



Avaya Solution & Interoperability Test Lab

Application Notes for Engelbart esuits² Special Purpose Console (SPC) Framework Solution using Avaya Client JavaScript SDK 4.4 and Avaya BreezeTM 3.8 - Issue 1.0

Abstract

These Application Notes contain instructions for Engelbart esuits² Special Purpose Console (SPC) Framework Solution using Avaya Client JavaScript SDK 4.4 and Avaya BreezeTM 3.8 to successfully interoperate with Avaya Aura Environment 8.1.3.

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 Engelbart esuits² Special Purpose Console (SPC) Framework solution to interoperate with Avaya Aura Environment 8.1.3 and Avaya BreezeTM 3.8.

The Engelbart esuits² Special Purpose Console (SPC) Framework solutions is a software application that serves as a softphone running as a browser application. Engelbart esuits² Special Purpose Console (SPC) Framework solutions integrated with Avaya Client JavaScript SDK 4.4 for voice call control and audio to register as WebRTC endpoints with Avaya Aura® Web Gateway and Avaya Aura® Session Manager.

2. General Test Approach and Test Results

Interoperability testing contained functional tests mentioned in **Section 2.1**. All test cases were performed manually. Necessary user actions were performed from the agent telephones to test different call scenarios. The serviceability test cases were performed manually by disconnecting/reconnecting the network to Engelbart esuits² Special Purpose Console (SPC) Framework Server.

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 Engelbart esuits² Special Purpose Console (SPC) Framework solution utilized enabled capabilities of TLS/SRTP.

2.1. Interoperability Compliance Testing

The interoperability Compliance test included feature and serviceability testing. Feature testing included the validation of the following:

- **Registration** - Successful registration of esuits² Special Purpose Console (SPC) Framework client with Avaya Aura Device Services (AADS) and Avaya Aura Web Gateway (AAWG).
- **Inbound and Outbound Calls** between esuits² Special Purpose Console (SPC) Framework client and Avaya SIP, H.323, and digital telephones. Calls between esuits² Special Purpose Console (SPC) Framework client and PSTN endpoints.
- Calls with G.711, OPUS codec support and negotiation, with and without media shuffling.
- Calls with SRTP enabled and disabled
- **Basic features** including audio call, answer, hang up, transfer, music on hold, DTMF transmission.
- **Serviceability** - The serviceability testing focused on verifying the ability of esuits² Breeze Rules Engine to recover from adverse conditions, such as disconnecting/reconnecting the network to esuits² Special Purpose Console (SPC) Framework Server.

2.2. Test Results

The testing was successful except for the following observation which was noted:

- esuits² Special Purpose Console (SPC) Framework client does not support initiate Conference.

2.3. Support

Support for Engelbart esuits² Special Purpose Console (SPC) Framework can be obtained through the following:

Engelbart Software GmbH

Alpenstrasse 12

6300 Zug

Switzerland

Tel: +41 41 511 35 02

E-Mail: info@engelbart-software.com

Parkstrasse 40

88212 Ravensburg

Germany

Tel: +49 751 7642 4300

E-Mail: info@engelbart-software.com

3. Reference Configuration

Figure 1 illustrates a sample configuration that consists of Avaya products and the Engelbart esuits² Special Purpose Console (SPC) Framework.

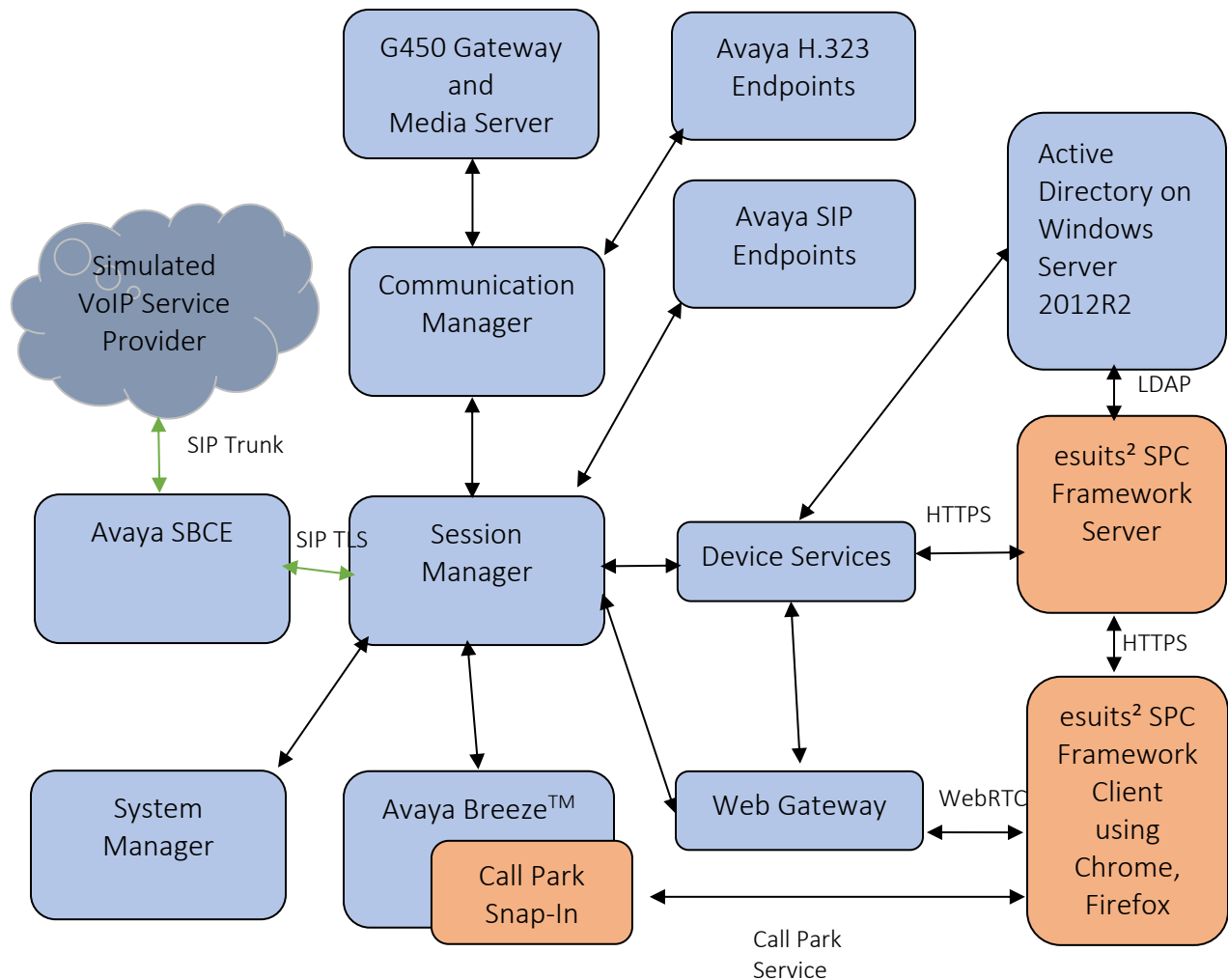


Figure 1: Test Configuration for Engelbart esuits² Special Purpose Console (SPC) Framework and Avaya Aura® Environment.

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 |
| Avaya Aura® Session Manager in Virtual Environment | 8.1.3 |
| Avaya Aura® Communication Manager in Virtual Environment | 8.1.3 |
| Avaya G450 Media Gateway <ul style="list-style-type: none">MGP | 41.16.30 |
| Avaya Aura® Media Server in Virtual Environment | 8.0.2.43 |
| Avaya Session Border Controller for Enterprise in Virtual Environment | 8.1.0.0-14-18490 |
| Avaya Breeze™ in Virtual Environment | 3.8 |
| Avaya Aura® Device Services | 8.0.2 |
| Avaya Aura® Web Gateway | 3.8.1 |
| Avaya 9608G & 9641G IP Deskphone (H.323) | 6.8 |
| Avaya IX Workplace | 3.8.4.102 |
| Avaya 9641 & 9621 IP Deskphone (SIP) | 7.1.9 |
| Avaya J159 | 4.0.7 |
| Engelbart esuits ² Special Purpose Console (SPC) Framework Server | 3.2.0.191 |

| | |
|--|-----|
| Engelbart esuits ² Special Purpose Console (SPC) Framework – Call Park Snap-in | 3.2 |
|--|-----|

5. Administer users on Windows Server 2012R2 Active Directory

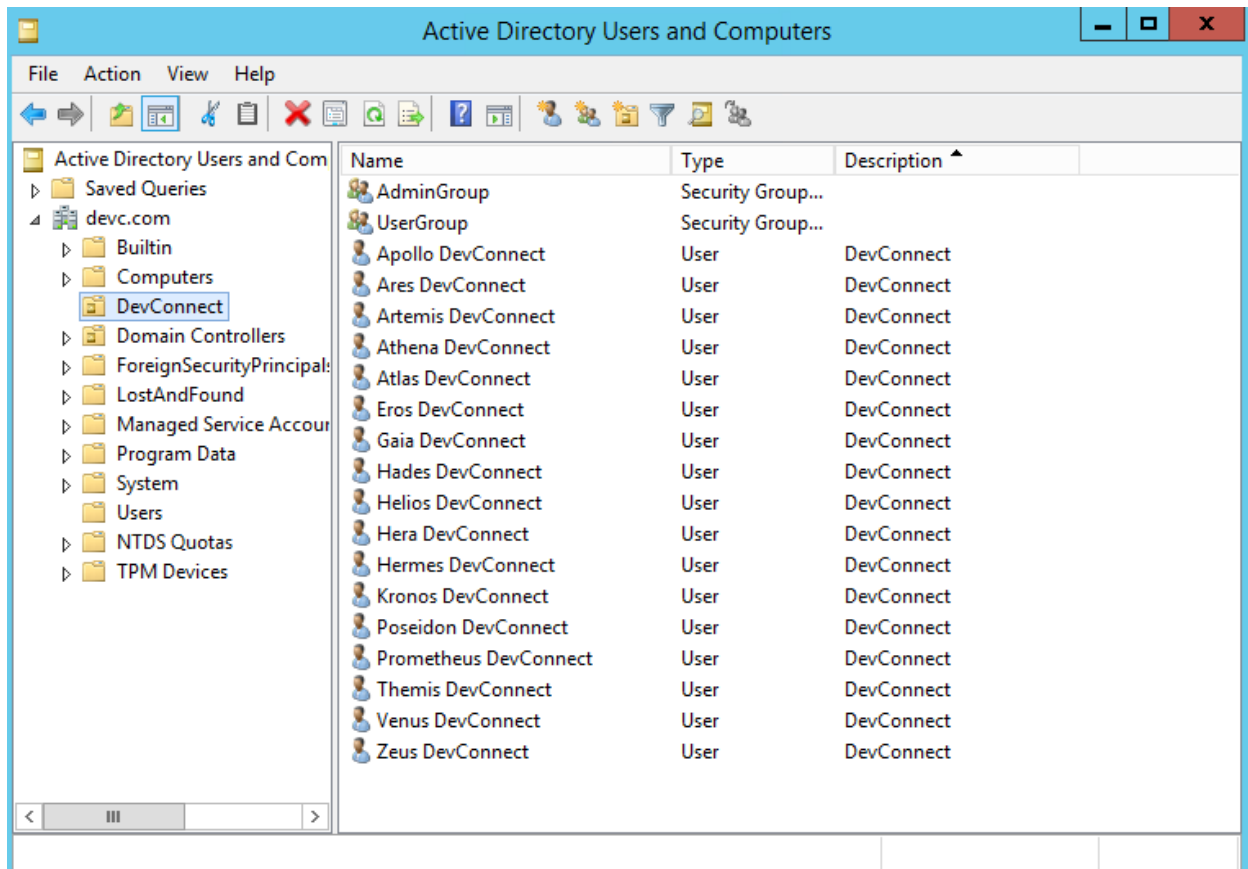
These application notes assume active directory and a domain are already in place. The screenshot below displays an active directory user administered with required fields **Telephone number**, **E-mail** and **Description**. All users should use same **Description**.

The screenshot shows the 'Zeus DevConnect Properties' dialog box with the 'General' tab selected. The dialog box has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with the following tabs: Published Certificates, Member Of, Password Replication, Dial-in, Object, Security, Environment, Sessions, Remote control, Remote Desktop Services Profile, COM+, Attribute Editor, General (selected), Address, Account, Profile, Telephones, and Organization. The 'General' tab contains the following fields:

- First name:** Zeus
- Initials:** (empty)
- Last name:** DevConnect
- Display name:** DevConnect, Zeus
- Description:** DevConnect
- Office:** (empty)
- Telephone number:** 72017
- E-mail:** Zeus@devc.com
- Web page:** (empty)

At the bottom of the dialog box are four buttons: OK, Cancel, Apply, and Help.

Below is a list of Active Directory users that were created for this Compliance testing:



The screenshot shows the 'Active Directory Users and Computers' console window. The left pane displays a tree view with 'devc.com' expanded, showing folders like 'Builtin', 'Computers', 'DevConnect', 'Domain Controllers', etc. The right pane shows a list of objects in the 'DevConnect' folder. The table below represents the data shown in the right pane.

| Name | Type | Description |
|-----------------------|-------------------|-------------|
| AdminGroup | Security Group... | |
| UserGroup | Security Group... | |
| Apollo DevConnect | User | DevConnect |
| Ares DevConnect | User | DevConnect |
| Artemis DevConnect | User | DevConnect |
| Athena DevConnect | User | DevConnect |
| Atlas DevConnect | User | DevConnect |
| Eros DevConnect | User | DevConnect |
| Gaia DevConnect | User | DevConnect |
| Hades DevConnect | User | DevConnect |
| Helios DevConnect | User | DevConnect |
| Hera DevConnect | User | DevConnect |
| Hermes DevConnect | User | DevConnect |
| Kronos DevConnect | User | DevConnect |
| Poseidon DevConnect | User | DevConnect |
| Prometheus DevConnect | User | DevConnect |
| Themis DevConnect | User | DevConnect |
| Venus DevConnect | User | DevConnect |
| Zeus DevConnect | User | DevConnect |

6. Configure Avaya Aura® Environment

This section provides the procedures for configuring Avaya Aura® Environment. It is implied a working Avaya Aura® Environment includes System Manager, Session Manager, Communication Manager, Media Server, Device Services and a Web Gateway that are 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**.

The procedures include the following areas:

- Create User Provisioning Rules on System Manager
- LDAP Sync Configuration
- Administer Avaya Breeze™ and esuits² SPC Call Park Snap-in

6.1. Create User Provisioning Rules on System Manager

A user provisioning rule includes a master communication profile template and a set of provisioning rules. A user provisioning rule enables predefined templates that consist of user attributes found in the communication profile of the user. In the user provisioning rule, the administrator specifies the following information to provision the user:

- Basic information that includes the communication profile password, time zone, and language preference.
- The communication system that the user must use, for example, Communication Manager.
- The method to assign or create a communication profile for the user, for example, by assigning the next available extension for Communication Manager.

Configuration of User Provisioning Rules and is performed via Avaya Aura® System Manager. Access the System Manager Administration web interface by entering the System Manager (SMGR) URL in a web browser. Log in using appropriate credentials.



Recommended access to System Manager is via FQDN.

[Go to central login for Single Sign-On](#)

If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

Use the "Change Password" hyperlink on this page to change the password manually, and then login.

Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.

This system is restricted solely to authorized users for legitimate business purposes only. The actual or attempted unauthorized access, use, or modification of this system is strictly prohibited.

Unauthorized users are subject to company disciplinary procedures and or criminal and civil penalties under state, federal, or other applicable domestic and foreign laws.

The use of this system may be monitored and recorded for administrative and security reasons. Anyone accessing this system expressly consents to such monitoring and recording, and is advised that if it reveals possible evidence of criminal activity, the evidence of such activity may be provided to law enforcement officials.

All users must comply with all corporate instructions regarding the protection of information assets.

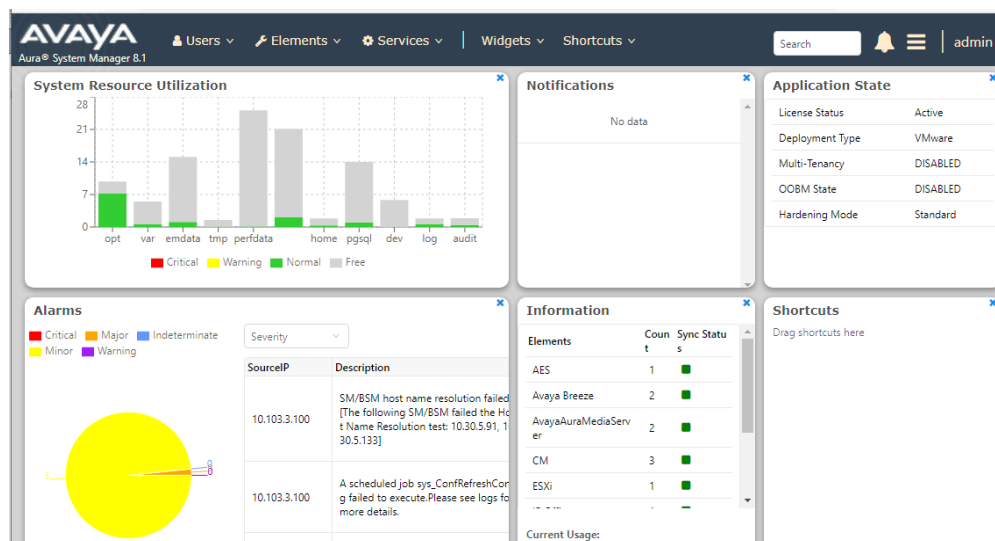
User ID:

Password:

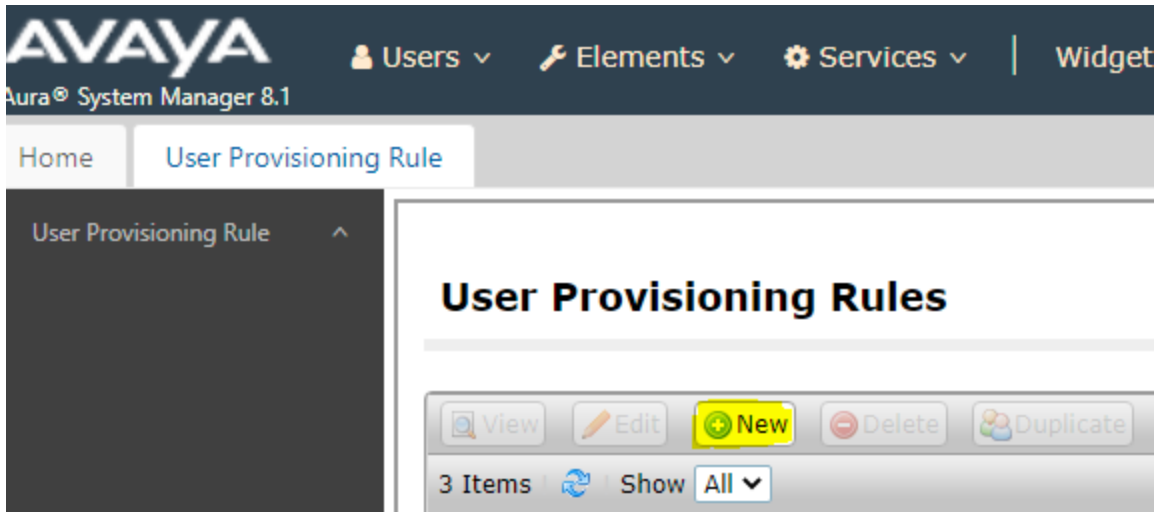
[Change Password](#)

Supported Browsers: Internet Explorer 11.x or Firefox 65.0, 66.0 and 67.0.

Once logged in, the following screen is displayed.



Select **Users** → **User Provisioning Rule**, Click **New** to create new User Provisioning Rule



Enter following information:

| | |
|--|---|
| User Provision Rule Name | Same as Active Directory Description in Section 5 . In this case " DevConnect " |
| SIP Domain | Select a SIP Domain from Drop down list, devconnect.com |
| Presence/IM Domain | Select a Presence/IM Domain from Drop down list, devconnect.com |
| Communication Profile Password | Enter a Password |
| Confirm Password | Enter Password again |
| User Phone Number last ... digits for Extension | Enter digits length for Communication Extension, In this case " 5 " |
| Prefix for Avaya E164 Handle | +848333 |
| Language Preference | Select Language Preference in drop down list |
| Time Zone | Select Time Zone in drop down list |

New User Provisioning Rule

Basic *

Communication Profile

* User Provisioning Rule Name:

DevConnect

Description:

SIP Domain:

devconnect.com

Presence/IM Domain:

devconnect.com

Auto Generate Communication Profile Password:

☐

Communication Profile Password:

Confirm Password:

Generate

Use Phone Number last

5

digits for Extension

Prefix for Avaya E164 Handle:

+848333

Language Preference:

English (United States)

Time Zone:

(+7:0)Bangkok, Hanoi, Jakarta,

Select **Communication Profile** Tab

New User Provisioning Rule

The screenshot shows a web interface for configuring a 'New User Provisioning Rule'. At the top, there are two tabs: 'Basic' (with a red asterisk indicating it is required) and 'Communication Profile' (which is currently selected). Below the tabs, there is a list of five profile options, each with an unchecked checkbox and a right-pointing arrow:

- ☐ Session Manager Profile
- ☐ Avaya Breeze® Profile
- ☐ CM Endpoint Profile
- ☐ Presence Profile
- ☐ IP Office Endpoint Profile

*Required

Enable **Session Manager Profile** and enter the **Primary Session Manager, Origination Application Sequence, Termination Application Sequence** and **Home Location** relevant to the implementation.

☒ **Session Manager Profile** ▼

SIP Registration

| | |
|--|--------------------------|
| * Primary Session Manager: | DevConnect-SMSIP ▼ |
| Secondary Session Manager: | (None) ▼ |
| Survivability Server: | Start typing... |
| Max. Simultaneous Devices: | 1 ▼ |
| Block New Registration When Maximum Registrations Active?: | <input type="checkbox"/> |

Application Sequences

| | |
|-----------------------------------|---------------|
| Origination Application Sequence: | CM93-AppSeq ▼ |
| Termination Application Sequence: | CM93-AppSeq ▼ |

Emergency Calling Application Sequences

| | |
|--|----------|
| Emergency Calling Application Sequences: | (None) ▼ |
| Emergency Calling Application Sequences: | (None) ▼ |

Call Routing Settings

| | |
|-------------------------|----------|
| * Home Location: | SaiGon ▼ |
| Conference Factory Set: | (None) ▼ |

Call History Settings

| | |
|-----------------------------------|----------|
| Enable Centralized Call History?: | Select ▼ |
|-----------------------------------|----------|

Scroll down the page and enable the **CM Endpoint Profile** section. Select the Communication Manager system from the **System** drop down box, select **Endpoint** as the **Profile Type**, enter the **Extension Range** number you wish to use, select **J179_DEFAULT_CM_8_1** as the **Template** and select **Security Code** as **Extension/Reverse Extension**.

☒ **CM Endpoint Profile** ▼

* System: ▼

Profile Type: ▼

Use Next Available Extension: ☒

Extension Range:

Template: ▼

Security Code: ▼

Preferred Handle: ▼

Delete Endpoint on Unassign of Endpoint from User or on Delete User: ☒

Override Endpoint Name: ☒

Allow H.323 and SIP Endpoint Dual Registration: ☐

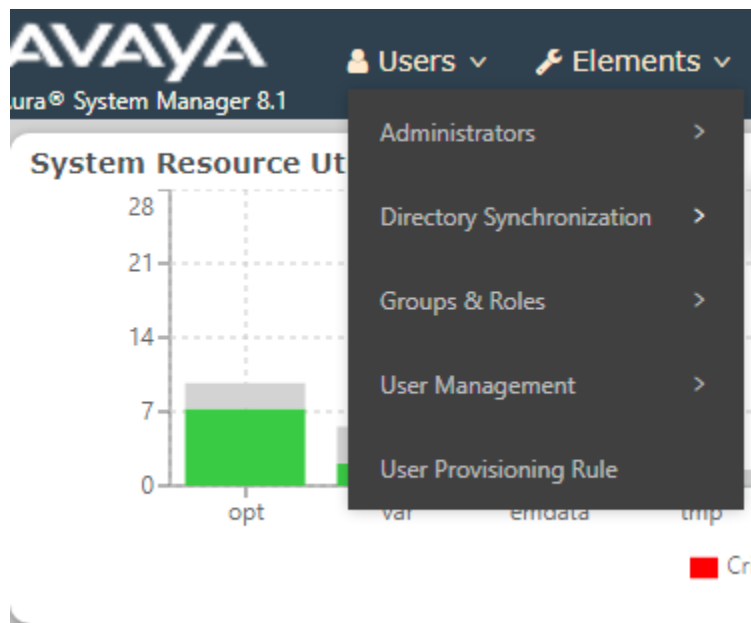
Click **Commit** to save **User Provisioning Rule**. The new User Provisioning Rule is shown in list below.

User Provisioning Rules

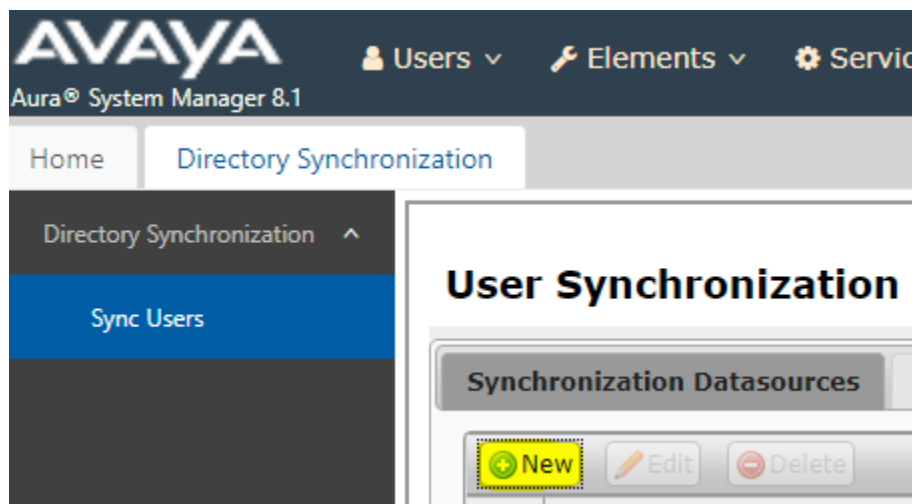
| <input type="button" value="View"/> <input type="button" value="Edit"/> <input type="button" value="New"/> <input type="button" value="Delete"/> <input type="button" value="Duplicate"/> | | |
|---|-----------------|----------------|
| 3 Items <input type="button" value="Show"/> All ▼ | | |
| <input type="checkbox"/> | Name | SIP Domain |
| <input type="checkbox"/> | DevConnect | devconnect.com |
| <input type="checkbox"/> | DevConnect-CM96 | devconnect.com |
| <input type="checkbox"/> | DevConnect-CM93 | devconnect.com |
| Select : All, None | | |

6.2. LDAP Sync Configuration

On the SMGR page, click on **Directory Synchronization** under the **Users** menu.



On the **User Synchronization** page, click **New** to create a data source for **System Manager** to synchronize with Active Directory.



On the **New User Synchronization Datasource** page, enter the required **Directory Parameters**.

| | |
|---------------------------|--|
| Datasource Name | Create a name to identify the LDAP Directory Server. This name will be required to create a sync job, i.e AD143 |
| Host | IP Address or host name of the directory server you want to sync users with, i.e 10.30.5.143 |
| Principal | LDAP Directory Server username that has write permissions to create/update users, i.e gnguyenanh@devc.com |
| Password | Password of the Principal (username above) to access LDAP Directory Server. |
| Port | LDAP Directory Server port number to enable System Manager connectivity. Default values are 389 for nonSSL connection and 636 for SSL connection. |
| Base Distinguished Name | Base DN is an element that works in conjunction with the search scope. It's the tree from which users are synced. The sub trees are not considered for syncing the users, i.e ou=DevConnect,dc=devc,dc=com |
| LDAP User Schema | Schema defines the object classes. The object class definitions define the list of attributes that must contain values and the list of attributes that may contain values. Definitions differ depending on your LDAP Directory Server. Default value is inetOrgPerson . |
| Search Filter | Search filter provides a mechanism for defining the criteria for matching entries in a LDAP search operation. |
| Use SSL | Checkbox to use SSL. |
| Allow Deletions | Checkbox to have System Manager delete previously sync users that have been deleted in the LDAP Directory Server. |
| Allow Null values in LDAP | The option to allow null values to be inserted by System Manager in LDAP. |

Edit User Synchronization Datasource

Directory Parameters

* Datasource Name

* Host

* Principal

* Password

* Port

* Base Distinguished Name

* LDAP User Schema

* Search Filter

Use SSL ☒

Allow Deletions ☒

Allow Null values in LDAP ☐

Click **Test Connection**. If the parameters that you enter are correct, the **New User Synchronization Datasource** page will expand to enable the administration of **Attribute Parameters**

Allow Null values in LDAP ☐

Attribute Parameters

| | | |
|----------------------|----|--|
| <input type="text"/> | -> | <input type="text" value="sourceUserKey"/> |
| <input type="text"/> | -> | <input type="text" value="loginName"/> |
| <input type="text"/> | -> | <input type="text" value="surname"/> |
| <input type="text"/> | -> | <input type="text" value="givenName"/> |
| <input type="text"/> | -> | <input type="text" value="displayName"/> |

Configure the five mandatory attribute mappings. These attributes are grayed out and can only be synced from the LDAP Directory Server to System Manager

| | | |
|-------------------|----|---------------|
| objectGUID | -> | sourceUserKey |
| userPrincipalName | -> | loginName |
| sn | -> | surname |
| givenName | -> | givenName |
| displayName | -> | displayName |

Click **Add Mapping** to configure optional attribute mappings:

| | | | |
|-----------------|----|---------------------------|--------|
| telephoneNumber | -> | Phone Number | Remove |
| description | + | User Provisioning Rule | Remove |
| mail | -> | Microsoft Exchange Handle | Remove |

Save Cancel

Click **Save** to save **User Synchronization Datasource**.

User Synchronization

| Synchronization Datasources | | | | Active Synchronization Jobs | Synchronization Job History |
|---|-------|-------------|---------------------|-----------------------------|-----------------------------|
| <div> New Edit Delete </div> | | | | | |
| | Name | Host | Search Filter | | |
| <input type="radio"/> | AD143 | 10.30.5.143 | userPrincipalName=* | | |
| Select : None | | | | | |

From **User Synchronization** page, select the **Active Synchronization Jobs** tab and then click on the **Create New Job** button.

| Synchronization Datasources | | | | Active Synchronization Jobs | Synchronization Job History |
|--|------------------------------------|--------------------|-------------------------|-----------------------------|-----------------------------|
| <div> Create New Job </div> | | | | | |
| Name | Next Execution Time | Recurring Interval | Action | | |
| DirectorySyncCleanupJob | January 31, 2021 1:18:31 PM +07:00 | Recursive | Delete Job | | |

To immediately start the synchronization, choose the datasource and click **Run Job**.

New User Synchronization Job

Datasource Name

AD143 ▼

Schedule job for future execution

















☐

Run Job

Cancel

On the **User Synchronization** page, and then click on the **Synchronization Job History** tab. Click on **View Job Summary** to view the details of the synchronization job


User Synchronization

| Synchronization Datasources | | | | | |
|--|-------------------------------------|-------------------------------------|-----------|----------------------------------|--|
| Active Synchronization Jobs | | | | | |
| Synchronization Job History | | | | | |
| 36 Items  | | | | | |
| Name | Start Time | End Time | Status | Job Result | Action |
| AD143 | December 15, 2020 5:28:43 PM +07:00 | December 15, 2020 5:28:43 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD143 | November 9, 2020 12:04:40 PM +07:00 | November 9, 2020 12:04:52 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD143 | November 6, 2020 7:46:04 PM +07:00 | November 6, 2020 7:46:10 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD143 | November 3, 2020 4:34:41 PM +07:00 | November 3, 2020 4:35:57 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | November 3, 2020 4:07:28 PM +07:00 | November 3, 2020 4:07:40 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | November 3, 2020 4:04:47 PM +07:00 | November 3, 2020 4:05:19 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | June 29, 2020 2:58:16 PM +07:00 | June 29, 2020 2:58:30 PM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | June 11, 2020 1:36:58 AM +07:00 | June 11, 2020 1:37:44 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | April 29, 2020 11:47:57 AM +07:00 | April 29, 2020 11:48:29 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | April 29, 2020 11:46:02 AM +07:00 | April 29, 2020 11:46:33 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | April 29, 2020 11:45:16 AM +07:00 | April 29, 2020 11:45:16 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD55 | April 29, 2020 5:00:00 AM +07:00 | April 29, 2020 5:00:00 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD79 | April 28, 2020 10:04:24 AM +07:00 | April 28, 2020 10:04:24 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD55 | April 28, 2020 10:04:15 AM +07:00 | April 28, 2020 10:04:15 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |
| AD55 | April 28, 2020 5:00:01 AM +07:00 | April 28, 2020 5:00:07 AM +07:00 | COMPLETED | View Job Summary |  Delete Job |

Page 1 of 3

The **Job Results** are shown below :

Job Results

| | | |
|--------------------------------|-----------|---|
| Added | 17 |  |
| Modified | 0 | |
| Deleted | 0 | |
| Unchanged | 0 | |
| Failed | 0 | |
| Total records processed | 17 | |

6.3. Configure Avaya Breeze™ and esuits² SPC Call Park Snap-in

esuits² SPC Call Park Snap-in is used to create a waiting area for calls. All SPC users can see and connect to the calls within this waiting area. This installation is only needed if waiting areas are requested.

This section describes the steps required to configure Avaya Breeze™ and esuits² SPC Call Park Snap-in. It is assumed that the Avaya Breeze™ has been installed and the installation is out of scope for this document. Configuration of Avaya Breeze™ is performed via Avaya Aura® System Manager.

6.3.1. Load esuits² SPC Call Park Snap-in

From the home screen, select **Elements** → **Avaya Breeze®** → **Server Administration**.

The screenshot shows the Avaya Aura System Manager 8.1 interface. The 'Elements' menu is open, displaying a list of components. 'Avaya Breeze®' is selected, and its sub-menu is shown, with 'Server Administration' highlighted. The background includes a 'System Resource Utilization' chart, an 'Alarms' section with a large yellow circle, and an 'Information' table listing system elements and their status.

Check that the server is in the state shown below.

Server Administration

This page allows you to view, edit and delete Avaya Breeze® server instances.

Avaya Breeze® Server Instances

Edit

New


Delete

System State

Shutdown System

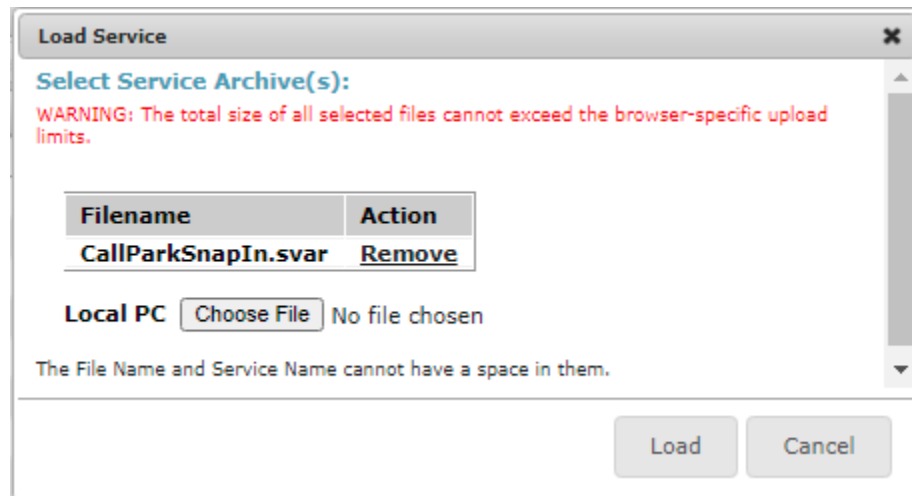
2 Items

Filter: Enable

| | Name | Cluster Name | Service Install Status | Tests Pass | Alarms | System State | Security Module | Activity | License Mode | Overload Status | Version | Last Reboot Status |
|-----------------------|--|--------------------------|------------------------|------------|--------|--------------|-----------------|----------|--------------|-----------------|----------------|-----------------------------|
| <input type="radio"/> | DevConnect-BreezeSIP | | ---- | ✓ | 0/0/0 | Denying | Up | ---- | ✓ | ✓ | 3.7.0.0.370008 | 2020-08-18 15:23:31 SUCCESS |
| <input type="radio"/> | <div><div> A</div>DevConnect-Presence</div> | Presence | ✓ | ✓ | 0/0/0 | Accepting | Up | 7 | ✓ | ✓ | 3.7.0.0.370008 | 2020-06-17 10:42:10 SUCCESS |

Select : None

Save the **CallParkSnapIn.svar** file provided by Engelbart somewhere on the PC used to access System Manager. Select **Service Management > Services** and click on **Load**. Click on **Browse** next to **Local PC** and select the svar file. Click on **Load**.



6.3.2. Create Avaya Breeze™ Cluster and Install CallParkSnapIn to Avaya Breeze™ Cluster

When returned to the Service Management page, the **ECI-SnapIn** is displayed as **Loaded**. Go to **Cluster Administration** from the left hand menu and click on **New**.

Select the **General Purpose** Profile from the drop down and fill in the **Cluster Name**.

The screenshot shows the 'Basic' configuration tab for a new cluster. The 'General' tab is selected, indicated by a red star. The 'Cluster Profile' dropdown is set to 'General Purpose'. The '*Cluster Name' field is highlighted with a black border and contains the text 'CallPark Cluster'. The 'Cluster Group' dropdown is set to '3'. The 'Cluster IPv4' and 'Cluster IPv6' fields are empty. The 'Cluster Fully Qualified Domain Name' field is empty. The 'Enable Cluster Database' checkbox is unchecked, and the 'Enable Database Auto Switchover' checkbox is checked. The 'Description' field is empty.

| Field | Value |
|-------------------------------------|-------------------------------------|
| Cluster Profile | General Purpose |
| *Cluster Name | CallPark Cluster |
| Cluster Group | 3 |
| Cluster IPv4 | |
| Cluster IPv6 | |
| Cluster Fully Qualified Domain Name | |
| Enable Cluster Database | <input type="checkbox"/> |
| Enable Database Auto Switchover | <input checked="" type="checkbox"/> |
| Description | |

Select the **Servers** tab and add the Avaya Breeze Server. Select the server using the + to the left of the **Unassigned Servers** list (not shown). The Server will move up into the **Assigned Servers** list for this cluster.

Cluster Editor Commit Cancel

General * **Servers** Services Reliable Eventing Groups

Assigned Servers *

1 Item Filter: Enable

| Name | Version | Description |
|------------------------|----------------|-------------|
| X DevConnect-BreezeSIP | 3.8.0.0.380018 | |

Unassigned Servers *

0 Items Filter: Enable

| Name | Version | Description |
|------|---------|-------------|
|------|---------|-------------|

*Required Commit Cancel

Select the **Services** tab and add the **CallParkSnapIn** version **1.0**, **CallEventControl** version **3.8.0.0.380019**, and **EventingConnector** version **3.8.0.0.380019** listed in **Available Services** list (not shown) using the '+'. The Services will be moved into the **Assigned Services** list.

General * Servers **Services** Reliable Eventing Groups

Assigned Services *

System Manager TLS version is: TLSv1.0

Select TLS Version for Selected Snap-in(s) *

4 Items Filter: Enable

| | Name | Version | Action Pending | TLS Version |
|--------------------------|-------------------|----------------|----------------|-------------|
| <input type="checkbox"/> | EventingConnector | 3.8.0.0.380019 | None | Default |
| <input type="checkbox"/> | CallEventControl | 3.8.0.0.380019 | None | Default |
| <input type="checkbox"/> | CallParkSnapIn | 1.0 | None | Default |
| <input type="checkbox"/> | ResourceService | 3.2.0.1.320111 | None | Default |

Select : All, None

When returned to the **Cluster Administration** screen, the cluster created will be in a **Denying** State. Click on the **Cluster State** drop down and select **Accept New Service**.

Cluster Administration

This page allows you to view, edit and delete Avaya Breeze® clusters.

Avaya Breeze® Clusters

3 Items

| | Details | Cluster Name | Cluster Group | Cluster IP | Cluster IPv6 | Cluster FQDN | Cluster Profile | Cluster State |
|-------------------------------------|----------------------|------------------|---------------|------------|--------------|--------------|-----------------|---------------|
| <input checked="" type="checkbox"/> | Show | CallPark Cluster | 3 | | | | General Purpose | Denying [1/1] |

6.3.3. Configure Service Profile on Avaya Breeze™

Add a new **Service Profile**, navigate to **Avaya Breeze™ > Configuration > Service Profiles** and select **New**.

- Type in a **Name** for the **Service Profile**
- Click **Add (+) CallParkSnapIn** in **Available Service**.
- Select **Commit**.

Service Profile Editor

Identity

*Name

Description

Services in this Service Profile

| All Services | | | |
|-----------------------------|--------------------------------|---------|-------------|
| Service Invocation Details | | | |
| 1 Item | | | |
| Remove from Service Profile | Name | Version | Description |
| | CallParkSnapIn | Latest* | My Service |

* The 'Latest' Service Profile version ensures that the latest version of a Service installed on the cluster is used for this Service Profile when a newer version is deployed.
** The 'Preferred' Service Profile version uses the version set as Preferred on the Service Management page for each particular cluster. If not set then Latest is used.

Available Service to Add to this Service Profile

| 8 Items | | |
|-----------------------------|----------------|-------------|
| Add to Service Profile | Name | Description |
| Advanced... | CallParkSnapIn | My Service |

6.3.4. Configure Avaya Aura® Session Manager

This section will help to assign new Call Park SnapIn Service to SIP Users. From SMGR Dashboard, Select **Elements** → **Session Manager** → **Application Configuration** from the left-hand menu and on the **Applications** screen click on **New**.

On the **Application Editor** screen, enter Application **Name** and select the Avaya Breeze **SIP Entity** to be used for the **Call Park Snap-In**. Click on **Commit** to save changes.

Application Editor

Commit Cancel

Application

*Name

Description

*SIP Entity

Application Attributes (optional)

| Name | Value |
|--------------------|----------------------|
| Application Handle | <input type="text"/> |
| URI Parameters | <input type="text"/> |

Application Media Attributes

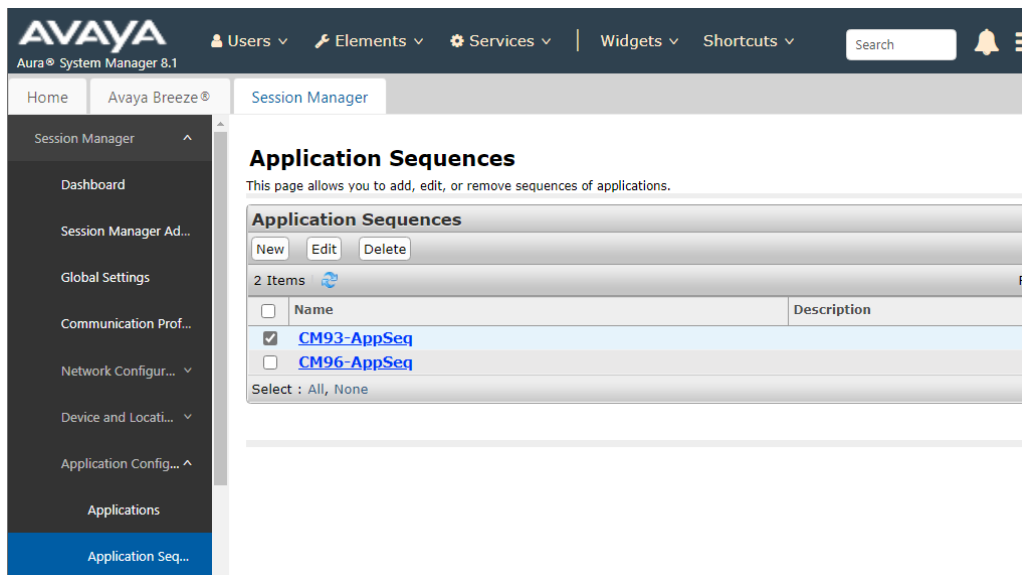
Enable Media Filtering ☐

| Audio | Video | Text | Match Type | If SDP Missing |
|----------------------------------|----------------------------------|----------------------------------|--|------------------------------------|
| <input type="text" value="YES"/> | <input type="text" value="YES"/> | <input type="text" value="YES"/> | <input type="text" value="NOT_EXACT"/> | <input type="text" value="ALLOW"/> |

*Required

Commit Cancel

Next, Select **Application Sequences** from the left-hand menu and from the **Application Sequences**. Select existing **Application Sequence** for SIP user and press **Edit**.



On the **Application Sequences Editor**, from the **Available Applications**, list select the **Application** added above. This will add the **CallParkSnapIn** Application to the **Applications in this Sequence** list as shown.

Application Sequence Editor Commit Cancel

Application Sequence

*Name

Description

Applications in this Sequence

Move First Move Last Remove

2 Items

| <input type="checkbox"/> | Sequence Order (first to last) | Name | SIP Entity | Mandatory |
|--------------------------|--------------------------------|----------------|----------------------|-------------------------------------|
| <input type="checkbox"/> | 1 | CM93 | DevConnect-CM93 | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | 2 | CallParkSnapIn | DevConnect-BreezeSIP | <input checked="" type="checkbox"/> |

Select : All, None

Available Applications

3 Items

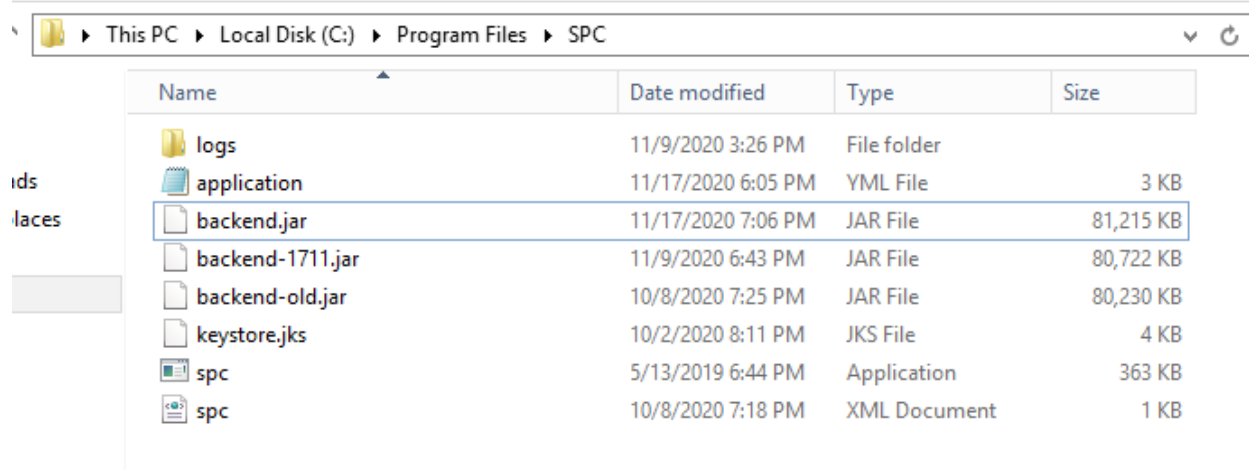
| <input type="checkbox"/> | Name | SIP Entity |
|-------------------------------------|----------------|----------------------|
| <input checked="" type="checkbox"/> | CallParkSnapIn | DevConnect-BreezeSIP |
| <input checked="" type="checkbox"/> | CM93 | DevConnect-CM93 |
| <input checked="" type="checkbox"/> | CM96 | DevConnect-CM96 |

*Required Commit Cancel

7. Configure Engelbart esuits² Special Purpose Console (SPC) Framework Server

It is implied a working Engelbart esuits² Special Purpose Console (SPC) Framework Solution include Engelbart BRE is already in place with the necessary licensing.

From Engelbart esuits² Special Purpose Console (SPC) Framework Server, go to the SPC installation folder, i.e **C:\Program Files\SPC**.



Select **application.yml** file and edit. Provide the following information for **ceci**, **ldap**, and **parked-call** servers.

```
eci:
  url: http://10.103.3.219:8080
  username: admin
  password: [REDACTED]
ldap:
  search-criteria: (&(objectClass=user)(sAMAccountName={0}))
  context-source:
    url: ldap://10.30.5.143:389
    base: OU=DevConnect,DC=devc,DC=com
    # base: OU=DevConnect,CN=DEVC,CN=COM
    user-dn: Administrator@devc.com
    password: [REDACTED]
parked-call:
  url: http://10.103.3.241/services/CallParkSnapIn
  username: snapinUser
  password: [REDACTED]
presence:
  enabled: false
message-queue:
  presenceQueue: presence_queue
  parkedCallQueue: parked_call_queue
```

8. Verification Steps

This section provides the verification steps that can be performed to verify proper configurations of Engelbart esuits² Special Purpose Console (SPC) Framework solution with Avaya Aura Environment.

8.1. Verify Status of Avaya Breeze™ Server

From the System Manager home screen, select **Session Manager** from **Elements** and under **Server Administration**. Verify that the Avaya Breeze server has a green tick under **Tests Pass** and **License Mode**. Verify that the **Security Module** is **Up**, and **System State** is **Accepting**.

Avaya Breeze® Server Instances

2 Items

| | Name | Cluster Name | Service Install Status | Tests Pass | Alarms | System State | Security Module | Activity | License Mode | Overload Status | Version | Last Reboot Status |
|-----------------------|--------------------------------------|----------------------------|------------------------|------------|--------|--------------|-----------------|----------|--------------|-----------------|----------------|-----------------------------|
| <input type="radio"/> | DevConnect-BreezeSIP | esuits2BRE | ✓ | ✓ | 0/0/0 | Accepting | Up | 0 | ✓ | ✓ | 3.7.0.0.370008 | 2020-08-18 15:23:31 SUCCESS |
| <input type="radio"/> | DevConnect-Presence | Presence | ✓ | ✓ | 0/0/0 | Accepting | Up | 7 | ✓ | ✓ | 3.7.0.0.370008 | 2020-06-17 10:42:10 SUCCESS |

Select : None

8.2. Verify Call Park SnapIn and Cluster

Verify that the **CallParkSnapIn** is showing as **Installed**.

All Services

42 Items

| <input type="checkbox"/> | Name | Version | Preferred Version | State | Deployment Type | License Mode | Avaya Signed |
|--------------------------|----------------------------------|------------------|-------------------|-------------|-----------------|----------------|--------------|
| <input type="checkbox"/> | AuthorizationService | 3.6.0.1.06360106 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | AuthorizationService | 3.6.0.2.360201 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | AuthorizationService | 3.6.0.3.360305 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | AuthorizationService | 3.7.0.0.01370008 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | AuthorizationService | 3.8.0.0.380019 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallEventControl | 3.6.0.2.360201 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallEventControl | 3.6.0.3.360305 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallEventControl | 3.7.0.0.01370008 | | ---- | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallEventControl | 3.8.0.0.380019 | | ✓ Installed | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallParkSnapIn | 1.0 | | ✓ Installed | Java | Not Applicable | Not Signed |
| <input type="checkbox"/> | CallServerConnector | 3.6.0.0.60110801 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | CallServerConnector | 3.8.0.0.13021042 | | ✓ Loaded | Java | Not Applicable | ✓ |
| <input type="checkbox"/> | ECI-SnapIn | 3.2.0.191 | | ---- | Java | Not Applicable | Not Signed |
| <input type="checkbox"/> | EmailConnector | 3.6.0.2.360201 | | ✓ Loaded | Java | Not Applicable | ✓ |

Verify that the **Cluster State** is **Accepting** and that the **Service Install Status** and **Tests Pass** have green ticks. Verify that **Data Grid Status** is **Up [1/1]**.

Cluster Administration

This page allows you to view, edit and delete Avaya Breeze® clusters.

Avaya Breeze® Clusters

Edit

New

Delete

Certificate Management

Cluster State

Backup and Restore

Reboot

3 Items

Filter: En

| <input type="checkbox"/> | Details | Cluster Name | Cluster Group | Cluster IP | Cluster IPv6 | Cluster FQDN | Cluster Profile | Cluster State | Alarms | Activity | Cluster Database | Data Replication | Service Install Status | Tests Pass | Data Grid Status | Overload Status |
|--------------------------|----------------------|------------------|---------------|------------|--------------|--------------|-------------------------|-----------------|--------|----------|------------------|------------------|------------------------|------------|------------------|-----------------|
| <input type="checkbox"/> | Show | CallPark Cluster | 3 | | | | General Purpose General | Accepting [1/1] | 0/0/0 | 0 | Disabled | ✓ | ✓ | ✓ | Up [1/1] | ✓ |

8.3. Verify User Registrations and Inbound/OutBound Call

From Chrome or Firefox browser, enter esuits² Special Purpose Console URL with port 7070.

Vermittler

10.103.3.220:7070/login?returnUrl=%2Fphone

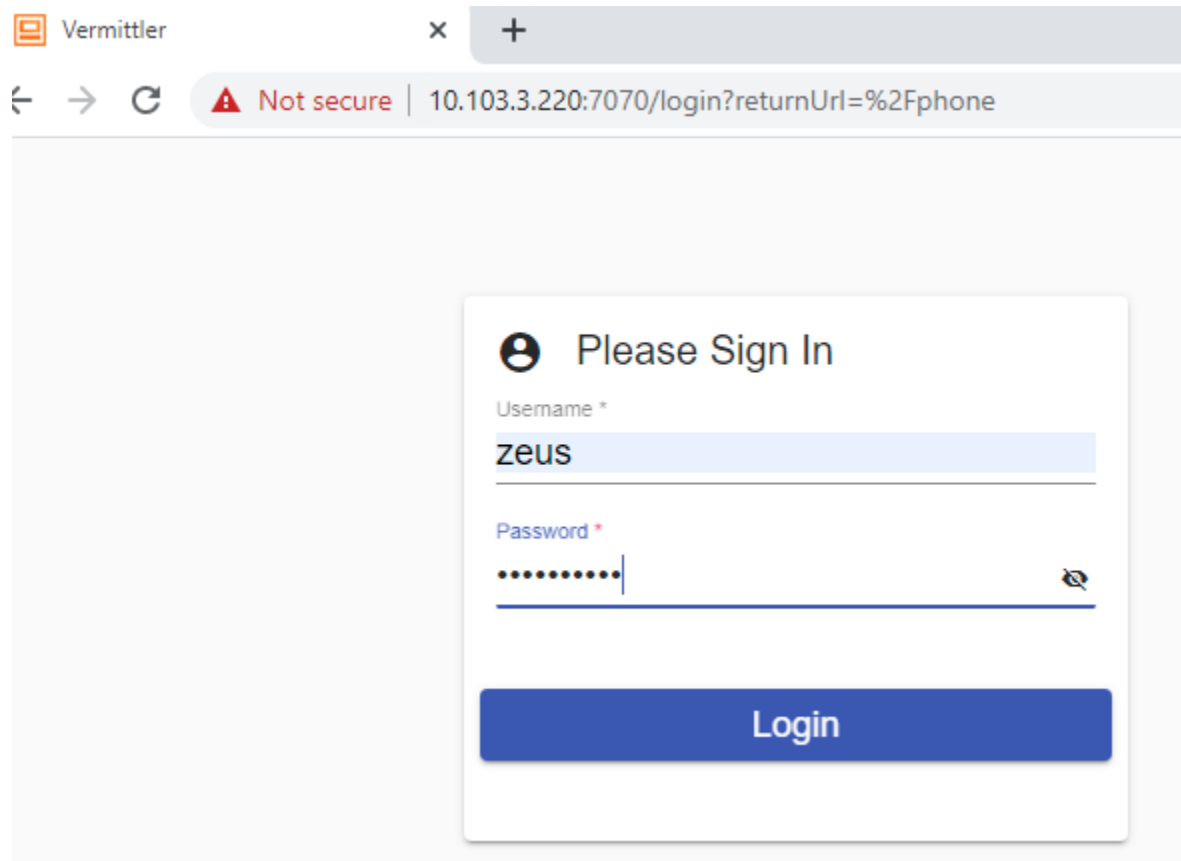
Please Sign In

Username *

Password *

Login


Enter LDAP user credentials already created in **Section 5** and press **Login**.



The screenshot shows a web browser window with the title 'Vermittler'. The address bar displays '10.103.3.220:7070/login?returnUrl=%2Fphone' with a 'Not secure' warning. The main content area features a 'Please Sign In' form. The form has a title 'Please Sign In' with a user icon, a 'Username *' field containing 'zeus', a 'Password *' field with masked characters and a toggle icon, and a blue 'Login' button.

Vermittler

Not secure | 10.103.3.220:7070/login?returnUrl=%2Fphone

 Please Sign In

Username *

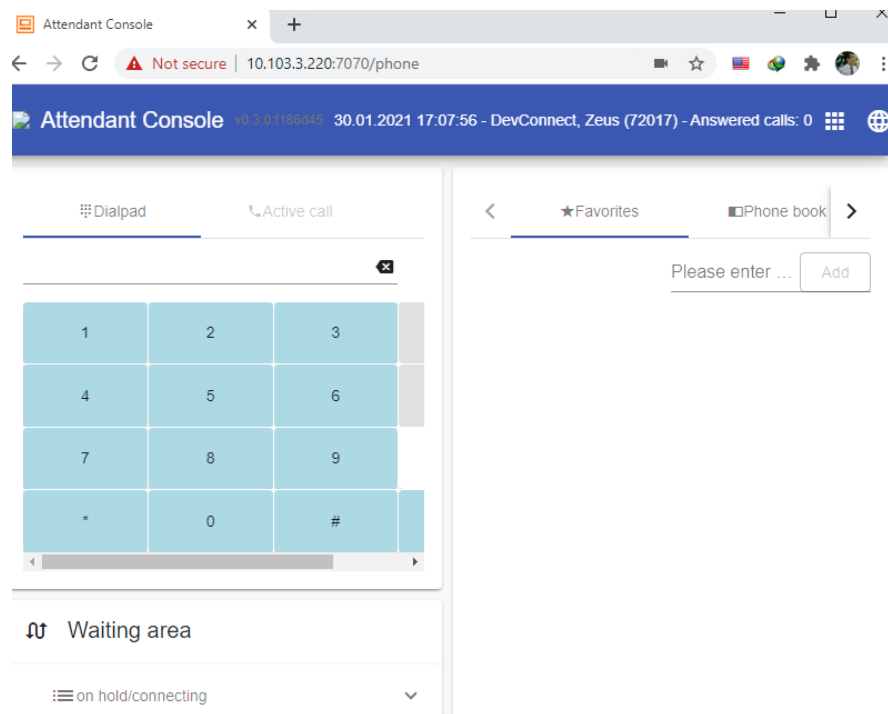
zeus

Password *

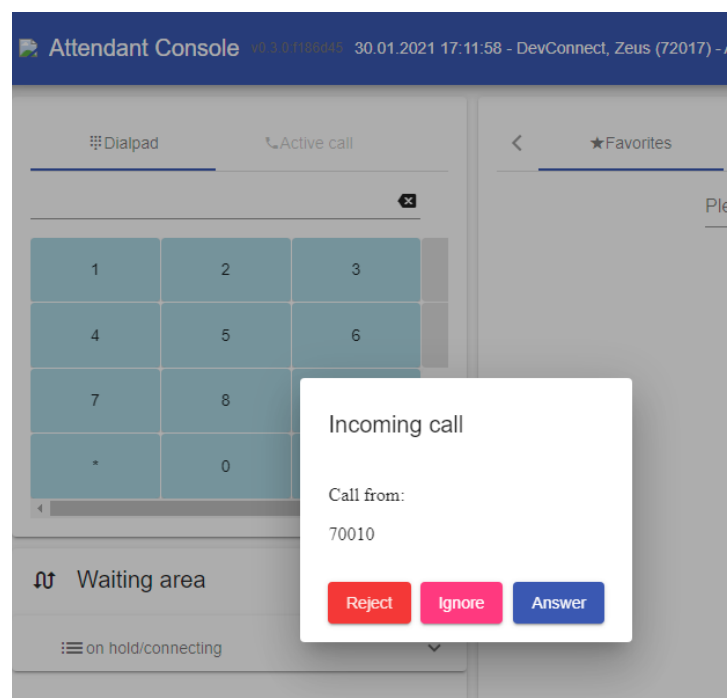
.....

Login

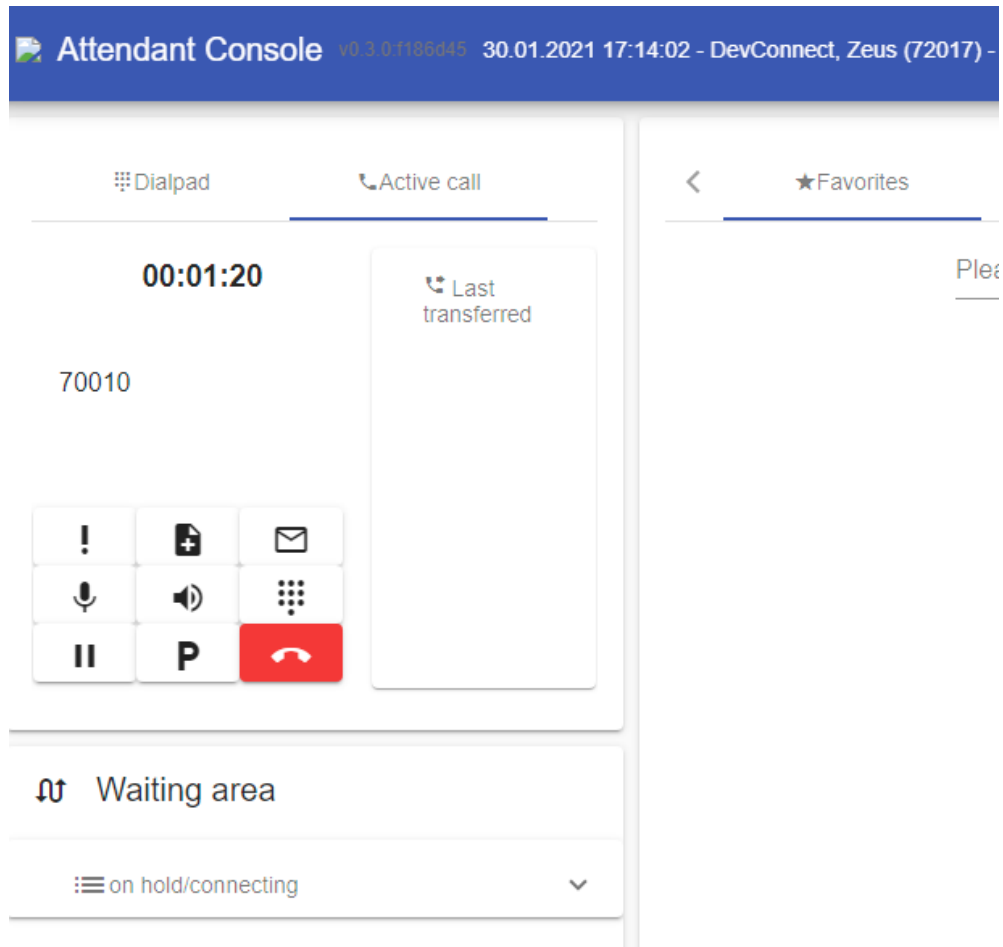
After logging in successfully, Attendant Console is shown below:



Make a call to this extension. An incoming call is shown below.



Press **Answer** and verify the audio path between the 2 clients.



8.4. Verify User Registrations on SMGR

From the SMGR Dashboard, go to **Elements** → **Session Manager** → **System Status**.

The screenshot displays the Avaya Aura System Manager 8.1 dashboard. The top navigation bar includes the Avaya logo and tabs for Users, Elements, Services, Widgets, and Shortcuts. The main content area is divided into three sections: System Resource Utilization, Alarms, and a list of system components. The System Resource Utilization section shows a bar chart with categories: opt, var, emdata, and t. The Alarms section shows a pie chart with categories: Critical, Major, Indeterminate, Minor, and Warning. The list of system components includes: Avaya Breeze, Communication Manager, Communication Server 1000, Conferencing, Device Adapter, Device Services, IP Office, Media Server, Meeting Exchange, Messaging, Presence, Routing, Session Manager, and Web Gateway. The Session Manager component is highlighted, and a sub-menu is displayed with the following options: Dashboard, Session Manager Administration, Global Settings, Communication Profile Editor, Network Configuration, Device and Location Configuration, Application Configuration, and System Status.

| Category | Value |
|----------|-------|
| opt | 7 |
| var | 7 |
| emdata | 14 |
| t | 1 |

| Category | Value |
|---------------|-------|
| Critical | 0 |
| Major | 0 |
| Indeterminate | 16 |
| Minor | 7 |
| Warning | 68 |

| Component | Value |
|---------------------------|-------|
| Avaya Breeze | 1 |
| Communication Manager | 1 |
| Communication Server 1000 | 1 |
| Conferencing | 1 |
| Device Adapter | 1 |
| Device Services | 1 |
| IP Office | 1 |
| Media Server | 1 |
| Meeting Exchange | 1 |
| Messaging | 1 |
| Presence | 1 |
| Routing | 1 |
| Session Manager | 1 |
| Web Gateway | 1 |

| Option | Value |
|-----------------------------------|-------|
| Dashboard | 1 |
| Session Manager Administration | 1 |
| Global Settings | 1 |
| Communication Profile Editor | 1 |
| Network Configuration | 1 |
| Device and Location Configuration | 1 |
| Application Configuration | 1 |
| System Status | 1 |

Select **User Registrations** in left pannel, and verify the user is logged in using the Web Gateway IP Address.

The screenshot shows the Avaya Aura System Manager 8.1 interface. The left sidebar contains a navigation menu with options like Global Settings, Communication Pro..., Network Configur..., Device and Locati..., Application Confi..., System Status, SIP Entity Monit..., Managed Band..., Security Modul..., SIP Firewall Stat..., Registration Su..., **User Registratio...**, and Session Counts. The main content area is titled 'User Registrations' and includes a table of registered users. The table has columns for Details, Address, First Name, Last Name, Actual Location, IP Address, Remote Office, and Share. The first row of data shows a user with IP address 10.30.5.138, which is highlighted in red and labeled 'Web Gateway IP address'.

| Details | Address | First Name | Last Name | Actual Location | IP Address | Remote Office | Share |
|-------------------------------|----------------------|------------|------------|-----------------|----------------|--------------------------|--------------------------|
| <input type="checkbox"/> Show | 72017@devconnect.com | Zeus | DevConnect | SaiGon | 10.30.5.138 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71015@devconnect.com | Ext7 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71014@devconnect.com | Ext6 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71013@devconnect.com | Ext5 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71012@devconnect.com | Ext4 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71010@devconnect.com | Ext2 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 71009@devconnect.com | Ext1 | BT | --- | 172.27.130.3 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 70001@devconnect.com | Ku | Go | --- | 10.128.224.164 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | 70000@devconnect.com | Quang | Nguyen | --- | 10.128.224.212 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | Eros | DevConnect | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | tran1 | Linh | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | Poseidon | DevConnect | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | Tran2 | Linh | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | Fernando | Torres | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Show | --- | Usopp | OP | --- | --- | <input type="checkbox"/> | <input type="checkbox"/> |

9. Conclusion

Engelbart Special Purpose Console (SPC) Framework solution was able to successfully interoperate with Avaya Aura® Environment and Avaya Breeze™.

10. 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 Avaya Breeze® platform*, Release 3.8 Issue 1 Sept 2020
- [4] *Administering the Avaya Aura® Web Gateway*, Release 3.8 Issue 2, July 2020

Documentation related to Engelbart can be obtained from <https://www.engelbart-software.com/>

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