SBC 8.2 - Configure SBC for Forking

In this section:

Configure the SBC for Forking

The SBC supports the forking functionality, where it can fork the calls to Microsoft Teams and Enterprise PBX (for example, Cisco or Avaya). This functionality provisions the user to migrate the traffic from the Enterprise PBXs to the Microsoft Teams.

The following section defines the additional configurations that need to be performed in addition to the standard Teams DR configuration.

> ⓘ **Note**
> This forking functionality is supported only for the calls that are originated from the PSTN side, and not from the Teams side since the main intention is to facilitate the migration between Enterprise PBXs and the Microsoft Teams. If a Teams user dials a number, the routing sends the call out to the PSTN leg/PBX leg, which does not result in both PSTN and Teams user ringing. It is expected that the Teams user "clicks" on someone's name in the Teams client window to call them directly in teams.

Common SBC Configurations

Configuration at the Forked Non-Teams leg

Zone

Create a Zone that groups the set of objects that are used for the communication to the PSTN.

```
set addressContext default zone CISCO_ZONE id 6
commit
```

SIP Signaling Port

Create a SIP Signaling Port (the logical address permanently bound to a specific zone) to send and receive SIP call signaling packets.

> ⓘ **Note**
> Replace "x.x.x.x" with the actual IP address.

```
set addressContext default zone CISCO_ZONE id 6 sipSigPort 2 ipInterfaceGroupName LIF1 ipAddressV4 x.x.x.x
portNumber 5060 transportProtocolsAllowed sip-tcp,sip-udp,sip-tls-tcp
set addressContext default zone CISCO_ZONE id 6 sipSigPort 2 mode inService state enabled
commit
```

IP Static Route

Create a default route for the destination IP to enter into the network through a particular interface.

> ⓘ **Note**
> Replace "x.x.x.x" with the destination IP, "Y" with the prefix length, and "z.z.z.z" with the PKT0 gateway IP address.

```
set addressContext default staticRoute X.X.X.X Y Z.Z.Z.Z LIF1 PKT0_V4 preference 100
commit
```

SIP Trunk Group

Create a SIP Trunk Group towards the forked non-Teams side.

> ⊘ You must use capital letters to configure the Trunk Group names.

> ⊘ Do not configure any 'media toneAndAnnouncementProfile' on this Trunk Group.
>
> Use the DLRBT only on the PSTN and Teams trunk group sides as per the standard Teams DR configuration.

```
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG media mediaIpInterfaceGroupName LIF1
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG media sdpAttributesSelectiveRelay enabled
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG signaling rel100Support enabled
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG signaling relayNonInviteRequest enabled
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG signaling honorMaddrParam enabled
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG services dnsSupportType a-only
set addressContext default zone CISCO_ZONE sipTrunkGroup CISCO_TG mode inService state enabled
commit
```

Configure the ERE for Forking

Create AoR Group Profile

Create The AoR Group Profile ID. The following URI's go out to the forked Egress legs.

- sip.pstnhub.microsoft.com: The domain towards the Teams.
- 172.16.100.69: The IP address of the other forked leg.

```
set profiles aorGroupProfile TEAMS_FORK_82 aorDataList sip:+19990001001@sip.pstnhub.microsoft.com;0;0;
user=phone,sip:+19990001001@172.16.100.69;0;0;user=phone
set profiles aorGroupProfile TEAMS_FORK_82 aorDialogAttribute useFirst18x
set profiles aorGroupProfile TEAMS_FORK_82 waitForAnswer 0
commit
```

Create VOIP Subscriber

Create the VOIP Subscriber entry. This number is the called number from the PSTN side and host part is the SIP Signaling IP of the side towards Ingress leg.

```
set profiles voipSubscriber sip:9990001001@172.16.106.132 aorGroupProfile TEAMS_FORK_82 egressRURIAttribute
aorEgress
```

IP-PEER towards Forked Non-Teams Leg

Create an IP-Peer towards forked non-Teams leg.

```
set addressContext default zone CISCO_ZONE ipPeer CISCO_IPP ipAddress x.x.x.x ipPort yyyy
commit
```

Routing Label Towards Forked Non-Teams Leg

Create a Routing Label with a single Routing Label Route to bind the PSTN Trunk Group with the PSTN IP Peer.

```
set global callRouting routingLabel CISCO_RL routingLabelRoute 1 trunkGroup CISCO_TG ipPeer CISCO_IPP inService
inService
commit
```

Call Routing

SIP Domain

Add one more global SIP domain entry. Ensure this entry is the IP address or domain name of the forked non-Teams leg. This will be used in case of call routing towards the forked non-Teams leg.

```
set global sipDomain 172.16.100.69
commit
```

Add two routes per called number:

- Towards the forked non-Teams leg with the domain name as the PSTN end point IP/domain which is defined in the above SIP domain section.
- Towards the forked Teams leg with domain name as the Teams domain.

Routing label towards forked non-Teams leg:

```
set global callRouting route none Sonus_NULL Sonus_NULL username +19990001001 Sonus_NULL all all ALL none
172.16.100.69 routingLabel CISCO_RL
commit
```

Routing label towards forked Teams leg:

```
set global callRouting route none Sonus_NULL Sonus_NULL username +19990001001 Sonus_NULL all all ALL none SIP.
PSTNHUB.MICROSOFT.COM routingLabel TEAMS_RL
commit
```

Configure the PSX for Forking

Softswitch

Enable the call forking flag in the Softswitch screen.

Figure 1: Softswitch 1/1

Create AoR Group Profile

Create AoR Group Profile ID. The following URI's go out in the forked Egress legs.

Figure 2: AoR Group Profile creation 1/1

Create VOIP Subscriber

Create the VOIP Subscriber entry. This number is the called number from the PSTN side and host part is the SIP Signaling IP of the side towards Ingress leg.

Figure 3: VOIP Subscriber creation 1/1

SIP Domain

Create a SIP Domain. This is the forked non-Teams leg IP.

Figure 4: SIP Domain creation 1/1

Trunk Group

Create a Trunk Group towards the forked non-Teams leg.

> ⊙ Do not provision any 'Tone and Announcement profile' on this Trunk Group.
>
> Use the DLRBT only on the PSTN and Teams trunk group sides as per the standard Teams DR configuration.

Figure 5: Trunkgroup creation 1/3

Figure 6: Trunkgroup creation 2/3

Figure 7: Trunkgroup creation 3/3

Routing Label

Routing Label Towards the Teams Leg

Figure 8: Route creation 1/2

Routing Label Towards the Forked PSTN Leg

Figure 9: Route creation 2/2
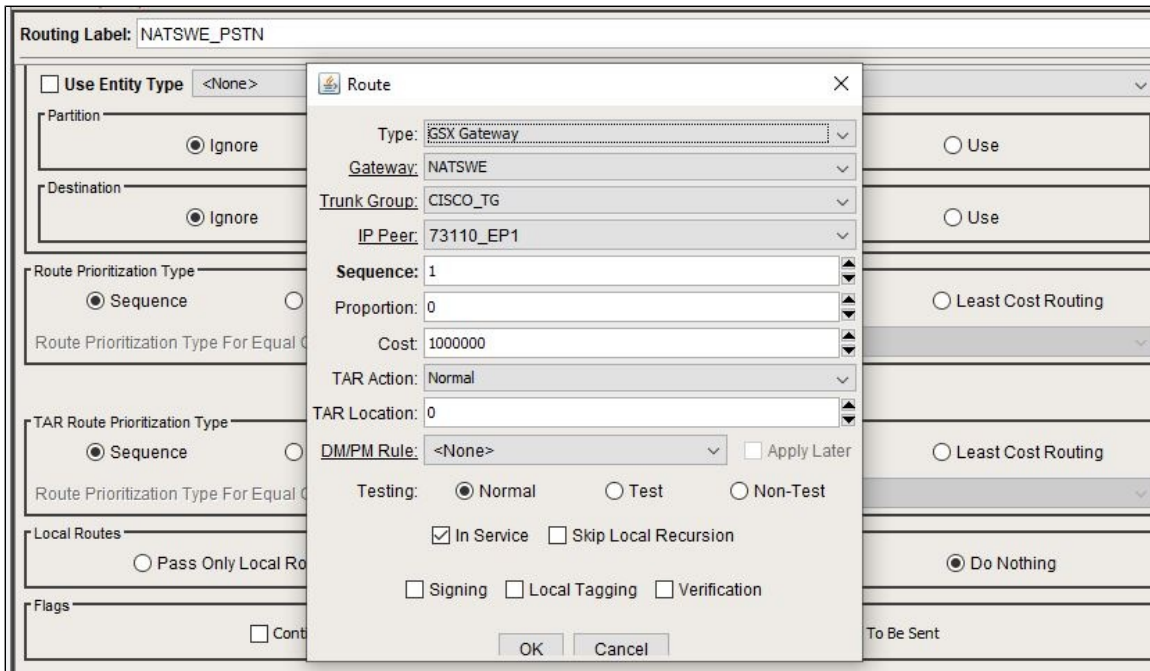
Call Routing

Add two routes per called number.

- Towards the forked PSTN leg with the domain name as the PSTN end point IP/domain.
- Towards the forked Teams leg with domain name as the Teams end point domain.
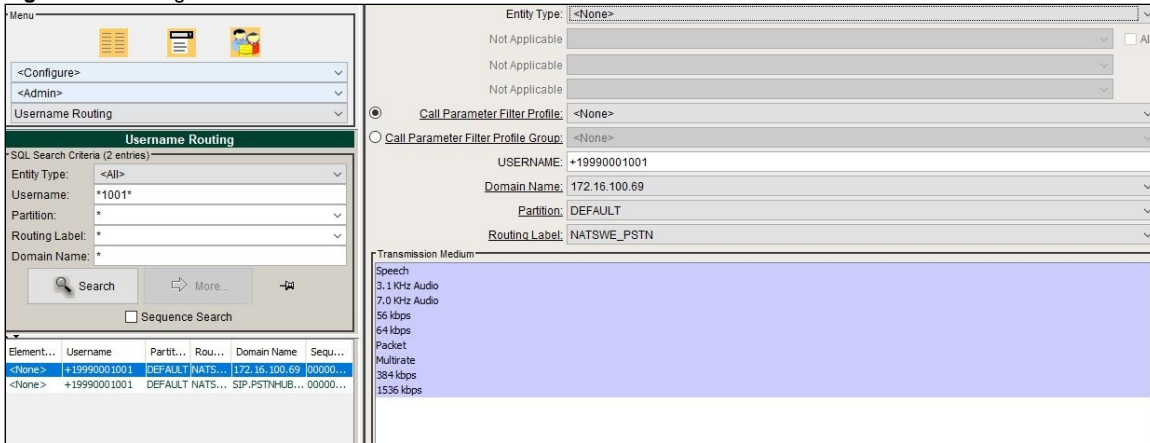
Username Routing

Figure 10: Routing creation 1/2

Figure 11: Routing creation 2/2

Menu

<Configure>
<Admin>
Username Routing

Username Routing

SQL Search Criteria (2 entries)

Entity Type:	<All>
Username:	*1001*
Partition:	*
Routing Label:	*
Domain Name:	*

[🔍 Search] [➡ More...] -🔲

☐ Sequence Search

Element...	Username	Partit...	Rou...	Domain Name	Sequ...
<None>	+19990001001	DEFAULT	NATS...	172.16.100.69	00000...
<None>	+19990001001	DEFAULT	NATS...	SIP.PSTNHUB...	00000...

Entity Type:	<None>
Not Applicable		☐ All
Not Applicable	
Not Applicable	
◉ Call Parameter Filter Profile:	<None>
○ Call Parameter Filter Profile Group:	<None>
USERNAME:	+19990001001
Domain Name:	SIP.PSTNHUB.MICROSOFT.COM
Partition:	DEFAULT
Routing Label:	NATSWE_TEAMS

Transmission Medium

Speech
3.1 KHz Audio
7.0 KHz Audio
56 kbps
64 kbps
Packet
Multirate
384 kbps
1536 kbps