Working with Avaya Session Border Controller for Enterprise Multi-tenancy

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Chapter 1: Introduction

Purpose

This document provides comprehensive information about setting up, maintaining, and using the Multi-tenancy feature.

Anyone who plans to work with this feature can use this document.

Chapter 2: Multi-tenancy overview

Overview

Avaya SBCE achieves multi-tenancy using multiple tenants, call servers, and Avaya SBCE interfaces. A tenant is a uniquely identifiable entity that obtains SIP-based Unified Communications services through Avaya SBCE.

Topology

This section explains some ways that tenants can be configured on Avaya SBCE.

The following scenario uses all four Avaya SBCE data interfaces. Avaya SBCE connects to two tenant networks, each with a unique set of remote workers. Avaya SBCE also connects to three other networks, each with a call server. Each call server is reached through a separate physical interface, which provides a measure of redundancy when one or more call servers stop responding.

Configuration example 1 : Multi-tenancy using multiple tenants, call servers, and Avaya SBCE interfaces

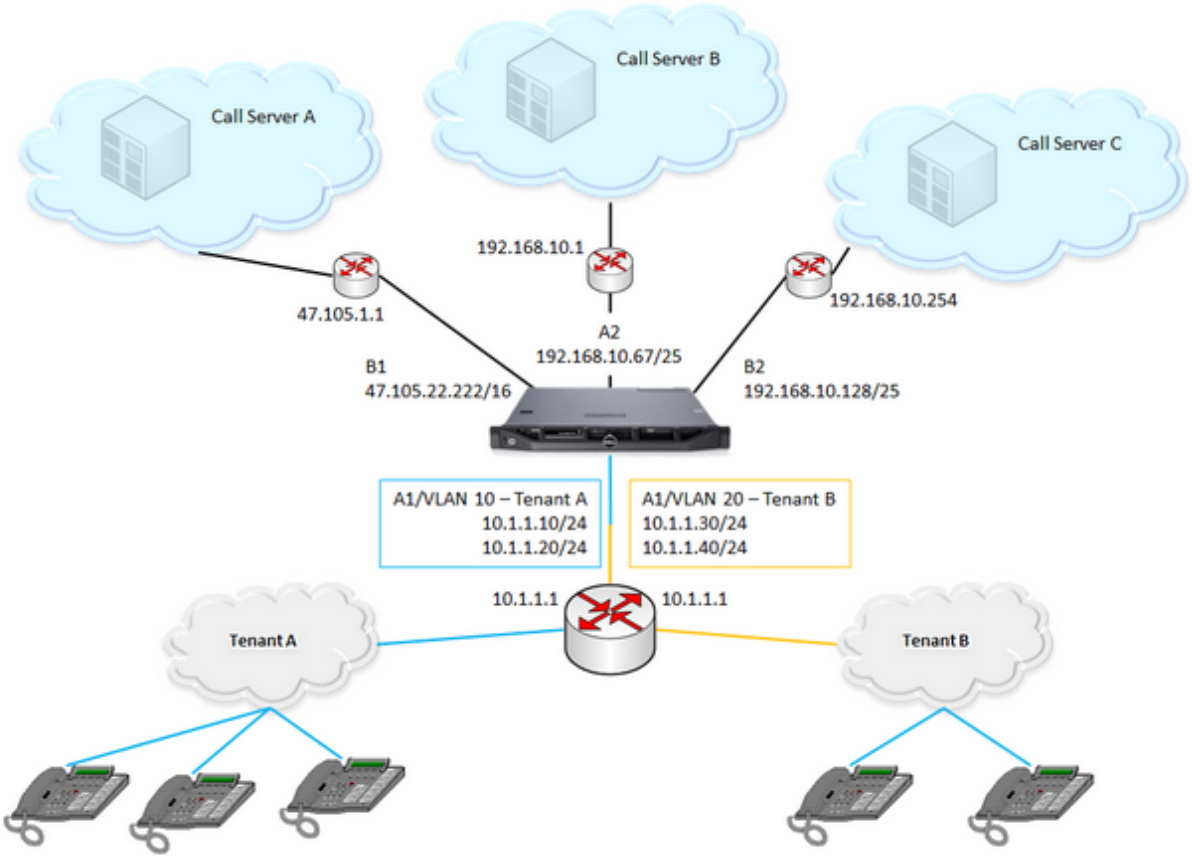


Figure 1: Multiple tenants, call servers, and Avaya SBCE interfaces

Configuration Example 2 : Multi-tenancy using the same IP address

Avaya SBCE supports the use of the same IP address on multiple data interfaces in Avaya SBCE. Customers often share the same address space and service IP address while using multitenant and cloud features. With support for using the same IP address more than one time, more than one customer can use the same IP address to connect to Avaya SBCE.

To permit the use of multiple instances of the same IP, the instances must exist on separate network interfaces, virtual network interfaces, or both. Avaya SBCE separates interface definition from network definition as follows:

- An interface is a combination of a physical port such as A1, A2, B1, and B2, and a vlan ID. A vlan ID can be **no vlan**.
- A network ties a set of Avaya SBCE IPs and gateways with an interface.

Therefore, for two instances of 1.2.3.10 on Avaya SBCE, you must define two interfaces and two networks, so that 1.2.3.10 occurs exactly once within each network.

In this scenario, Avaya SBCE connects to two tenant networks, each with a unique set of remote workers. However, the same IP address is assigned on Avaya SBCE on both the tenant networks.

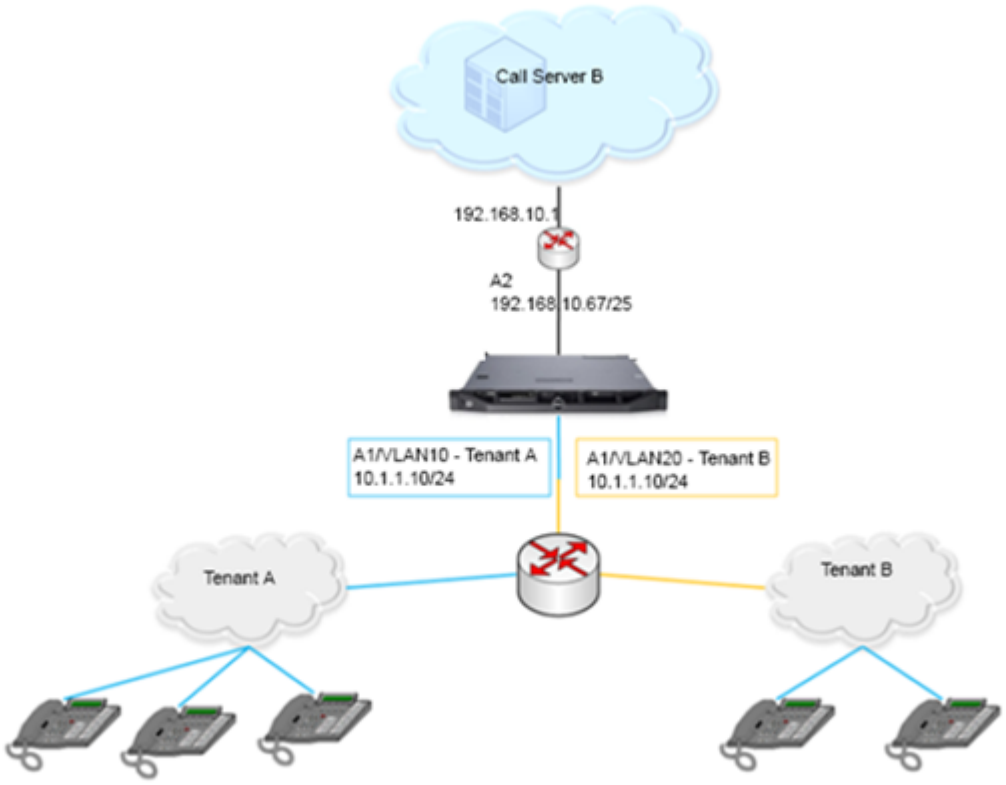


Figure 2: Multiple tenants using the same IP address

Chapter 3: Multi-tenancy example configuration for SIP Trunk Tenant

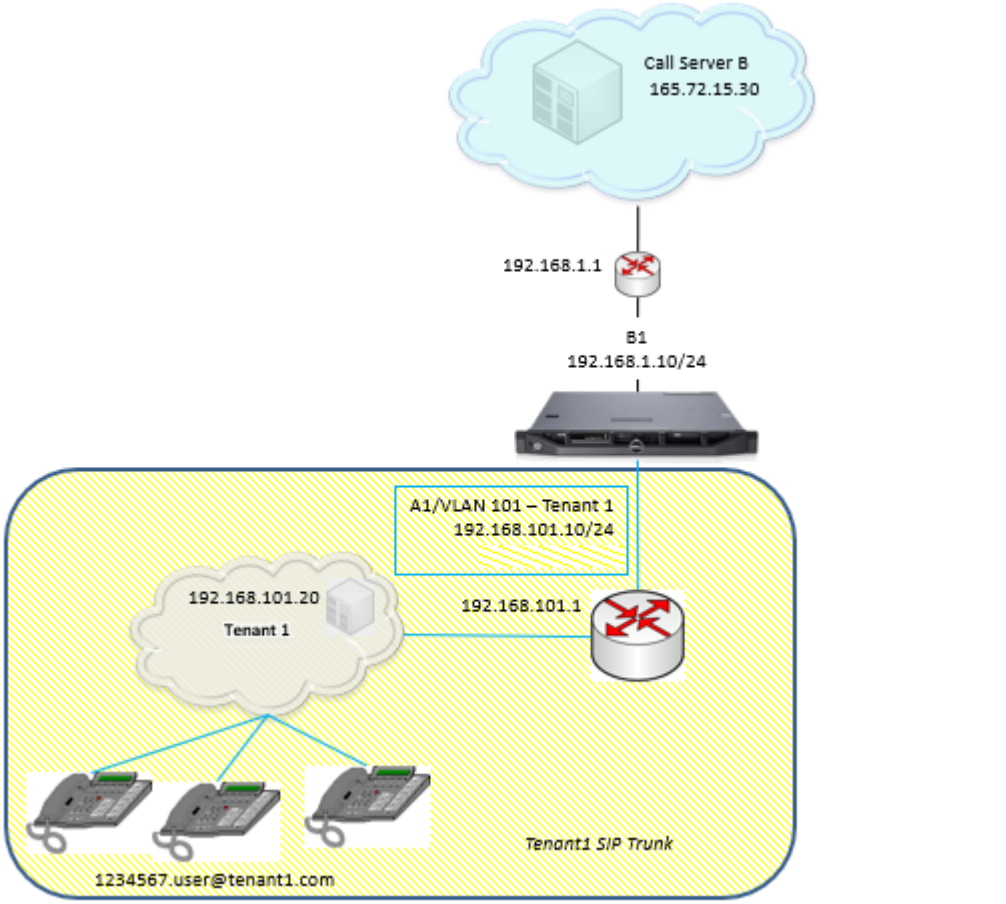
Overview

In this example, the tenant is a SIP trunk that communicates with the Avaya SBCE on a unique VLAN on the A1 interface. The Avaya SBCE provides interworking with a SIP server that is shared among all tenants and is reachable via the B1 interface.

The tenant reaches Avaya SBCE using an IP address on the above VLAN. The same IP is used for both signaling and media.

Each tenant uses a unique SIP domain. This can be used for routing calls to the correct tenant.

In this example, Avaya SBCE licensing is configured once and applies to all tenants.



Checklist for configuring Multi-tenancy

The following is a sample configuration of a SIP trunk tenant and SIP server on the Avaya SBCE.

No.	Task	Reference	✔
Tenant data configuration			
1	Configure the VLAN interface.	Configuring the VLAN interface on page 13	
2	Configure the tenant network.	Configuring the tenant network on page 14	
3	Create tenant signaling interface.	Creating a tenant signaling interface on page 14	
4	Create tenant media interface.	Creating a tenant media interface on page 15	
5	Configure the SIP trunk server.	Configuring the SIP trunk server on page 15	
6	Configure a tenant routing profile.	Configuring a tenant routing profile on page 16	

Table continues…

No.	Task	Reference	✔
7	Create a URI group.	Creating a URI group on page 17	
SIP server configuration			
8	Configure the SIP server network.	Configuring the SIP server network on page 17	
9	Create SIP server signaling interface.	Creating a SIP server signaling interface on page 18	
10	Create SIP server media interface.	Creating a SIP server media interface on page 18	
11	Configure a SIP call server	Configuring the SIP call server on page 19	
12	Configure a SIP server routing profile	Configuring a SIP server routing profile on page 19	
Connecting the SIP server and tenant			
13	Create a server flow for tenant trunk server	Configuring server flow for tenant trunk server on page 20	
14	Create a server flow for SIP call server.	Configuring server flow for SIP call server on page 21	
15	Repeat Steps 1-7 and Steps 13-14 for each tenant.	—	

In this example configuration, Avaya SBCE has been commissioned and named **SBCE**.

Configuring the first SIP trunk tenant

Configuring the VLAN interface

About this task

The tenant network connects to the Avaya SBCE over a VLAN. On the Avaya SBCE, a VLAN interface must be defined to support this connection. In this example, the A1 interface is the VLAN trunk.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Interfaces** tab.
4. Click **Add VLAN**.

5. In the **Name** field, enter `tenant1_vlan`.
6. In the **Interface** field, select **A1**.
7. In the **Tag** field, enter `101`.
8. Click **Finish**.

Configuring the tenant network

About this task

Use this procedure to assign an IP address for Avaya SBCE to use for communicating with the tenant network. This IP address is assigned to the A1 VLAN interface for the tenant.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. Click **Add**.
5. In the **Name** field, enter `tenant1_network`.
6. In the **Gateway** field, enter `192.168.101.1`.
7. In the **Subnet mask** field, enter `255.255.255.0`.
8. In the **Interface** field, select the VLAN interface created in the earlier section.
9. In the **IP address** field, enter `192.168.101.10`.
10. Click **Finish**.

Creating a tenant signaling interface

About this task

Use this procedure to configure the interface for SIP signaling using the available network configuration. This interface allows SIP sessions to take place.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add** .

4. In the **Name** field, enter `SM1_tenant1`.
5. In the **IP address** field, select **192.168.101.10** and select the VLAN interface created in the earlier section.
6. In the **TCP Port** field, enter `5060`.
7. Click **Finish**.

Creating a tenant media interface

About this task

Use this procedure to configure the interface for SIP media using the available network configuration. This interface allows SIP media to flow through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add** .
4. In the **Name** field, enter `Med_tenant1`.
5. In the **IP address** field, select **192.168.101.10** and select the VLAN interface created in the earlier section.
6. Click **Finish**.

Configuring the SIP trunk server

About this task

SIP sessions belonging to this tenant use a SIP server, for example, a SIP PBX. Use this procedure to configure Avaya SBCE with the contact details for this SIP trunk server.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant1_trunk_server`.
5. Click **Next**.
6. In the **Server type**, select **Trunk Server**.

7. In the **IP Address/FQDN** field, enter `192.168.101.20`.
8. In the **Port** field, enter `5060`.
9. In the **Transport** field, enter `TCP`.
10. Click **Next**.
11. In the Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.
12. In the Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
13. In the Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
14. In the Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
15. In the Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Configuring a tenant routing profile

About this task

The Avaya SBCE is between the trunk and the SIP server. When a SIP message arrives from the SIP server, the Avaya SBCE must know where to forward the message. Use this procedure to set a routing profile that specifies a next-hop for the SIP message. You can also set other criteria to make a routing decision.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant1_routing`.
5. Click **Next**.
6. On the **Profile: Trunk Edit Rule** page, leave the default values and click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select `tenant1_trunk_server`.
9. Click **Finish**.

Creating a URI group

About this task

When a SIP request arrives from the server, the Avaya SBCE must know which tenant the request should be directed to. Use this procedure to create a URI group for the tenants. The URI group defines what a user contact looks like for this tenant. It is used later when creating flows to connect the Aura and tenant.

Note that if each tenant uses a unique SIP domain, you can create a URI group for each tenant.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add** on the left of the page.
4. In the **Name** field, enter `URI1`.
5. In the **Type** field, select **Regular expression**.
6. In the **URI(s)** field, enter `[0-9]{7}\.user@tenant1\.com`.
7. Click **Finish**.

Configuring SIP server data

Configuring the SIP server network

About this task

Use this procedure to configure an address on B1 for communicating with the SIP server for Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management** .

   The EMS server displays the Network Management page.
3. On the Network Management page, click **Networks** tab.
4. In the **Name** field, enter `SIPServer1_network`.
5. Click **Add**.
6. In the **Gateway** field, enter `192.168.1.1`.
7. In the **Subnet mask** field, enter `255.255.255.0`.

8. In the **Interface** field, select `B1`.
9. In the **IP address** field, enter `192.168.1.10`.
10. Click **Finish**.

Creating a SIP server signaling interface

About this task

Use this procedure to create a signaling interface to support SIP signaling with the SIP call server for the Avaya SBCE. This interface groups an IP address and network interface with TCP and UDP signaling ports.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add**.
4. In the **Name** field, enter `SM_SIPServer1`.
5. In the **IP address** field, enter `192.168.1.10` and the VLAN interface created in the earlier section.
6. In the **TCP Port** field, enter `5060`.
7. Click **Finish**.

Creating a SIP server media interface

About this task

Use this procedure to create a media interface to support SIP media to and from the SIP call server for the Avaya SBCE. This interface groups an IP address and network interface with a range of UDP ports that will be used for SIP media.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add**.
4. In the **Name** field, enter `sip_server1`.
5. In the **IP address** field, enter `192.168.1.10` and the VLAN interface created in the earlier section.
6. Click **Finish**.

Configuring the SIP call server

About this task

The Avaya SBCE is between the tenant and the SIP call server (for example, an Avaya Aura® call server). A SIP server may be unique to a tenant, or it may be shared among several tenants once it has been configured. Use this procedure to configure the Avaya SBCE with contact details for the call server.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `SIP_call_server1`.
5. Click **Next**.
6. In the **Server type**, select `Call Server`.
7. In the **IP Address/FQDN** field, enter `165.72.15.30`.
8. In the **Port** field, enter `5060`.
9. In the **Transport** field, enter `TCP`.
10. Click **Next**.
11. In Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.
12. In Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
13. In Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
14. In Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
15. In Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Configuring a SIP server routing profile

About this task

The Avaya SBCE is between the trunk and the SIP server. When a SIP message arrives from the SIP server, the Avaya SBCE must know where to forward the message. Use this procedure to set a routing profile that specifies a next-hop for the SIP message. You can also set other criteria to make a routing decision.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add** on the left-side of the page.

4. In the **Profile Name** field, enter `SIPServer1_routing`.
5. Click **Next**.
6. Click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select`SIP_call_server1`.
9. Click **Finish**.

Connecting the tenant and call server with endpoint flows

Configuring server flow for tenant trunk server

About this task

Use this procedure to configure the server flows that are types of endpoint flow in SIP trunking. You must specify the defined server and tenant relation for Avaya SBCE so that packets can flow between them.

Before you begin

Define a flow for routing SIP requests from the tenant to the call server. The corresponding responses will automatically be routed back to the endpoint from which they came (the tenant1 trunk server, for example).

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows** .
4. Click **Add**.
5. In the **Flow Name** field, enter `tenant1_to_server`.
6. In the **SIP Server** Profile, select **tenant1_trunk_server**.
7. In the **Received Interface** field, select **SM_SIPServer1**.
8. In the **Signaling Interface** field, select **SM1_tenant1**.
9. In the **Media Interface** field, select **Med_tenant1.**
10. In the **Routing Profile** field, select **SIPServer1_routing**.
11. Click **Finish**.

Configuring server flow for SIP call server

About this task

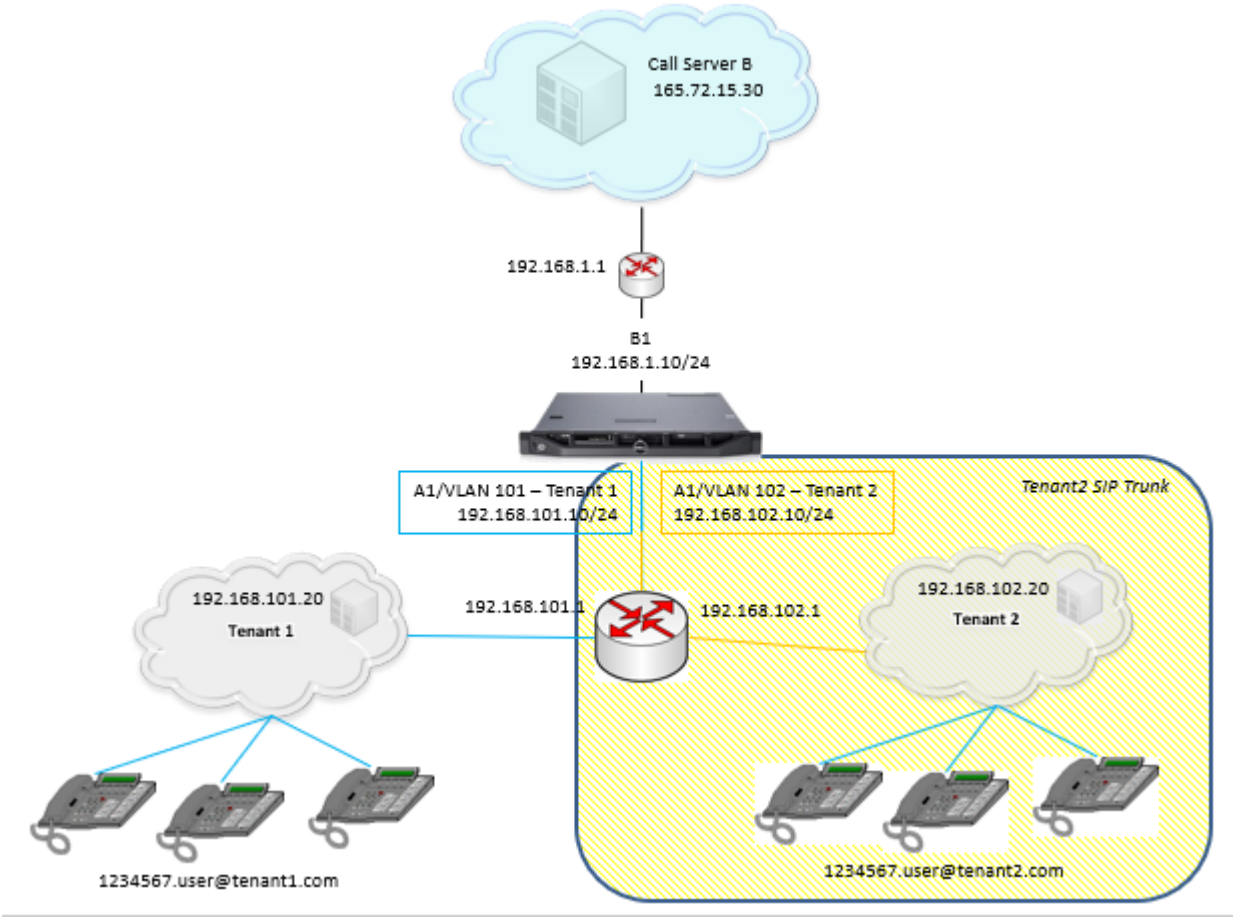
You can use this procedure to define a flow for routing SIP requests from the call server to tenant1. The corresponding responses will automatically be routed back to the endpoint from which they came (the call server, for example).

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. Click **Add**.
5. In the **Flow Name** field, enter `server-to-tenant1`.
6. In the **SIP Server** Profile, select **SIP_call_server1**.
7. In the **URI group** field, select **URI1**.
8. In the **Received Interface** field, select **SM1_tenant1.**
9. In the **Signaling Interface** field, select **SM_SIPServer1**.
10. In the **Media Interface** field, select **sip_server1**.
11. In the **Routing Profile** field, select **tenant2_routing**.
12. Click **Finish**.

Configuration of the second SIP trunk tenant using the same SIP call server



Configuring the VLAN interface

About this task

The tenant network connects to the Avaya SBCE over a VLAN. On the Avaya SBCE, a VLAN interface must be defined to support this connection. In this example, the A1 interface is the VLAN trunk.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Interfaces** tab.

4. Click **Add VLAN**.
5. In the **Name** field, enter `tenant2_vlan`.
6. In the **Interface** field, select **A1**.
7. In the **Tag** field, enter `102`.
8. Click **Finish**.

Configuring the tenant network

About this task

Use this procedure to assign an IP address for Avaya SBCE to use for communicating with the tenant network. This IP address is assigned to the A2 VLAN interface for the tenant.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. In the **Name** field, enter `tenant2_network`.
5. Click **Add**.
6. In the **Gateway** field, enter `192.168.102.1`.
7. In the **Subnet mask** field, enter `255.255.255.0`.
8. In the **Interface** field, select **tenant2_vlan**.
9. In the **IP address** field, enter `192.168.102.10`.
10. Click **Finish**.

Creating a tenant signaling interface

About this task

Use this procedure to configure the interface for SIP signaling using the available network configuration. This interface allows SIP sessions to take place.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.

3. Click **Add** .
4. In the **Name** field, enter `SM1_tenant2`.
5. In the **IP address** field, select **192.168.102.10** and interface **tenant2_vlan**.
6. In the **TCP Port** field, enter `5060`.
7. Click **Finish**.

Creating a tenant media interface

About this task

Use this procedure to configure the interface for SIP media using the available network configuration. This interface allows SIP media to flow through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add** .
4. In the **Name** field, enter `Med_SM2`.
5. In the **IP address** field, select **192.168.102.10** and interface **tenant2_vlan**.
6. Click **Finish**.

Configuring the SIP trunk server

About this task

SIP sessions belonging to this tenant use a SIP server, for example, a SIP PBX. Use this procedure to configure Avaya SBCE with the contact details for this SIP trunk server.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant2_trunk_server`.
5. Click **Next**.
6. In the **Server type**, select **Trunk Server**.

7. In the **IP Address/FQDN** field, enter `192.168.102.20`.
8. In the **Port** field, enter `5060`.
9. In the **Transport** field, enter `TCP`.
10. Click **Next**.
11. In Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.
12. In Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
13. In Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
14. In Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
15. In Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Configuring a tenant routing profile

About this task

The Avaya SBCE is between the trunk and the SIP server. When a SIP message arrives from the SIP server, the Avaya SBCE must know where to forward the message. Use this procedure to set a routing profile that specifies a next-hop for the SIP message. You can also set other criteria to make a routing decision.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant2_routing`.
5. Click **Next**.
6. On the **Profile: tenant2_routing Edit Rule** page, leave the default values and click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select `tenant2_trunk_server`.
9. Click **Finish**.

Creating a URI group

About this task

When a SIP request arrives from the server, the Avaya SBCE must know which tenant the request should be directed to. Use this procedure to create a URI group for the tenants. The URI group

defines what a user contact looks like for this tenant. It is used later when creating flows to connect the Aura and tenant.

Note that if each tenant uses a unique SIP domain, you can create a URI group for each tenant.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add**.
4. In the **Name** field, enter `URI2`.
5. In the **Type** field, select **Regular Expression**.
6. In the **URI(s)** field, enter `[0-9]{7}\.user@tenant2\.com`.
7. Click **Finish**.

Connecting the tenant and call server with end point flows

Configuring server flow for tenant trunk server

About this task

Use this procedure to configure the server flows that are types of endpoint flow in SIP trunking. You must specify the defined server and tenant relation for Avaya SBCE so that packets can flow between them.

Define a flow for routing SIP requests from the tenant to the call server. The corresponding responses will automatically be routed back to the endpoint from which they came.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows** .
4. Click **Add**.
5. In the **Flow Name** field, enter `tenant2_to_server`.
6. In the **SIP Server** Profile, select **tenant2_trunk_server**.
7. In the **Received Interface** field, select **SM_SIPServer1**.
8. In the **Signaling Interface** field, select **SM1_tenant2**.
9. In the **Media Interface** field, select **Med_SM2.**

10. In the **Routing Profile** field, select **SIPServer1_routing**.
11. Click **Finish**.

Configuring server flow for SIP call server

About this task

Define a flow for routing SIP requests from the call server to tenant2. The corresponding responses will automatically be routed back to the endpoint from which they came.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. Click **Add**.
5. In the **Flow Name** field, enter `server-to-tenant2`.
6. In the **SIP Server** Profile, select **SIP_call_server1**.
7. In the **URI group** field, select **URI2**.
8. In the **Received Interface** field, select **SM1_tenant2.**
9. In the **Signaling Interface** field, select **SM_SIPServer1**.
10. In the **Media Interface** field, select **sip_server1**.
11. In the **Routing Profile** field, select **tenant2_routing**.
12. Click **Finish**.

Chapter 4: Multi-tenancy example configuration for Powered By IP Office

Configuration of Avaya SBCE to support multi-tenancy in a Powered by IP Officedeployment

You can configure Avaya SBCE to support multi-tenancy in a Powered by IP Officedeployment. You can see the schematic representations of configuration for Tenant 1 and Tenant 2 on the figures below. Each tenant in this example consists of a set of remote workers and a corresponding set of IP Office components.

The example also includes a carrier SIP trunk to support PSTN access.

On the Avaya SBCE, the system uses the same IP addresses and interfaces to support each tenant.

In this example, Avaya SBCE licensing is configured once and applied to all tenants.

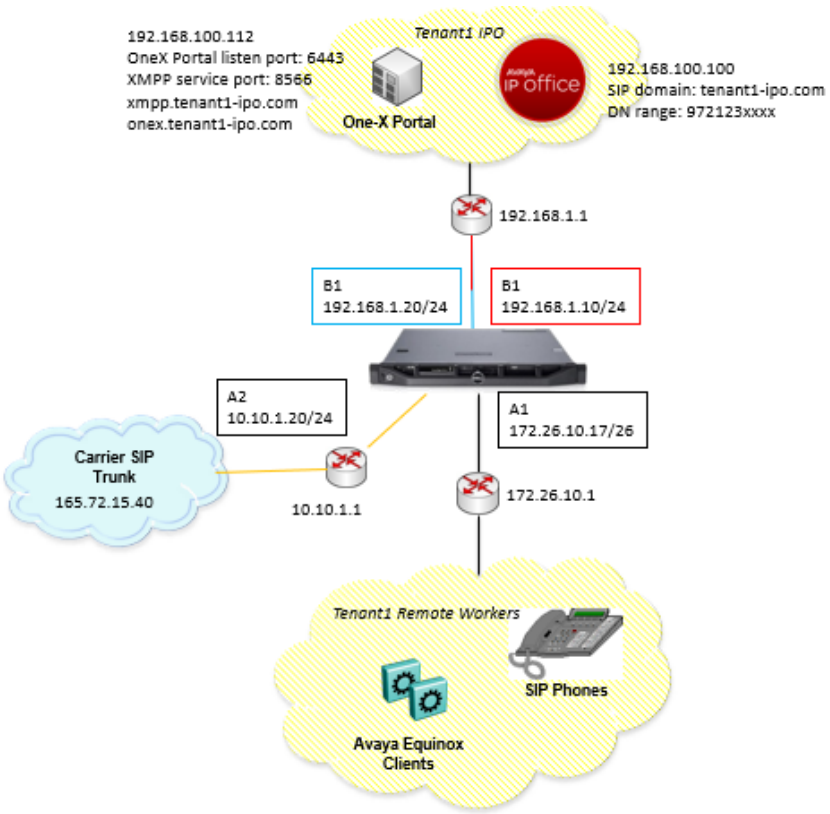


Figure 3: Configuration of Tenant 1 in a Powered by IP Officedeployment

Checklist for configuring Multi-tenancy for Powered by IP Office deployment

The following is a sample configuration of Avaya SBCE to support multi-tenancy in a Powered by IP Office deployment.

No.	Task	Reference	✔
Global Configuration			
1	Configuring the tenant network for communicating with tenant IP Office deployments	Configuring the tenant network for IP Office on page 31	
2	Editing the tenant network for IP Office trunk traffic	Editing the tenant network on page 32	

Table continues…

No.	Task	Reference	✔
3	Configuring the tenant network for communicating with tenant the SIP server	Configuring the tenant network for remote workers on page 33	
4	Configuring the tenant network for carrier trunk traffic	Configuring the tenant network for carrier trunk traffic on page 33	
5	TLS Configuration	-	
6	Create signaling interface for IP Office	Creating a tenant signaling interface for IP Office on page 34	
7	Create media interface for IP Office	Creating a tenant media interface for IP Office on page 34	
8	Create signaling interface for tenant remote workers	Creating a tenant signaling interface for remote workers on page 35	
9	Create media interface for tenant remote workers	Creating a tenant media interface for remote workers on page 35	
10	Create signaling interface for carrier trunk	Creating a tenant signaling interface for carrier trunks on page 36	
11	Create media interface for carrier trunk	Creating a tenant media interface for carrier trunks on page 36	
12	Create signaling interface for IP Office trunk	Creating a tenant signaling interface for IP Office trunk on page 37	
13	Create media interface for IP Office trunk	Creating a tenant media interface for IP Office trunk on page 37	
14	Create reverse Proxy Policy for Avaya one-X® Portal Access	Creating Reverse Proxy Policy for Avaya one-X Portal Access on page 38	
15	Configure the carrier SIP trunk server	Configuring the carrier SIP trunk server on page 38	
16	Configure trunk routing profile for trunk to IP Office	Configuring a tenant routing profile for carrier trunk to IP Office on page 39	
17	Configure trunk routing profile for IP Office to trunk	Configuring a tenant routing profile for IP Officeto carrier trunk on page 39	
18	Create server flow for carrier trunk	Configuring server flow for carrier trunk on page 40	
Configuring tenant1			
19	Create SIP server profile	Configuring the SIP call server on page 41	
20	Create URI group	Creating URI group on page 41	
21	Create routing profile for SIP server	Configuring a routing profile for SIP server on page 42	
22	Create subscriber flow for remote worker	Creating subscriber flow for remote worker on page 43	

Table continues…

No.	Task	Reference	✔
23	Create server flow for IP Office	Creating server flow for IP Office on page 46	
24	Create reverse proxy relay service for Avaya one-X® Portal	Creating reverse proxy relay service for Avaya one-X Portal on page 44	
25	Add a new XMPP profile	Creating XMPP relay service for Avaya one-X Portal on page 45	
26	Configure WebRTC	-	
27	Create server flow for IP Office	Creating server flow for IP Office on page 46	
28	Add a routing rule to the tenant IP Office routing profile	Adding a routing rule to the tenant IP Office routing profile on page 46	
Configuring tenant2			
29	Create SIP server profile	Configuring the SIP call server on page 48	
30	Create URI group	Creating URI group on page 48	
31	Create routing profile for SIP server	Configuring a routing profile for SIP server on page 49	
32	Create subscriber flow for remote worker	Creating subscriber flow for remote worker on page 50	
33	Create server flow for IP Office	Configuring server flow for IP Office on page 51	
34	Create reverse proxy relay service for Avaya one-X® Portal	Creating reverse proxy relay service for Avaya one-X Portal on page 51	
35	Add a new XMPP profile	Creating XMPP relay service for Avaya one-X Portal on page 52	
36	Configure WebRTC	-	
37	Create server flow for IP Office	Configuring server flow for IP Office on page 51	
38	Add a routing rule to the tenant IP Office routing profile	Adding a routing rule to the tenant IP Office routing profile on page 53	

Global configuration

Configuring the tenant network for IP Office

About this task

Use this procedure to configure the tenant network for communicating with tenant IP Office deployments. Avaya SBCE needs an address on B1 for communicating with tenant IP Office deployments.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. Click **Add**.
5. In the **Name** field, enter `B1-tenant-IPO`.
6. In the **Gateway** field, enter `192.168.1.1`.
7. In the **Subnet mask** field, enter `255.255.255.0`.
8. In the **Interface** field, select **B1**.
9. In the **IP address** field, enter `192.168.1.10`.
10. Click **Finish**.

Editing the tenant network

About this task

Use this procedure to edit the tenant network for IP Office trunk traffic.

Avaya SBCE uses a different address on B1 to support the carrier SIP trunk traffic to and from the tenant IP Office clouds. All tenant IP Office deployments use this same address on the Avaya SBCE for carrier SIP trunk traffic.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. For the **B1-tenant-IPO** network, click **Edit**.
5. Click **Add**.
6. In the **IP address** field, enter `192.168.1.20`.
7. Click **Finish**.

Configuring the tenant network for remote workers

About this task

Use this procedure to configure the tenant network for communicating with the SIP server. For that, Avaya SBCE needs an address on A1.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. Click **Add**.
5. In the **Name** field, enter `A1-tenant-RW`.
6. In the **Gateway** field, enter `172.26.10.1`.
7. In the **Subnet mask** field, enter `255.255.255.0`.
8. In the **Interface** field, select **A1**.
9. In the **IP address** field, enter `172.26.10.17`.
10. Click **Finish**.

Configuring the tenant network for carrier trunk traffic

About this task

Use this procedure to configure an address on A2 interface to support SIP trunk traffic to and from the carrier PSTN gateway for Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Network Management**.

   The EMS server displays the Network Management page.
3. On the Network Management page, click the **Networks** tab.
4. In the **Name** field, enter `A2-carrier-trunk`.
5. In the **Gateway** field, enter `10.10.1.1`.
6. In the **Subnet mask** field, enter `255.255.255.0`.
7. In the **Interface** field, select **A2**.

8. In the **IP address** field, enter `10.10.1.20`.
9. Click **Finish**.

Creating a tenant signaling interface for IP Office

About this task

Use this procedure to configure the signaling interface to support SIP signaling with the tenant IP Office. In Avaya SBCE, this interface groups an IP address and network interface with TCP and UDP signaling ports.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add**.
4. In the **Name** field, enter `B1-tenant-sig`.
5. In the **IP Address** field, select **192.168.1.10** and select the B1-tenant-IPO network.
6. In the **TCP Port** field, enter `5060`.
7. In the **UDP Port** field, enter `5060`.
8. Click **Finish**.

Creating a tenant media interface for IP Office

About this task

Use this procedure to configure the media interface to support RTP/RTCP media packets to and from the tenant IP Office. In Avaya SBCE, this interface groups an IP address and network interface with a UDP port range.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add**.
4. In the **Name** field, enter `B1-tenant-med`.
5. In the **IP address** field, select **192.168.1.10** and select the B1-tenant-IPO network.
6. Click **Finish**.

Creating a tenant signaling interface for remote workers

About this task

Use this procedure to configure the signaling interface to support SIP signaling with the tenant remote workers. In Avaya SBCE, this interface groups an IP address and network interface with TCP and UDP signaling ports.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add**.
4. In the **Name** field, enter `A1-tenant-sig`.
5. In the **IP address** field, select **172.26.10.17** and select A1-tenant-RW network.
6. In the **TCP Port** field, enter `5060`.
7. In the **UDP Port** field, enter `5060`.
8. Click **Finish**.

Creating a tenant media interface for remote workers

About this task

Use this procedure to configure the media interface to support RTP/RTCP media packets to and from the tenant remote workers. In Avaya SBCE, this interface groups an IP address and network interface with a UDP port range.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add**.
4. In the **Name** field, enter `A1-tenant-med`.
5. In the **IP address** field, select **172.26.10.17** and select the A1-tenant-RW network.
6. Click **Finish**.

Creating a tenant signaling interface for carrier trunks

About this task

Use this procedure to configure the signaling interface to support SIP signaling with the carrier SIP trunk. In Avaya SBCE, this interface groups an IP address and network interface with TCP and UDP signaling ports.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add**.
4. In the **Name** field, enter `A2-carrier-sig`.
5. In the **IP address** field, select **10.10.1.20** and select the A2-carrier-trunk network.
6. In the **TCP Port** field, enter `5060`.
7. In the **UDP Port** field, enter `5060`.
8. Click **Finish**.

Creating a tenant media interface for carrier trunks

About this task

Use this procedure to configure the media interface to support RTP/RTCP media packets to and from the tenant . In Avaya SBCE, this interface groups an IP address and network interface with a UDP port range.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add**.
4. In the **Name** field, enter `A2-carrier-med`.
5. In the **IP address** field, select **10.10.1.20** and select the A2-carrier-trunk network.
6. Click **Finish**.

Creating a tenant signaling interface for IP Office trunk

About this task

Use this procedure to configure the signaling interface to support SIP signaling with the tenant IP Office for traffic to and from the carrier trunk. In Avaya SBCE, this interface groups an IP address and network interface with TCP and UDP signaling ports.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Signaling Interface**.

   The EMS server displays the Signaling Interface page.
3. Click **Add**.
4. In the **Name** field, enter `B1-trunk-sig`.
5. In the **IP address** field, select **192.168.1.20** and select the B1-tenant-IPO network.
6. In the **TCP Port** field, enter `5060`.
7. In the **UDP Port** field, enter `5060`.
8. Click **Finish**.

Creating a tenant media interface for IP Office trunk

About this task

Use this procedure to configure the media interface to support RTP/RTCP media packets flowing between the tenant IP Office and the carrier trunk. In Avaya SBCE, this interface groups an IP address and network interface with a UDP port range.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **Media Interface**.

   The EMS server displays the Media Interface page.
3. Click **Add**.
4. In the **Name** field, enter `B1-trunk-med`.
5. In the **IP address** field, select the B1-tenant-IPO network and **192.168.1.20**.
6. Click **Finish**.

Creating Reverse Proxy Policy for Avaya one-X® Portal Access

About this task

Use this procedure to configure the access of the tenant remote workers to Avaya one-X® Portal through Avaya SBCE. To support this, you must define a reverse proxy relay for each tenant. In the following example, each of the relays uses the same policy.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **DMZ Services** > **Relay**.
3. Click **Reverse Proxy**.
4. Click **Add**.
5. In the **Service Name** field, enter `tenant-onex`.
6. Select the **Allow web socket** check box.
7. Click **Finish**.

Configuring the carrier SIP trunk server

About this task

Use this procedure to configure the SIP trunk details on Avaya SBCE. Avaya SBCE need to know this information about the carrier SIP trunk to manage sessions between the PSTN and the tenants.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP Servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `carrier-SIP-trunk`.
5. Click **Next**.
6. In **Server type**, select **Trunk Server**.
7. In the **IP Address/FQDN** field, enter `165.72.15.40`.
8. In the **Port** field, enter `5060`.
9. Click **Next**.
10. On Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.

11. On Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
12. On Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
13. On Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
14. On Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Configuring a tenant routing profile for carrier trunk to IP Office

About this task

Use this procedure to configure the tenant routing profile for carrier trunk to IP Office. Avaya SBCE is between the trunk and the SIP server. When a SIP message arrives from the SIP server, Avaya SBCE must know where to forward the message. A routing profile specifies a next-hop for a SIP message, along with other criteria that the system can use to make a routing decision.

Note that all tenants will use the created profile, and when you add tenants to Avaya SBCE, you must add next-hop rules to this profile to support them.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add**.
4. In the **Profile Name** field, enter `to-tenant-IPO`.
5. Click **Next**.
6. In the **Transport** field, select **TCP**.
7. Click **Finish**.

Configuring a tenant routing profile for IP Officeto carrier trunk

About this task

Use this procedure to configure the tenant routing profile for IP Office to carrier trunk. Avaya SBCE is between the trunk and the SIP server. When a SIP message arrives from the SIP server, Avaya SBCE must know where to forward the message. A routing profile specifies a next-hop for a SIP message, along with other criteria that the system can use to make a routing decision.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.

3. Click **Add**.
4. In the **Profile Name** field, enter `to-carrier-trunk`.
5. Click **Next**.
6. On the **Profile: Trunk Edit Rule** page, leave the default values and click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select **carrier-SIP-trunk**.
9. In the **Next Hop Address** field, select the TCP address.
10. Click **Finish**.

Configuring server flow for carrier trunk

About this task

Use this procedure to configure the server flows for carrier trunk. After the definition of the carrier SIP trunk, Avaya SBCE needs to know its relation to the tenants so that packets can flow between them.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. In the **Flow Name** field, enter `carrier-to-IPO`.
5. In the **SIP Server** Profile, select **carrier-SIP-trunk**.
6. In the **Received Interface** field, select **B1-trunk-sig**.
7. In the **Signaling Interface** field, select **A2-carrier-sig**.
8. In the **Media Interface** field, select **A2-carrier-med**.
9. In the **Routing Profile** field, select **to-tenant-IPO**.
10. Use default values for the remaining fields.
11. Click **Finish**.

Configuration of the first tenant

Configuring the SIP call server

About this task

Use this procedure to configure each IP Office on Avaya SBCE as a SIP call server.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP Servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant1-IPO`.
5. Click **Next**.
6. In **Server type**, select **Call Server**.
7. In the **IP Address/FQDN** field, enter `192.168.100.100`.
8. In the **Port** field, enter `5060`.
9. In the **Transport** field, enter `TCP`.
10. Click **Add**.
11. In the **IP Address/FQDN** field, enter `192.168.100.100`.
12. In the **Port** field, enter `5060`.
13. In the **Transport** field, enter `UDP`.
14. On Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.
15. On Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
16. On Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
17. On Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
18. On Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Creating URI group

About this task

Use this procedure to create a URI group for Avaya SBCE to direct a SIP request for a tenant IP Office. A URI group is a collection of URI patterns that typically correspond to the same entity.

As each tenant uses a unique SIP domain and DN, you can create a URI group for each tenant. The URI group defines what a user contact looks like for this tenant. Avaya SBCE will use it later when creating flows to connect remote workers and the carrier SIP trunk to this IP Office.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add**.
4. In the **Name** field, enter `tenant1-URI-group`.
5. In the **Scheme** field, select **sip:/sips:**.
6. In the **Type** field, select **Regular Expression**.
7. In the **URI(s)** field, enter `.*@tenant1-ipo\.com`.
8. Click **Finish**.

Adding a new URI

About this task

Use this procedure to add a new URI into a URI group for the tenants.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add**.
4. In the **Name** field, enter `tenant1-URI-group`.
5. To add a new URI, click **Add** on the right side of the screen.
6. In the **Scheme** field, select **tel:**.
7. In the **URI(s)** field, enter `972123XXXX`.
8. Click **Finish**.

Configuring a routing profile for SIP server

About this task

Use this procedure to configure a routing profile for Avaya SBCE to know where to forward an arrived SIP message arrives. A routing profile is used to specify a next-hop for the SIP message, along with other criteria that can be used to make a routing decision. Avaya SBCE automatically routes responses back to the server that sent the corresponding request.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add**.
4. In the **Profile Name** field, enter `to-tenant1-IPO`.
5. Click **Next**.
6. On the Routing Profile page, leave the default values and click **Add**.
7. In the **SIP Server Profile** field, select **tenant1-IPO**.
8. In the **Next Hop Address** field, select the TCP address.
9. Click **Add**.
10. In the **SIP Server Profile** field, select **tenant1-IPO**.
11. In the **Priority** field, enter **1**.
12. In the **Next Hop Address** field, select the UDP address.
13. Click **Finish**.

Creating subscriber flow for remote worker

About this task

Use this procedure to define a flow for handling incoming sessions and media from the remote workers.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Subscriber Flows**.
4. In the **Flow Name** field, enter `tenant1-RW-to-IPO`.
5. In the **URI Group** field, select **tenant1-URI-group**.
6. In the **Signaling Interface** field, select **A1-tenant-sig**.
7. Click **Next**.
8. In the **Media Interface** field, select **A1-tenant-med**.
9. In the **Routing Profile** field, select **to-tenant1-IPO**.
10. Use default values for the remaining fields.

11. Click **Finish**.

Configuring server flow for IP Office

About this task

Use this procedure to define a flow for handling incoming sessions and media from the IP Office.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. Click **Add**.
5. In the **Flow Name** field, enter `tenant1-IPO-to-RW`.
6. In the **SIP Server** Profile, select **tenant1-IPO**.
7. In the **Received Interface** field, select **A1-tenant-sig**.
8. In the **Signaling Interface** field, select **B1-tenant-sig**.
9. In the **Media Interface** field, select **B1-tenant-med**.
10. Use default values for the remaining fields.
11. Click **Finish**.

Creating reverse proxy relay service for Avaya one-X® Portal

About this task

Use this procedure to provide the remote worker endpoints with access to Avaya one-X® Portalthat is part of the internal-side IP Office deployment. You can enable this access by configuring a reverse proxy relay through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **DMZ Services** > **Relay**.
3. Click **Reverse Proxy**.
4. Click **Add**.
5. In the **Service Name** field, enter `tenant1-RP`.
6. In the **Listen IP** field, select **A1-tenant-RW**.

7. In the **Listen Port** field, enter `6443`.

   Remote workers can use this IP and port on Avaya SBCEto access Avaya one-X® Portal.
8. Select the **Enabled** check box.
9. In the **connect IP** field, select **B1-tenant-IPO**.

   Avaya SBCE uses this address to contact Avaya one-X® Portal.
10. In the **Reverse Proxy Policy Profile** field, select **tenant-onex**.
11. In the **Server Addresses** field, enter `192.168.100.112:6443`.
12. Click **Finish**.

Creating XMPP relay service for Avaya one-X® Portal

About this task

Use this procedure to provide the remote worker endpoints with access to the XMPP service on Avaya one-X® Portal that is part of the internal-side IP Office deployment. You can enable this access by configuring an XMPP relay through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **DMZ Services** > **Relay**.
3. Click **XMPP**.
4. Click **Add**.
5. In the **Service Name** field, enter `tenant1-XMPP`.
6. In the **Listen IP** field, select **A1-tenant-RW**.
7. In the **Listen Port** field, enter `8566`.

   Avaya SBCElistens to incoming XMPP messages that it relays to the XMPP service on the internal side.
8. In the **XMPP Domain** field, enter `xmpp.tenant1-ipo.com`.
9. In the **Remote IP** field, enter`192.168.100.112` .
10. In the **Port** field, enter `8566`.
11. In the **Connect IP** field, select **B1-tenant-IPO** and select **192.168.1.10**.
12. Click **Finish**.

Creating server flow for IP Office

About this task

Use this procedure to create the server flow for IP Office. When SIP arrives from IP Office that is intended for the PSTN, Avaya SBCE needs to know how to perform that action. In this example, all IP Office tenants use the same interface for trunk access, so anything arriving on this interface should go to the carrier trunk.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. In the **Flow Name** field, enter `tenant1-IPO-to-carrier`.
5. In the **SIP Server** Profile, select **tenant1-IPO**.
6. In the **Received Interface** field, select **A2-carrier-sig**.
7. In the **Signaling Interface** field, select **B1-trunk-sig**.
8. In the **Media Interface** field, select **B1-trunk-med**.
9. In the **Routing Profile** field, select **to-carrier-trunk**.
10. Use default values for the remaining fields.
11. Click **Finish**.

Adding a routing rule to the tenant IP Office routing profile

About this task

Use this procedure to add a routing rule to the tenant IP Office routing profile for Avaya SBCE to know where to forward an arrived SIP message. A routing profile is used to specify a next-hop for the SIP message, along with other criteria that can be used to make a routing decision. Avaya SBCE automatically routes responses back to the server that sent the corresponding request.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. For the **to-tenant-IPO** routing profile, click **Edit**.
4. Click **Add** at the right side of the tab to add the new next hop.

5. In the **URI group** field, select **tenant1-URI-group**.
6. Click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select **tenant1-IPO**.
9. Select the TCP address.
10. Click **Add**.
11. In the **Priority/Weight** field, enter `2`.
12. In the **SIP Server Profile** field, select **tenant1-IPO**.
13. Select the UDP address.
14. Click **Finish**.

Configuration of the second tenant

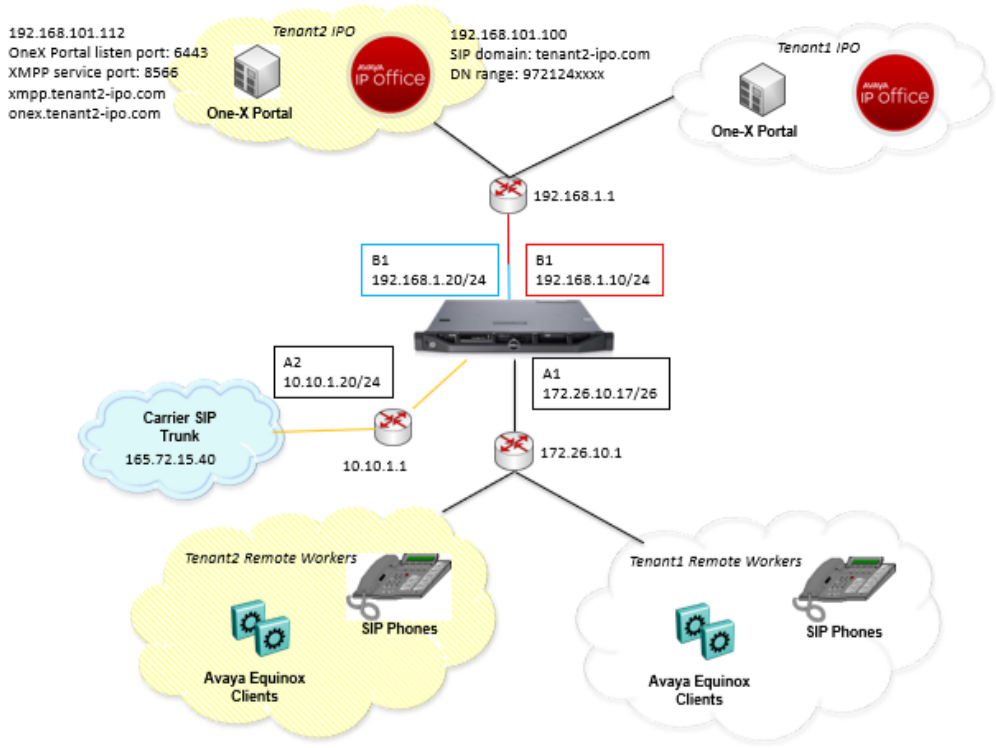


Figure 4: Configuration of Tenant 2 in a Powered by IP Officedeployment

Configuring the SIP call server

About this task

Use this procedure to configure each IP Office on Avaya SBCE as a SIP call server.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Services** > **SIP Servers**.

   The EMS server displays the SIP Servers page.
3. Click **Add**.
4. In the **Profile Name** field, enter `tenant2-IPO`.
5. Click **Next**.
6. In **Server type**, select **Call Server**.
7. In the **SIP Domain** field, enter `tenant2-ipo.com`.
8. In the **IP Address/FQDN** field, enter `192.168.101.100`.
9. In the **Port** field, enter `5060`.
10. In the **Transport** field, enter `TCP`.
11. Click **Add**.
12. In the **IP Address/FQDN** field, enter `192.168.101.100`.
13. In the **Port** field, enter `5060`.
14. In the **Transport** field, enter `UDP`.
15. On Edit SIP Server Profile - Authentication page, leave the default values and click **Next**.
16. On Edit SIP Server Profile - Heartbeat page, leave the default values and click **Next**.
17. On Edit SIP Server Profile - Registration page, leave the default values and click **Next**.
18. On Edit SIP Server Profile - Ping page, leave the default values and click **Next**.
19. On Edit SIP Server Profile - Advanced page, leave the default values and click **Finish**.

Creating URI group

About this task

Use this procedure to create a URI group for Avaya SBCE to direct a SIP request for a tenant IP Office. A URI group is a collection of URI patterns that typically correspond to the same entity.

As each tenant uses a unique SIP domain and DN, you can create a URI group for each tenant. The URI group defines what a user contact looks like for this tenant. Avaya SBCE will use it later when creating flows to connect remote workers and the carrier SIP trunk to this IP Office.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add**.
4. In the **Name** field, enter `tenant2-URI-group`.
5. In the **Scheme** field, select **sip:/sips:**.
6. In the **Type** field, select **Regular Expression**.
7. In the **URI(s)** field, enter `.*@tenant2-ipo\.com`.
8. Click **Finish**.

Adding a new URI

About this task

Use this procedure to add a new URI into a URI group for the tenants.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **URI Groups**.

   The EMS server displays the URI Groups page.
3. Click **Add**.
4. In the **Name** field, enter `tenant2-URI-group`.
5. To add a new URI, click **Add** on the right side of the screen.
6. In the **Scheme** field, select **tel:**.
7. In the **URI(s)** field, enter `972124XXXX`.
8. Click **Finish**.

Configuring a routing profile for SIP server

About this task

Use this procedure to configure a routing profile for Avaya SBCE to know where to forward an arrived SIP message arrives. A routing profile is used to specify a next-hop for the SIP message, along with other criteria that can be used to make a routing decision. Avaya SBCE automatically routes responses back to the server that sent the corresponding request.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. Click **Add**.
4. In the **Profile Name** field, enter `to-tenant2-IPO`.
5. Click **Next**.
6. On the Profile: Trunk Edit Rule page, leave the default values and click **Add**.
7. In the **SIP Server Profile** field, select **tenant2-IPO**.
8. In the **Next Hop Address** field, select the TCP address.
9. In the **Priority/Weight** field, enter **1**.
10. Click **Add**.
11. In the **SIP Server Profile** field, select **tenant2-IPO**.
12. In the **Next Hop Address** field, select the UDP address.
13. In the **Priority/Weight** field, enter **2**.
14. Click **Finish**.

Creating subscriber flow for remote worker

About this task

Use this procedure to define a flow for handling incoming sessions and media from the remote workers.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Subscriber Flows**.
4. In the **Flow Name** field, enter `tenant2-RW-to-IPO`.
5. In the **URI Group** field, select **tenant2-URI-group**.
6. In the **Signaling Interface** field, select **A1-tenant-sig**.
7. In the **Media Interface** field, select **A1-tenant-med**.
8. In the **Routing Profile** field, select **to-tenant2-IPO**.
9. Use default values for the remaining fields.

10. Click **Finish**.

Configuring server flow for IP Office

About this task

Use this procedure to define a flow for handling incoming sessions and media from the IP Office.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. Click **Add**.
5. In the **Flow Name** field, enter `tenant2-IPO-to-RW`.
6. In the **SIP Server** Profile, select **tenant2-IPO**.
7. In the **Received Interface** field, select **A1-tenant-sig**.
8. In the **Signaling Interface** field, select **B1-tenant-sig**.
9. In the **Media Interface** field, select **B1-tenant-med**.
10. Use default values for the remaining fields.
11. Click **Finish**.

Creating reverse proxy relay service for Avaya one-X® Portal

About this task

Use this procedure to provide the remote worker endpoints with access to Avaya one-X® Portalthat is part of the internal-side IP Office deployment. You can enable this access by configuring a reverse proxy relay through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **DMZ Services** > **Relay**.
3. Click **Reverse Proxy**.
4. Click **Add**.
5. In the **Service Name** field, enter `tenant2-RP`.
6. In the **Listen IP** field, select **A1-tenant-RW**.

7. In the **Listen Port** field, enter `7443`.

   Remote workers can use this IP and port on Avaya SBCEto access Avaya one-X® Portal.
8. Select the **Enabled** check box.
9. In the **connect IP** field, select **B1-tenant-IPO**.

   Avaya SBCE uses this address to contact Avaya one-X® Portal.
10. In the **Reverse Proxy Policy Profile** field, select **tenant-onex**.
11. In the **Server Addresses** field, enter `192.168.101.112:6443`.
12. Click **Finish**.

Creating XMPP relay service for Avaya one-X® Portal

About this task

Use this procedure to provide the remote worker endpoints with access to the XMPP service on Avaya one-X® Portal that is part of the internal-side IP Officedeployment. You can enable this access by configuring an XMPP relay through Avaya SBCE.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **DMZ Services** > **Relay**.
3. Click **XMPP**.
4. Click **Add**.
5. In the **Service Name** field, enter `tenant2-XMPP`.
6. In the **Listen IP** field, select **A1-tenant-RW**.
7. In the **Listen Port** field, enter `8566`.

   Avaya SBCElistens to incoming XMPP messages that it relays to the XMPP service on the internal side.
8. In the **XMPP Domain** field, enter `xmpp.tenant2-ipo.com`.
9. In the **Remote IP** field, enter`192.168.101.112` .
10. In the **Port** field, enter `8566`.
11. In the **Connect IP** field, select **B1-tenant-IPO** and select **192.168.1.10**.
12. Click **Finish**.

Creating server flow for IP Office

About this task

Use this procedure to create the server flow for IP Office. When SIP arrives from IP Office that is intended for the PSTN, Avaya SBCE needs to know how to perform that action. In this example, all IP Office tenants use the same interface for trunk access, so anything arriving on this interface should go to the carrier trunk.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Network & Flows** > **End Point Flows**.

   The EMS server displays the End Point Flows page.
3. Click **Server Flows**.
4. In the **Flow Name** field, enter `tenant2-IPO-to-carrier`.
5. In the **SIP Server** Profile, select **tenant2-IPO**.
6. In the **Received Interface** field, select **A2-carrier-sig**.
7. In the **Signaling Interface** field, select **B1-trunk-sig**.
8. In the **Media Interface** field, select **B1-trunk-med**.
9. In the **Routing Profile** field, select **to-carrier-trunk**.
10. Use default values for the remaining fields.
11. Click **Finish**.

Adding a routing rule to the tenant IP Office routing profile

About this task

Use this procedure to add a routing rule to the tenant IP Office routing profile for Avaya SBCE to know where to forward an arrived SIP message. A routing profile is used to specify a next-hop for the SIP message, along with other criteria that can be used to make a routing decision. Avaya SBCE automatically routes responses back to the server that sent the corresponding request.

Procedure

1. On the EMS web interface, in the navigation pane, click **SBCE**.
2. In the navigation pane, click **Configuration Profiles** > **Routing**.

   The EMS server displays the Routing Profiles page.
3. For the **to-tenant-IPO** routing profile, click **Edit**.
4. Click **Add** at the right side of the tab to add the new next hop.

5. In the **URI group** field, select **tenant2-URI-group**.
6. Click **Add**.
7. In the **Priority/Weight** field, enter `1`.
8. In the **SIP Server Profile** field, select **tenant2-IPO**.
9. Select the TCP address.
10. Click **Add**.
11. In the **Priority/Weight** field, enter `2`.
12. In the **SIP Server Profile** field, select **tenant2-IPO**.
13. Select the UDP address.
14. Click **Finish**.

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