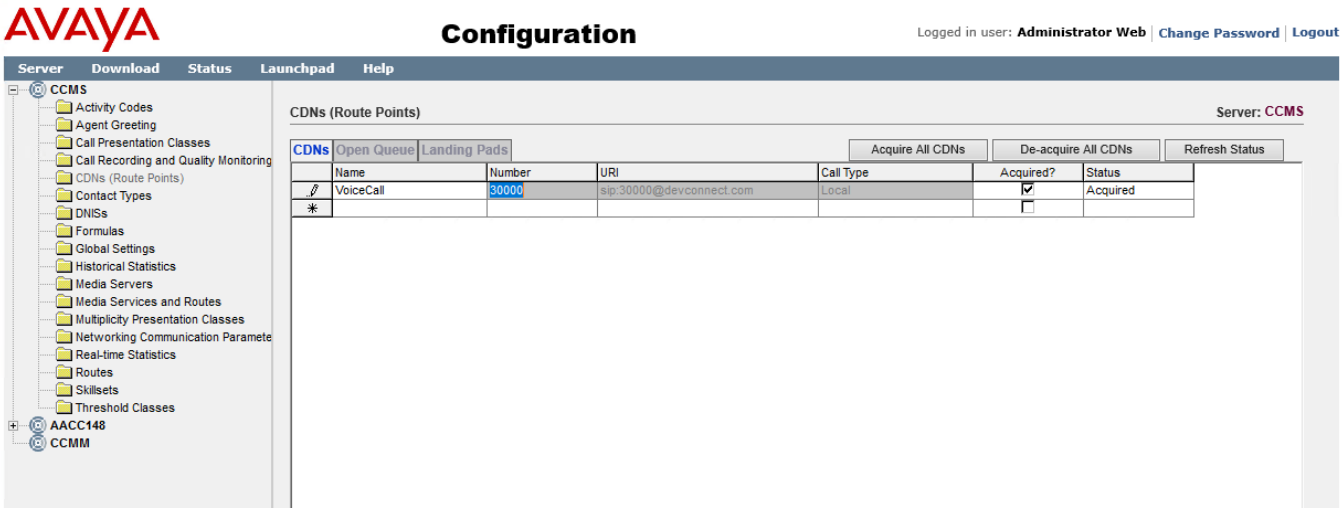
5.1. Log into Avaya Aura® Contact Center Manager

Launch url: http://<IP Address of AACC> and log into the Contact Center Management Administration with administrative credentials. The Contact Center Launch pad is displayed.

5.2. CDN (Route Point) Configuration

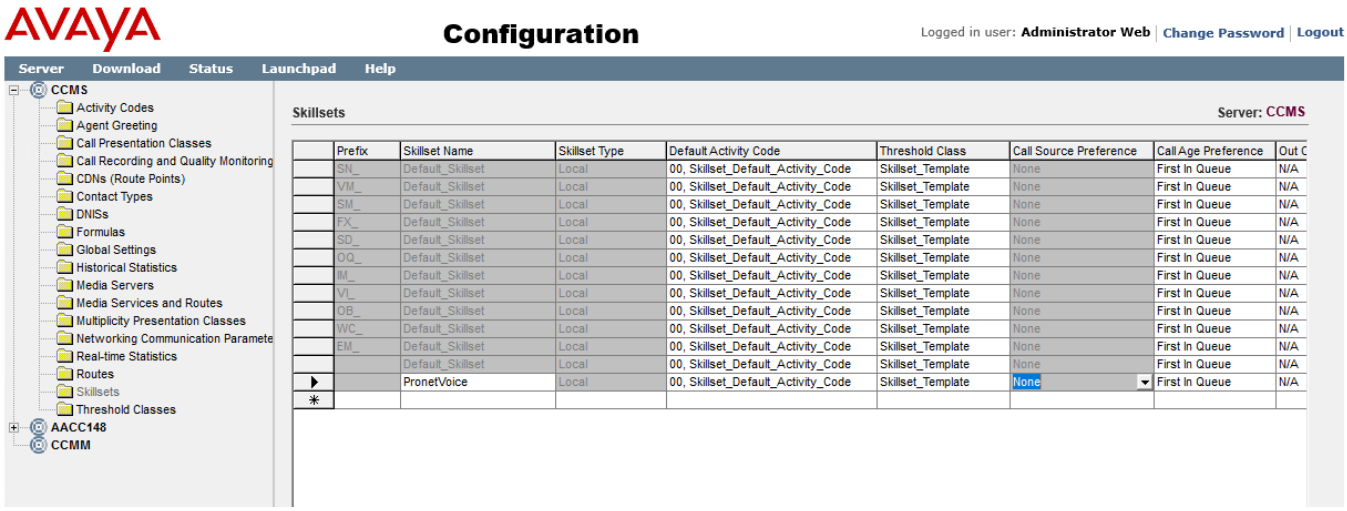
In the Launch pad, click Configuration. In the left pane, click the (+) sign next to the Contact Server manager Name, to which the route point is to be added. Select the CDNs (Route Points) folder. The following highlighted configurations are required on the CDNs (Route Points) window:

- **Name**: Type the name of the route point.
- **Number**: Type the number for the route point.
- **URI**: Type the value of the Uniform Resource Indicator (URI) of the route point of the SIP server.
- **Call Type**: Select Local from the list.
- **Acquired**: Check the Acquired check box.



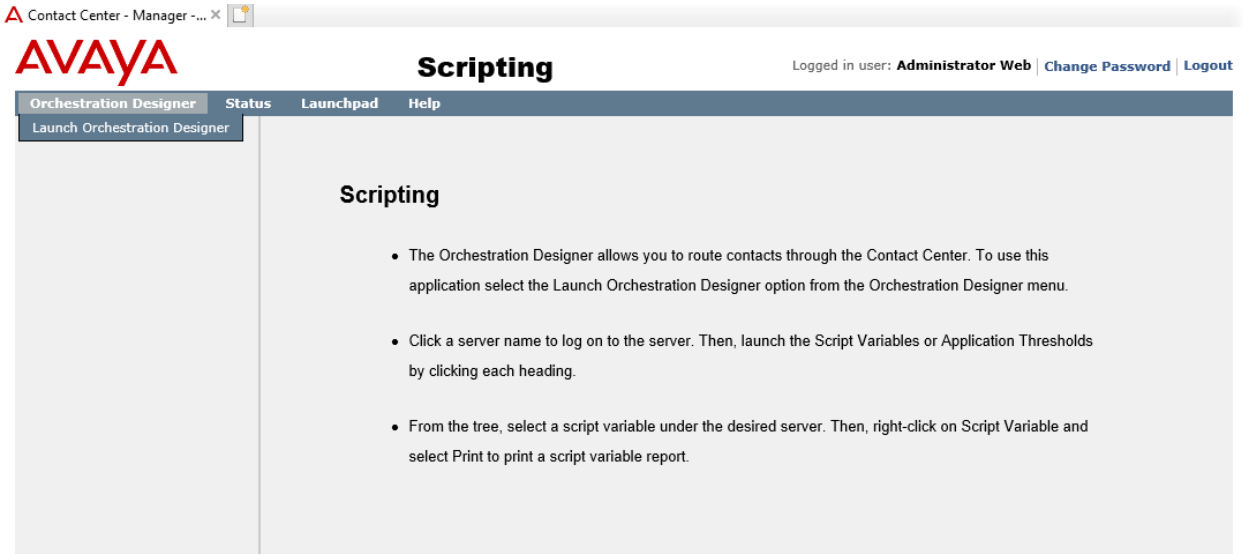
5.3. Skillset Configuration

Select the Skillsets folder in left panel. The following highlighted configurations are required on the Skillsets window:
Contact Type: Chose Contact Type of skillset (Example: Voice)
Skillset Name: Enter name of Skillset (Exp : PronetVoice)
And leave the rest as default.

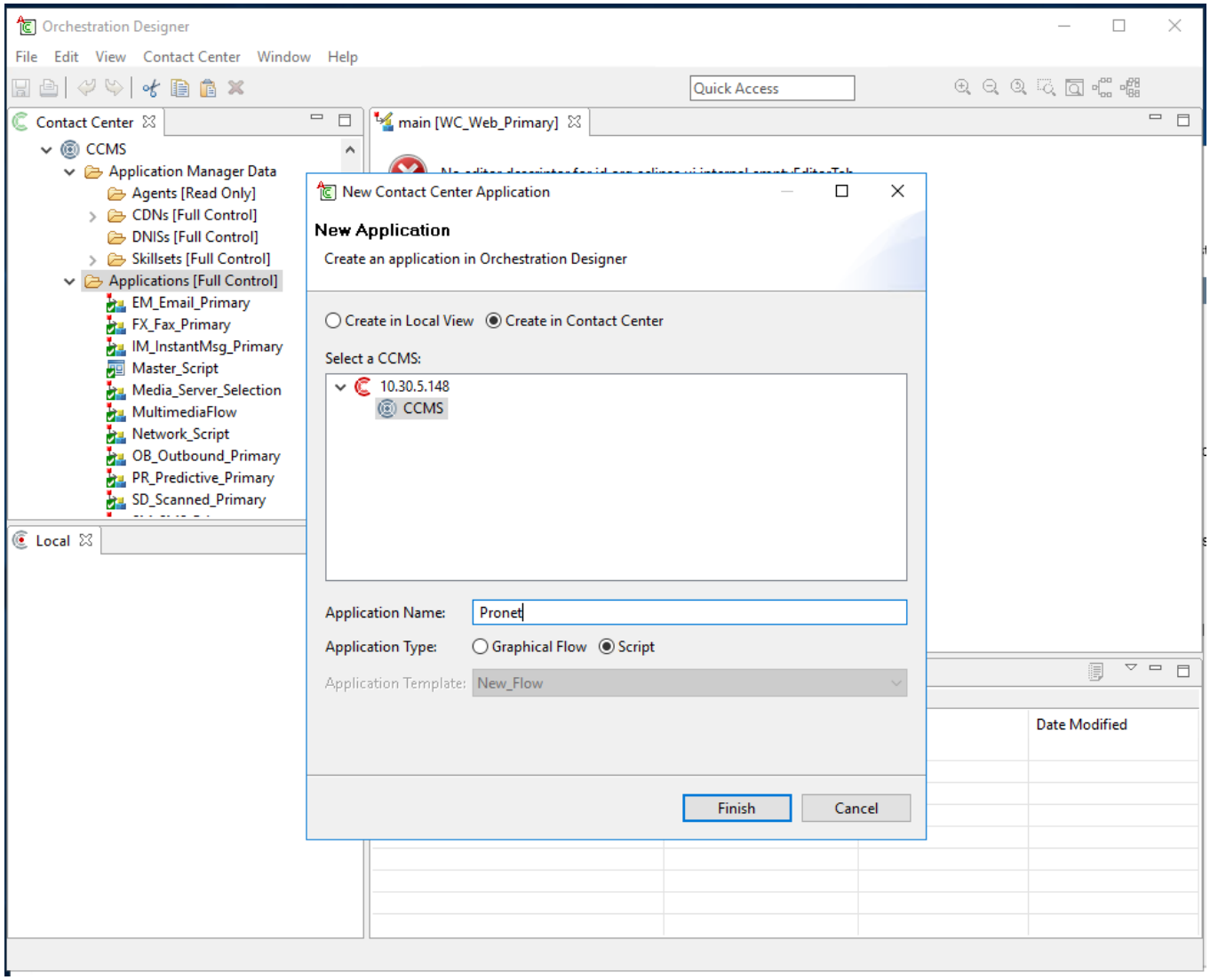


5.4. Add an Application Script

Applications contain instructions that determine the sequence of steps that a contact follows after the contact arrives at Avaya Aura® Contact Center. These steps can include call treatments (such as music or ringback), call routing (such as skill-based routing), or interaction with the caller (entering account numbers). In the **Launch Pad**, click **Scripting**. Choose **Orchestration Designer**. If prompted to download the **Orchestration Designer**, click **OK**. Follow the instructions of the installer and Install the Program. After the Program is installed, select **Launch Orchestration Designer**



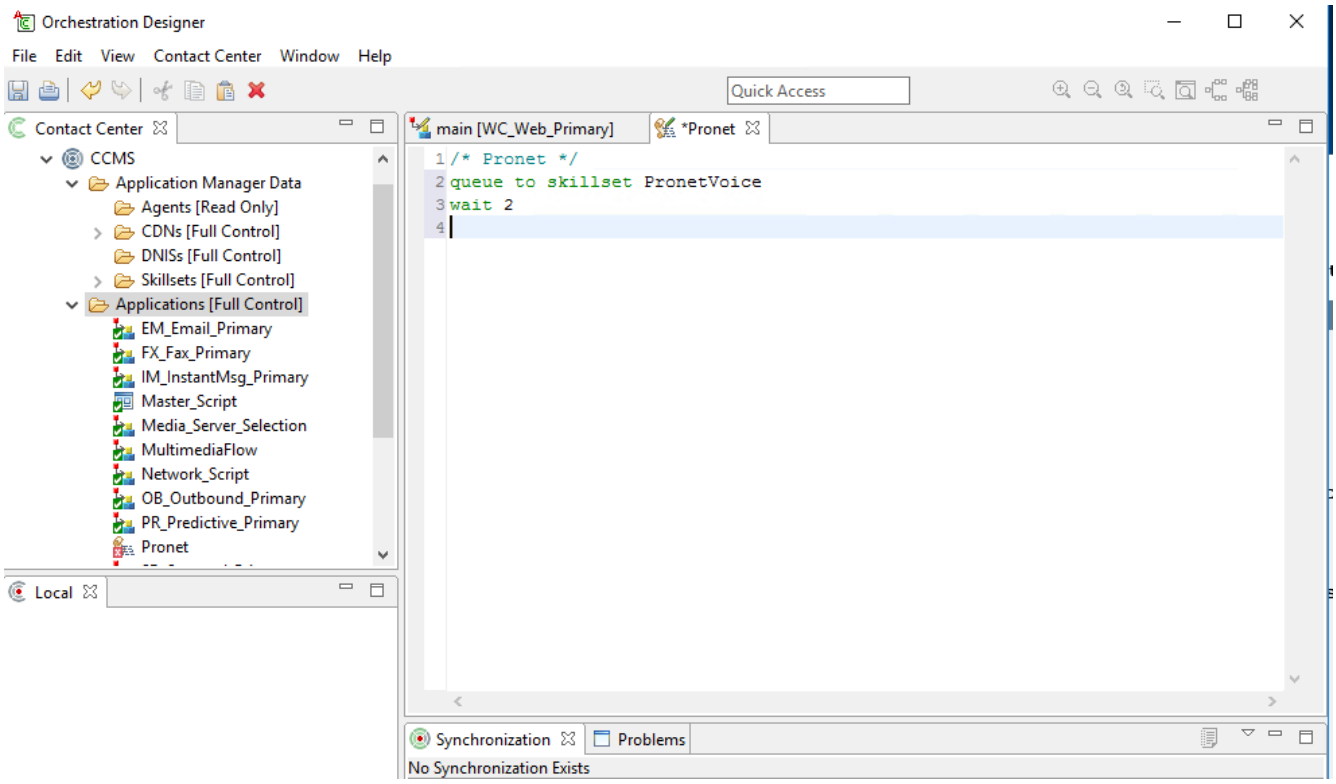
On the **Orchestration Designer Contact Center** window, on the left pane click the (+) sign next to the **Contact Server manager Name** and right click on **Applications [Full Control].** Select **New → Application**. Provide the **Application Name** and select **Script** radio button. Click Finish.



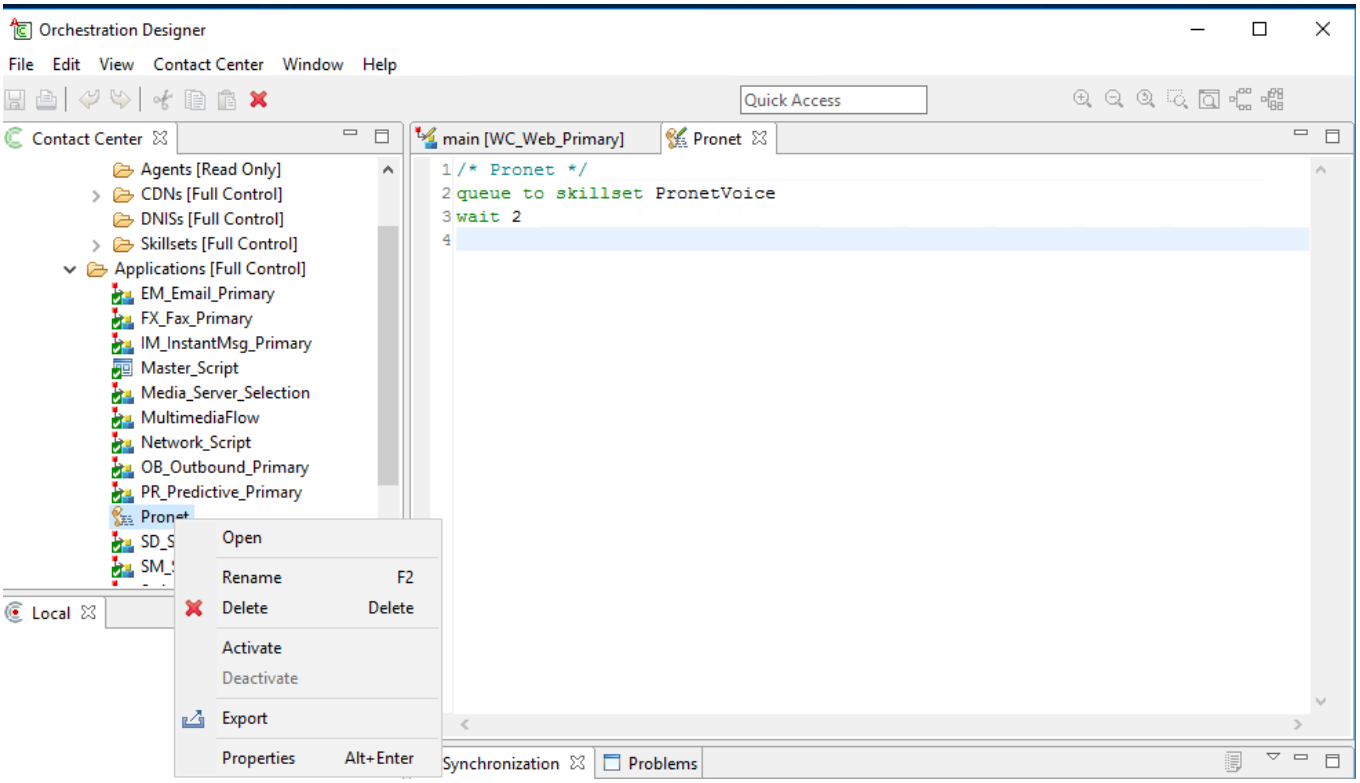
Edit the above created Application script to have the following lines:

- queue to skillset PronetVoice
- wait 2

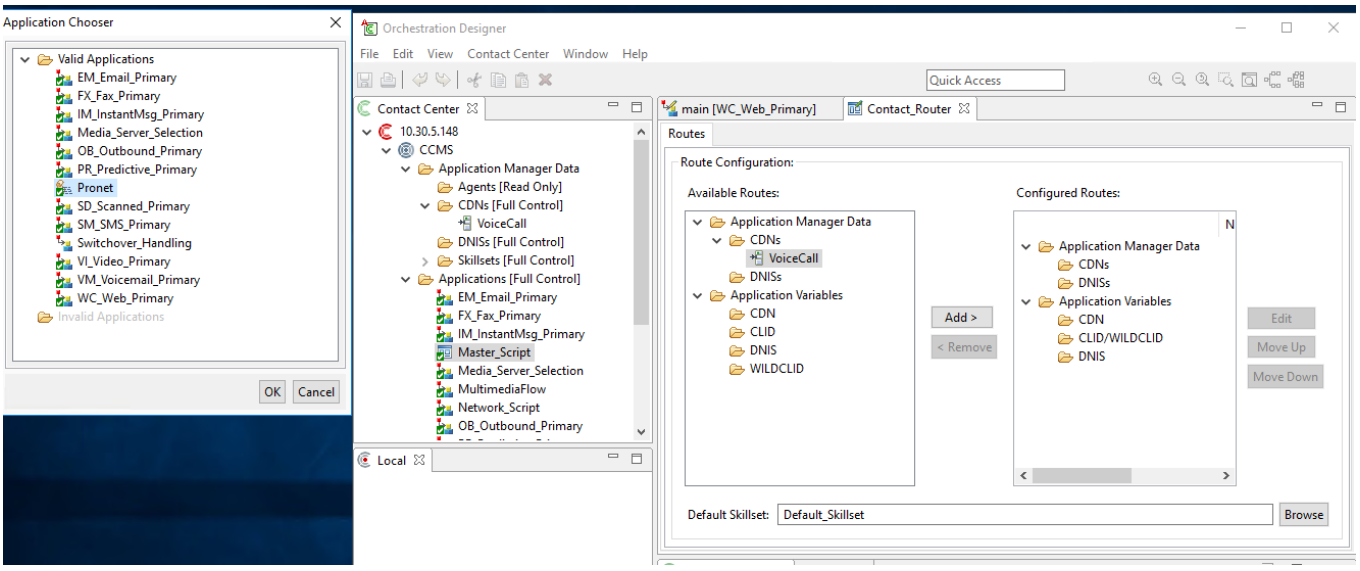
Save the application



Right-click on the Application Name and select **Activate**. The message of Application Activation is displayed.



Associate the application and the CDN created correctly in the Master script

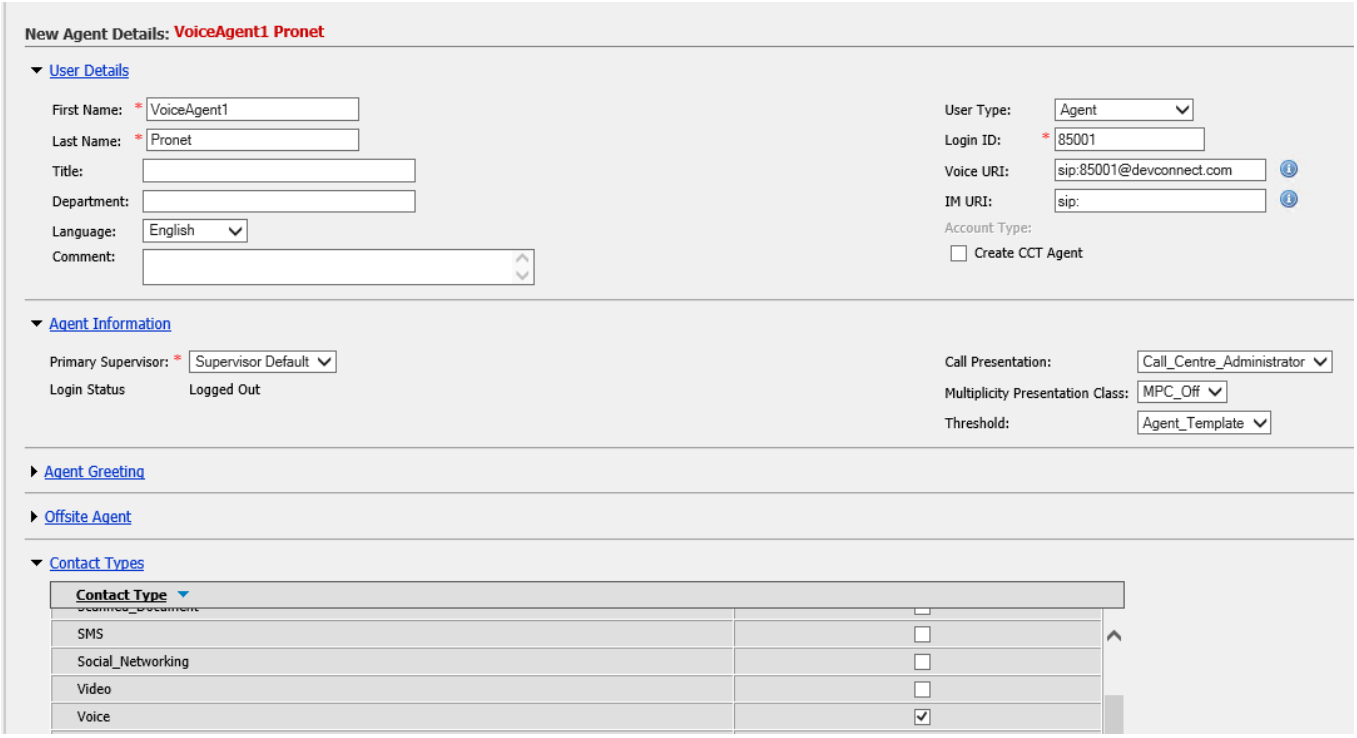


5.5. Configure a Contact Center Agent

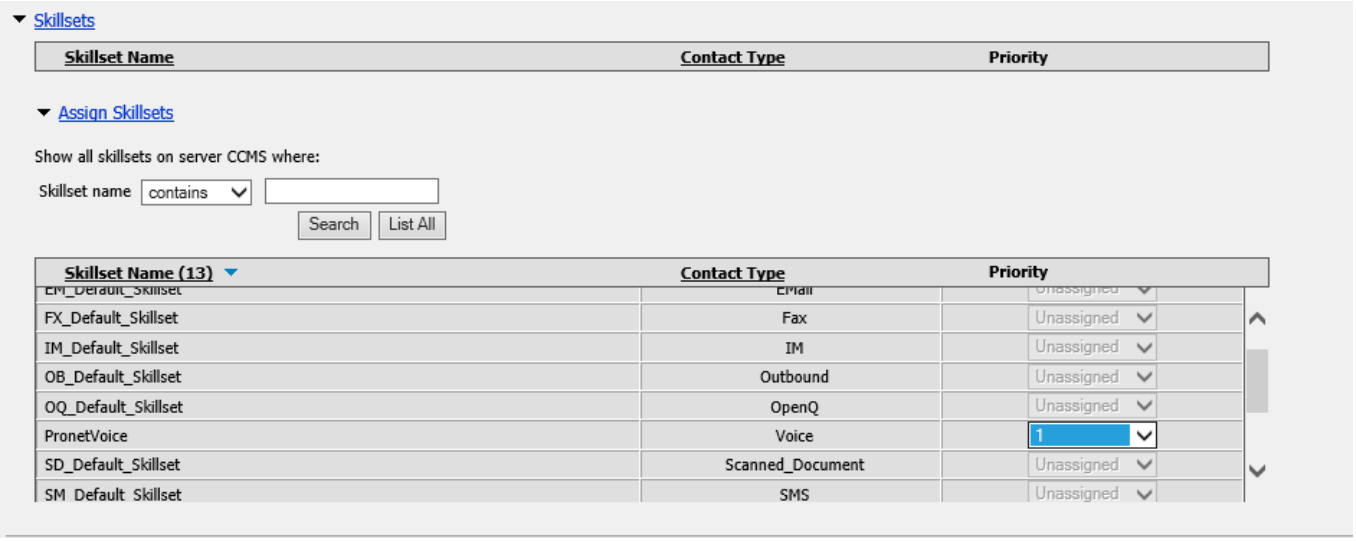
In the Launchpad, click Contact Center Management. In the left pane, click the Contact Center Manager to which the agent is to be added. On the Menu, select Add Agent. The following highlighted fields were configured on New Agent Details Window under User Details section:

- **User Type**: Select Agent as User Type
- **First Name**: Type a first name for the agent
- **Last Name**: Type a last name for the agent
- **Login ID**: The number the agent enters to logon to the phone. In this case the field is set to the extension (85001)
- **Primary Supervisor**: Select Default Supervisor from the list
- **Voice URI**: The SIP address of the TR87-controlled terminal dedicated to this agent, in the format sip:agent (use Extension@SIPdomain, where SIPdomain is the CCMS Local SIP Subscriber Domain name. For example; sip:85001@devconnect.com)
- **Enable CTI for this agent**: Check the check box

Click Contact Types, which is then expanded. Select the check box beside each Contact Type to assign to the agent (for example, Voice).



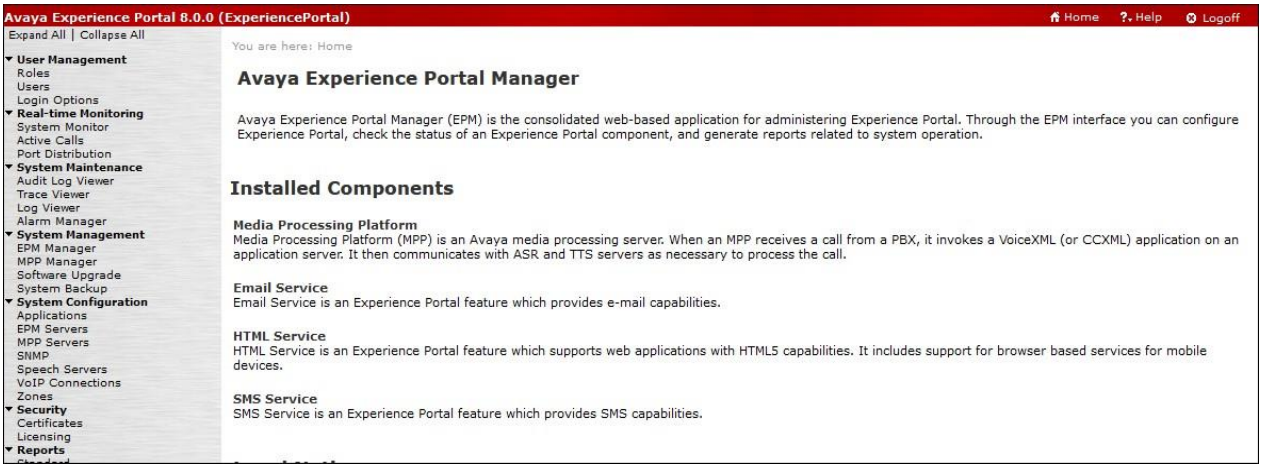
Click the **Skillsets** heading to expand the branch. Click List All to list all skillsets configured on the server. From the Priority list for each skillset to assign to the agent, select the priority levels (for example, select Voice and set the priority level 1).



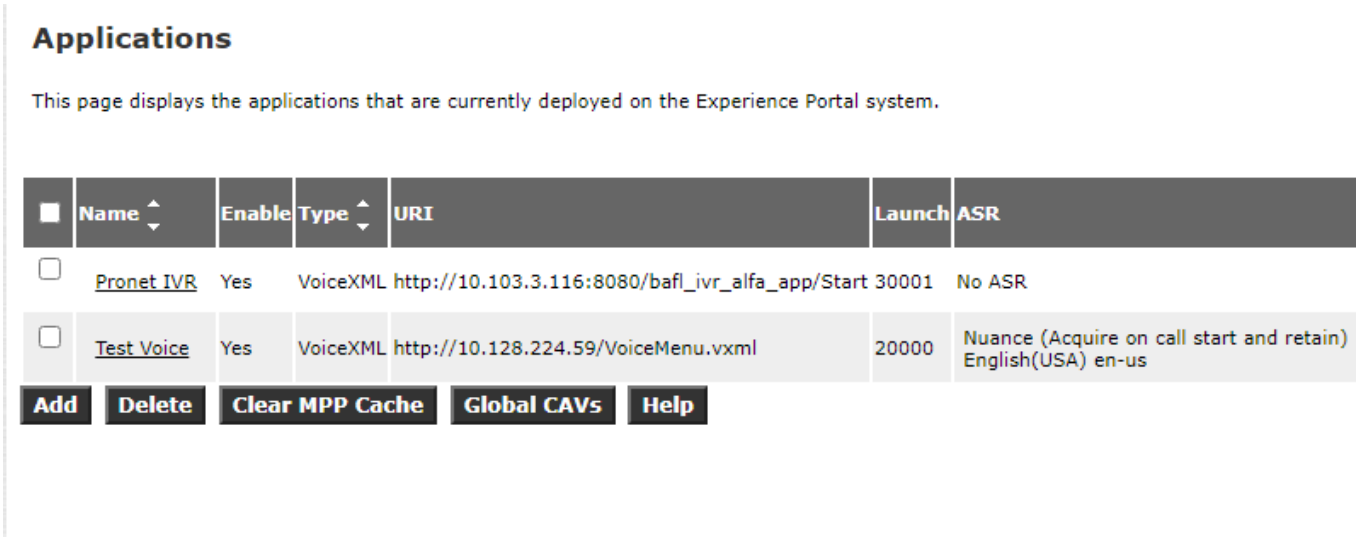
6. Configure Avaya Experience Portal

The configuration and verification operations illustrated in this section were all performed using browser. The information provided in this section describes the configuration of Experience Portal for this solution. For all other provisioning information such as initial installation, are not the focus of these Application Notes and will not be described.

Log into the Avaya Experience Portal Manager and select **System Configuration → Application** on the left pane.



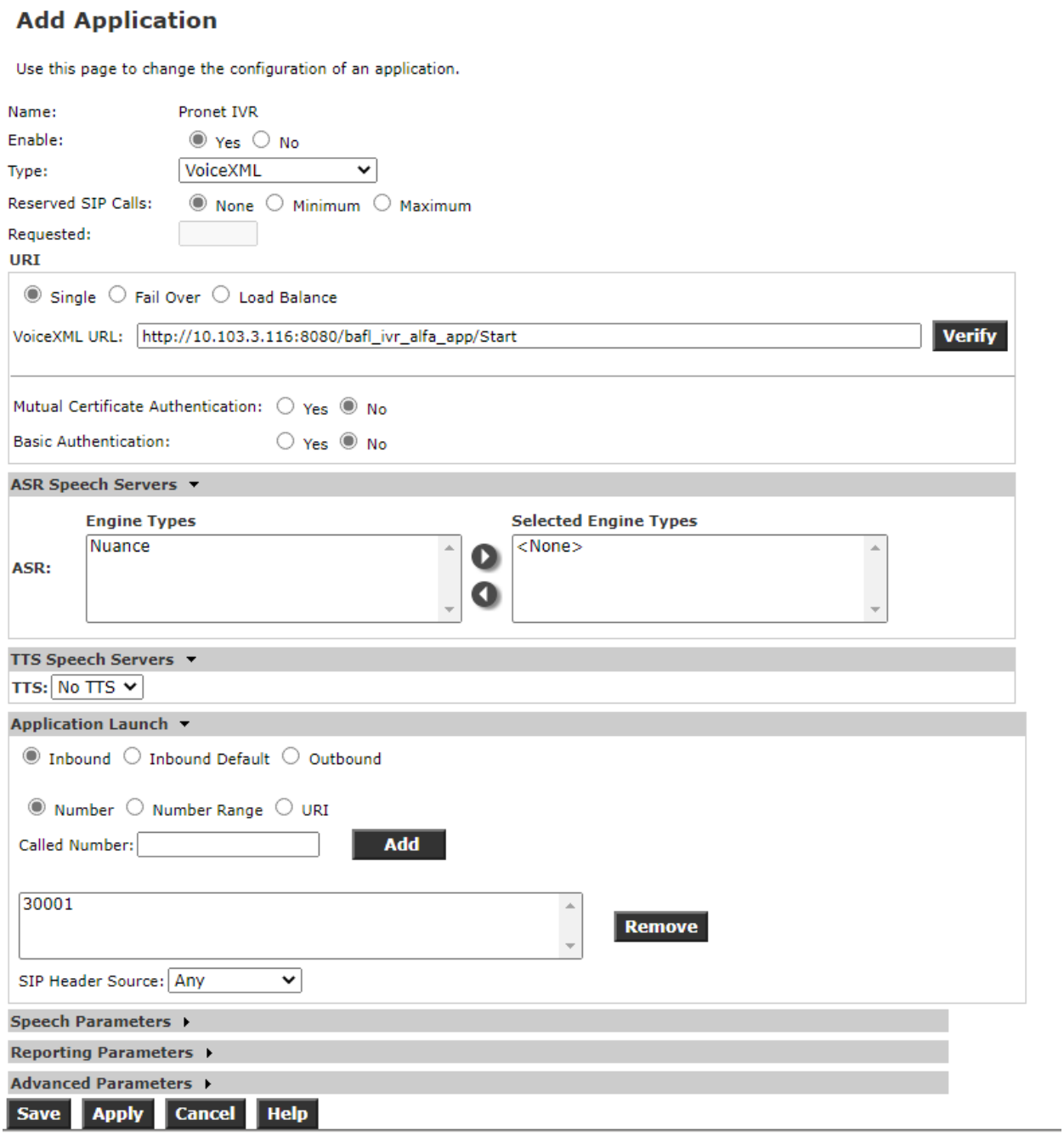
The following shows the applications listed. Click on Add to create new Application.



The **VoiceXML URL** is administered for pointing to the Pronet application server running on Tomcat.

"<IP address of application server>:<Port of Tomcat>/<location of application>"

In the section for **Application Launch**, check **Inbound** and add the IVR station 30001 number as **Called Number**. Then click **Save** to save new Application.

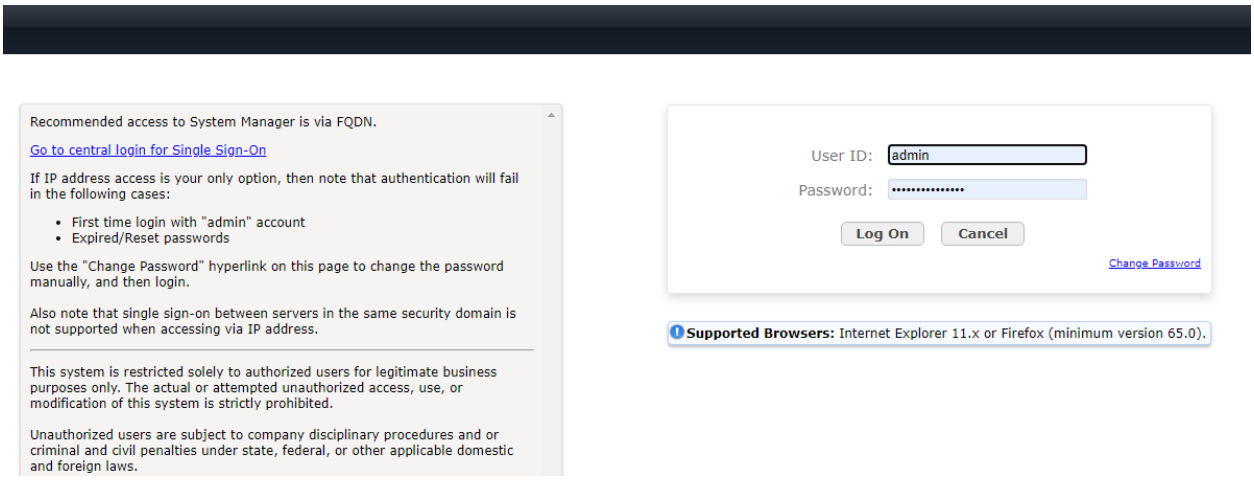


7. Configure Avaya Aura® System Manager

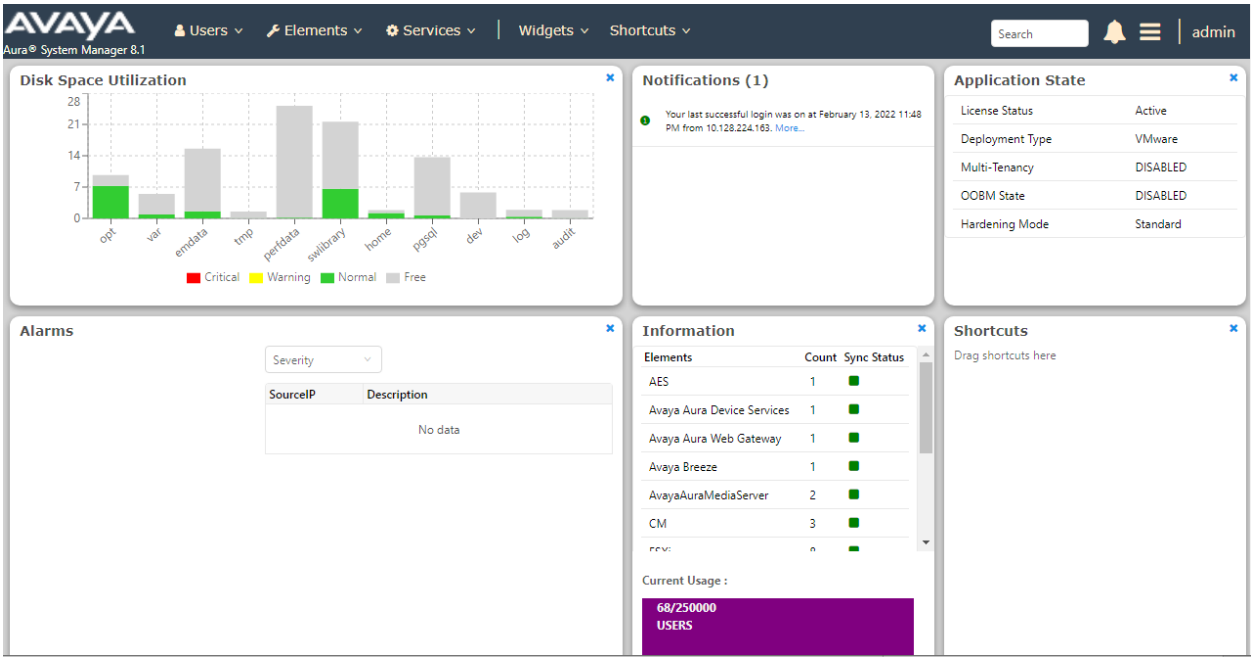
This section shows the steps required configuration for Routing Policy and Dial Pattern to Avaya Aura Contact Center and Pronet Dynamic IVR on Experience Portal.

7.1. Access System Manager Web Interface

Access the System Manager URL ((https://<SERVER_NAME>/SMGR) and log on to the System Manager Web Interface using appropriate login credentials.

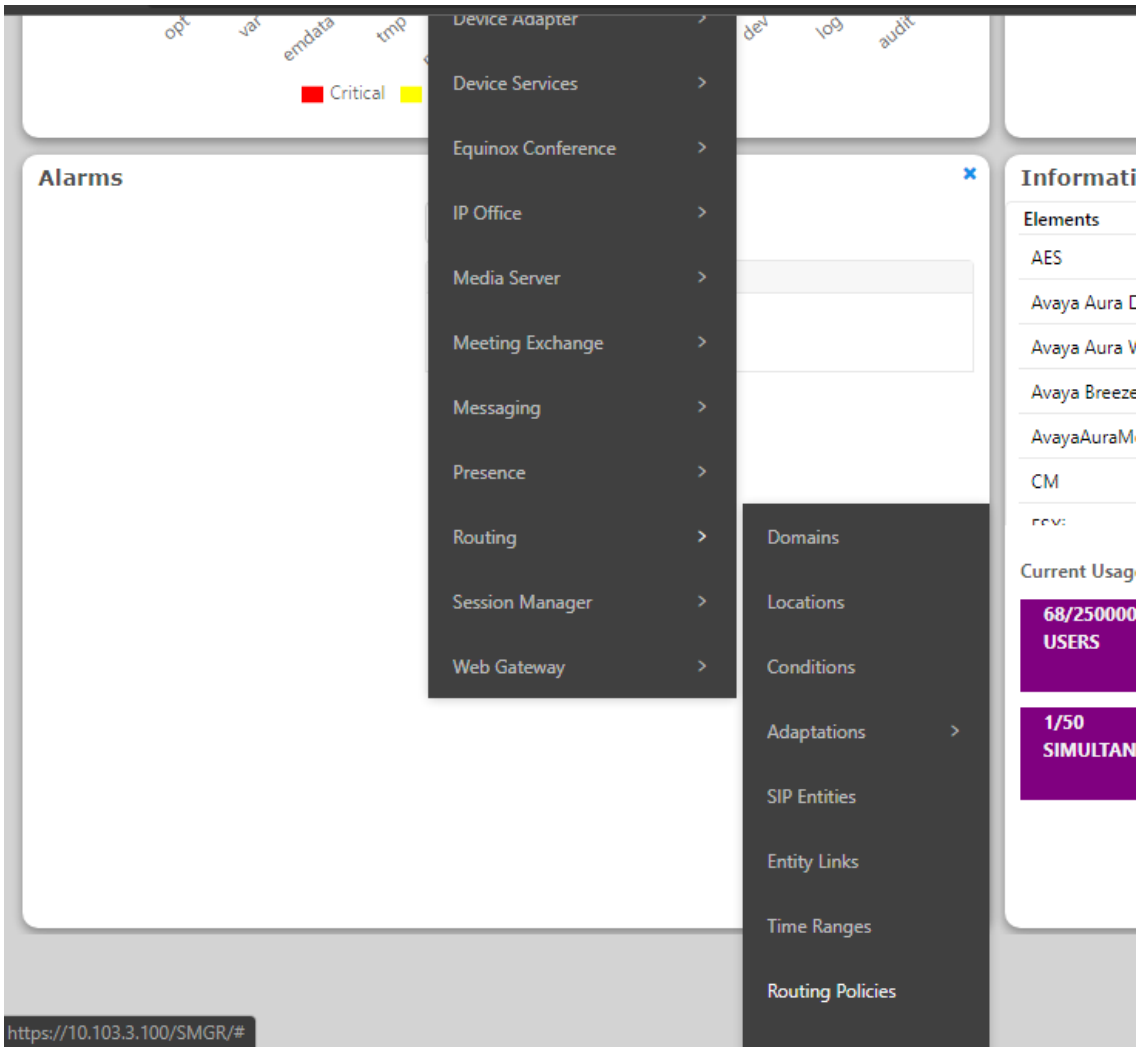


The System Manager home page displays Dashboard as below:

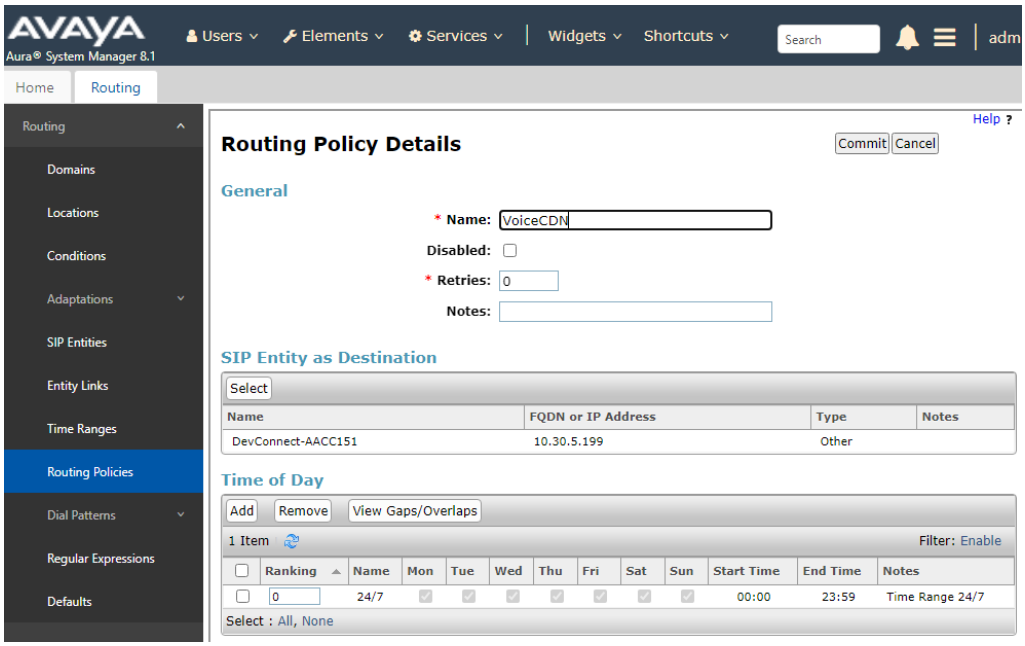


7.2. Create Routing Policy to Avaya Aura® Communication Manager

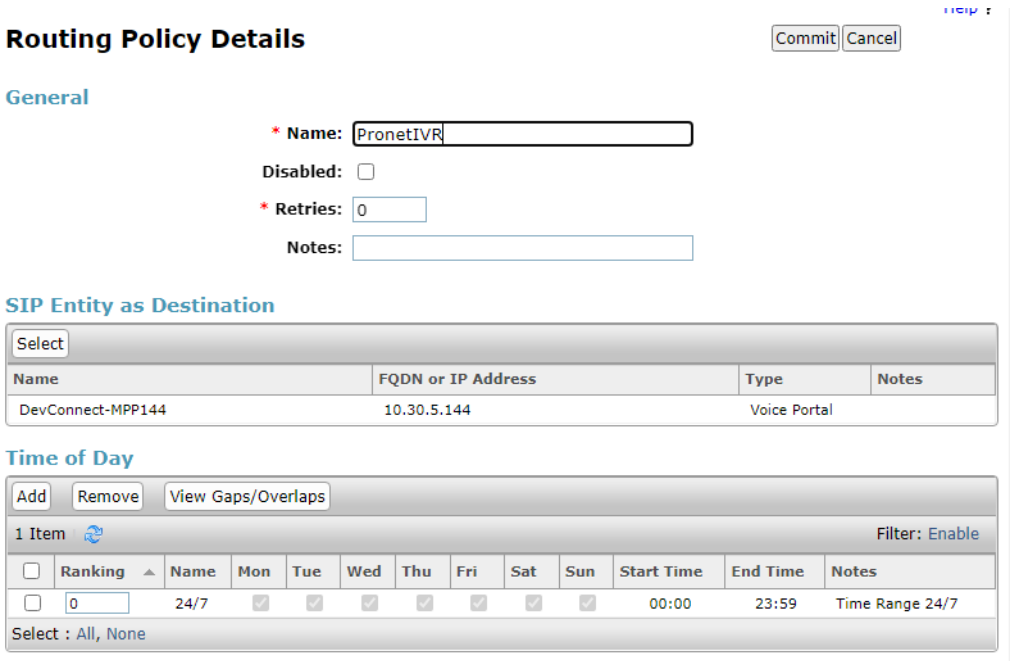
From System Manager Dashboard, go to **Elements** (not shown) → **Routing** → **Routing Policies**



On Routing Policies window, click New to create new Routing Policy for VoiceCDN. Enter Routing Policy Details.
Name : Name of Routing Policy for VoiceCDN
SIP Entity as Destination: select AACC Entity in this case.
Click **Commit** to save new Routing Policy

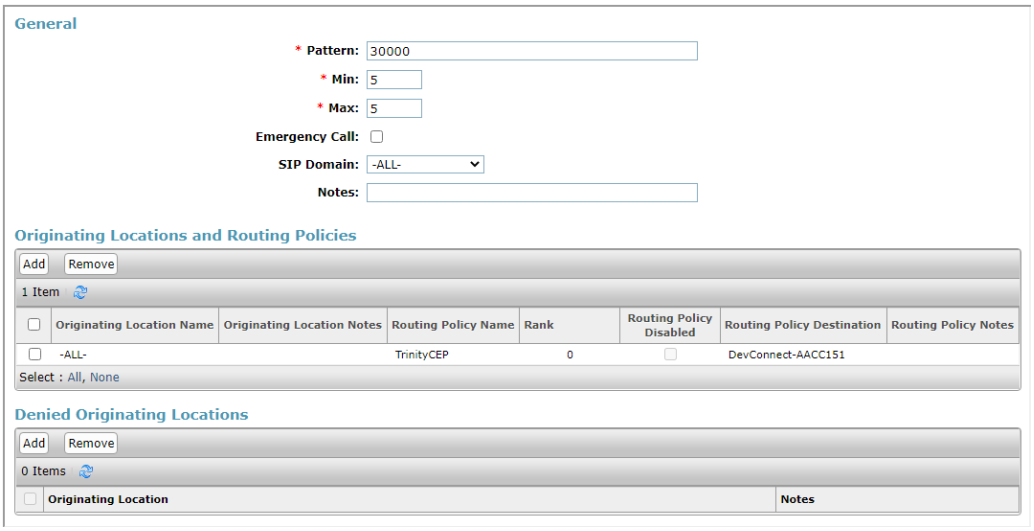


Repeat step above to create new Routing Policy for Pronet Dynamic IVR on Experience Portal

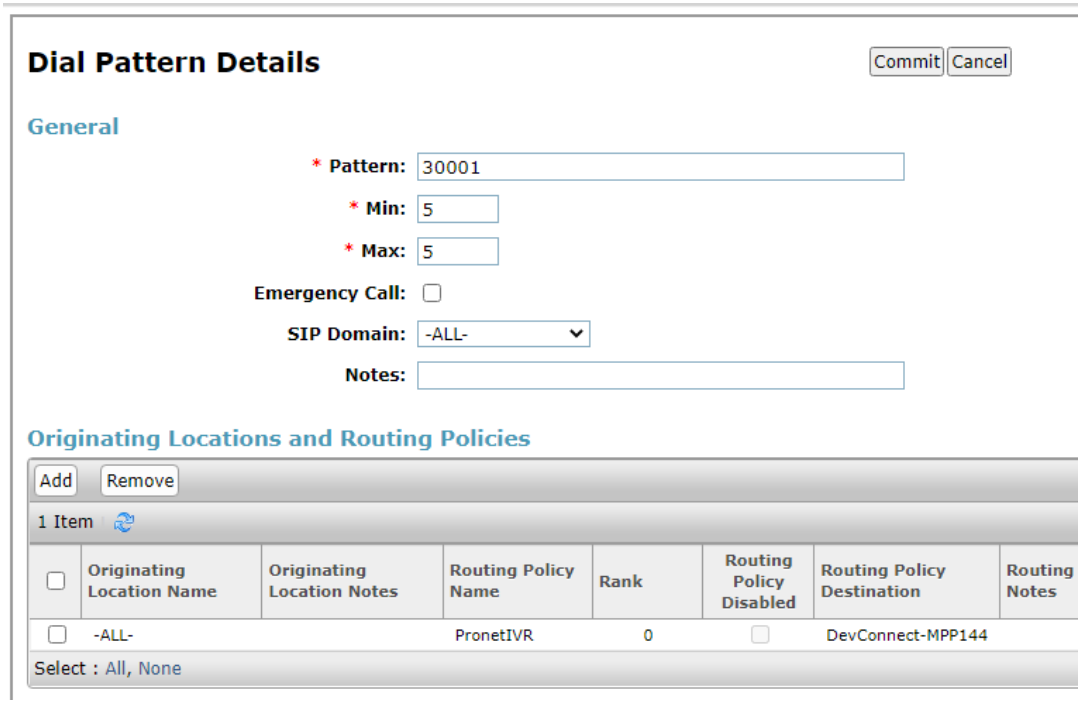


7.3. Create Dial Pattern for VoiceCDN

On the left panel of Routing window, select **Dial Patterns → Dial Patterns** and click New to create new Dial Pattern. Enter following for Dial Patterns details:
Pattern: Enter same CDN pattern created on **Section 5.2.**
Originating Locations select **-ALL-** and **Routing Policy Name** select with policy created on **Section 6.2.** Click **Commit** to save new Dial Pattern.



Repeat step above to create new Dial Pattern with the pattern same as Called Number configured on **Section 6** for Pronet Dynamic IVR on Experience Portal



8. Configure CDN on Pronet Dynamic IVR

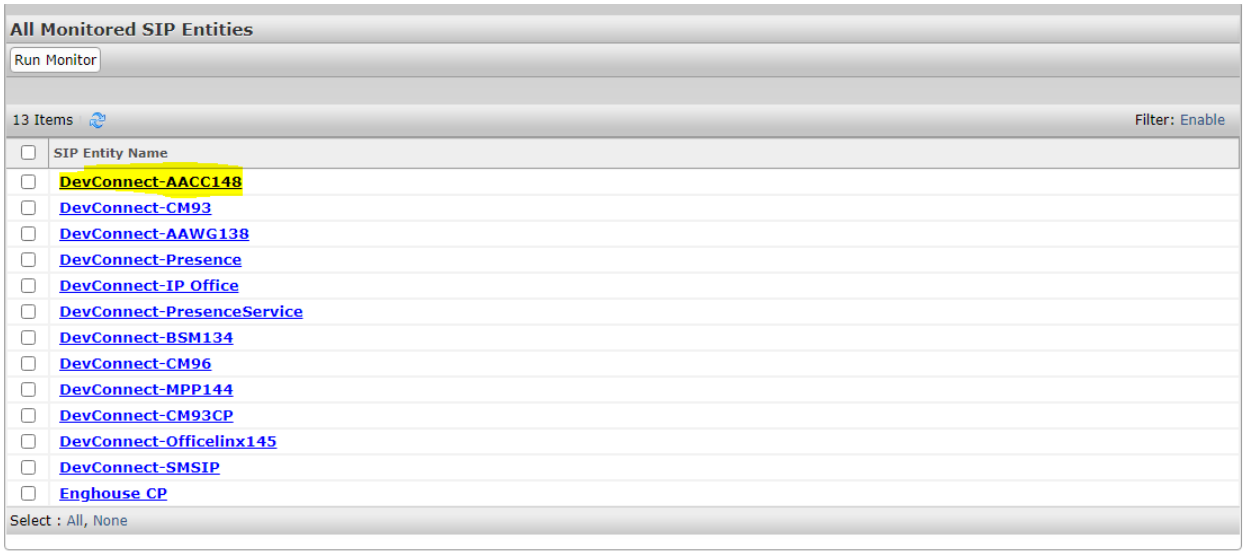
All installation and configuration related to Pronet Dynamic IVR Dynamic is performed by to Pronet engineers and, thus, is not documented.
This section shows the steps required configuration Pronet scripts with AACC CDN. Log into Pronet Dynamic IVR tomcat server and edit main script at example location C:\apache-tomcat-8.5.23\webapps\bafl_ivr_alfa_app\flow.

9. Verification Steps

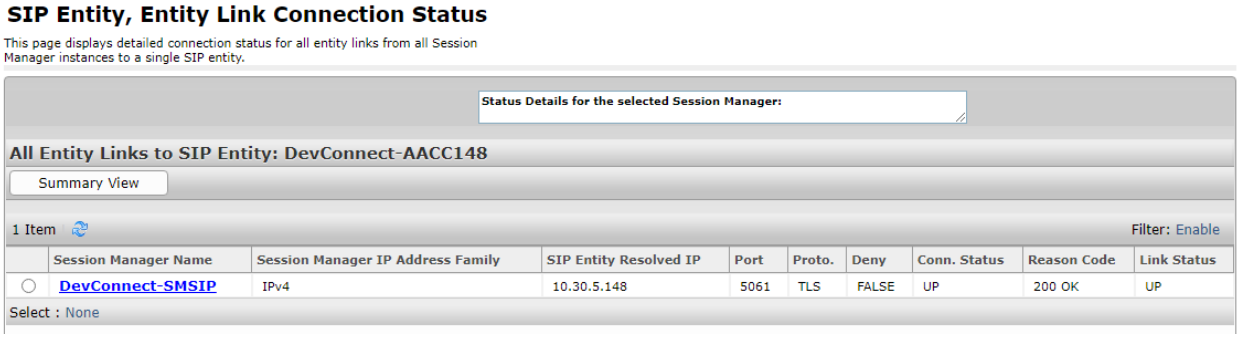
This section provides the tests that can be performed to verify proper configuration

9.1. Verify Entity Link between Session Manager and Contact Center

To verify SIP connectivity to AACC, via System Manager, navigate to **Elements → Session Manager → System Status → SIP Entity Monitoring.** Under the **All Monitored SIP Entities,** select the **Contact Center** Entity.

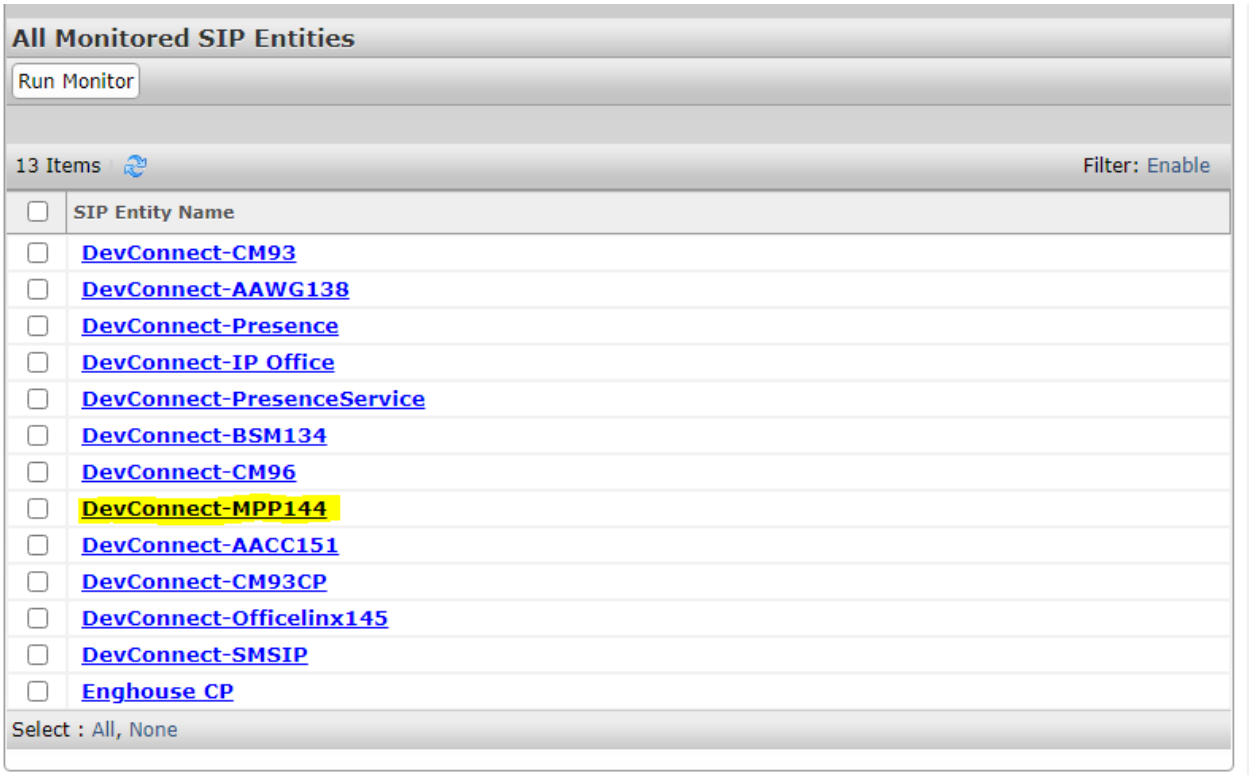


Verify **Conn. Status** is **UP.**

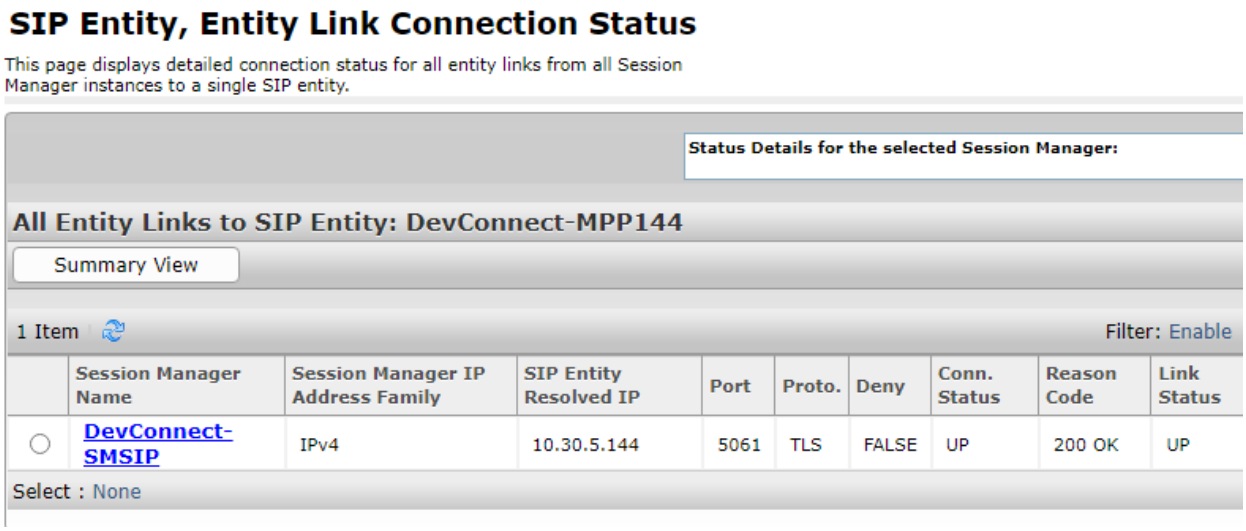


9.2. Verify Entity Link between Session Manager and Experience Portal MPP

Under the All Monitored SIP Entities, select the **Experience Portal MPP Entity.**

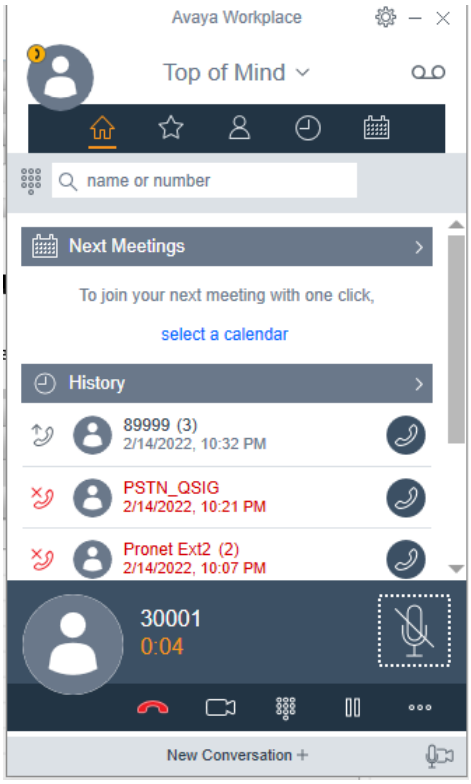


Verify **Conn. Status** is **UP.**



9.3. Pronet Dynamic IVR Connection

Make a test call to Communication Manager VDN which routes to the IVR station **30001** and verify announcement is heard from Pronet application. Select the choice for speaking to an agent. Verify the call is successfully transferred by Pronet application as shown below.



10. Conclusion

Pronet Dynamic IVR 1.0 solution was able to successfully interoperate with Avaya Experience Portal 8.0 and Avaya Aura® Contact Center 7.1.2. All test cases passed successfully.

11. Additional References

Documentation related to Avaya can be obtained from https://support.avaya.com.

[1] *Administering Avaya Aura® Communication Manager*, Release 8.1.x, Issue 8, Nov 2020
[2] *Administering Avaya Aura® Session Manager*, Release 8.1.x, Issue 8, Feb 2021
[3] *Administering the Avaya Aura® Web Gateway*, Release 3.8 Issue 2, July 2020
[4] *Administering Avaya Aura® Application Enablement Services,* Release 8.1.x, Issue 8, Feb 2021
[5] *Avaya Aura® Contact Center Server Administration*, Release 7.1, Issue 07.06, Sept 2021

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.