



Configure Two Stacks (IPv4 and IPv6)

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Two Stacks (IPv4 and IPv6) Overview

When your SIP network is configured for both IPv4 and IPv6 stacks, SIP devices can handle calls for each of the following scenarios:

- All devices in the call support IPv4 only
- All devices in the call support IPv6 only
- All devices in the call support both IPv4 and IPv6 stacks. In this scenario, the system determines the IP address type by the configuration for the **IP Addressing Mode Preference for Signaling** setting for signaling events and the **IP Addressing Mode Preference for Media** enterprise parameter for media events.
- One device supports IPv4 only and the other supports IPv6 only. In this scenario, Unified Communications Manager inserts an MTP into the call path to translate the signaling between the two addressing types.

For SIP devices and trunks, you can enable two-stack support by configuring Alternate Network Address Types (ANAT). When ANAT is applied to a SIP device or trunk, the SIP signaling that the device or trunk sends includes both an IPv4 and IPv6 address, if both are available. ANAT allows the endpoint to interoperate seamlessly in both IPv4-only and IPv6-only networks.

Two Stacks (IPv4 and IPv6) Prerequisites

You must first configure Cisco Unified Communications Manager to support the IPv6 stack (IPv4 is enabled by default). This includes setting IP addressing preferences for both media and signaling. For configuration details, see [IPv6 Configuration Task Flow](#).

Two Stacks (IPv4 and IPv6) Configuration Task Flow

Complete the following tasks to configure SIP devices and trunks to support both IPv4 and IPv6 addressing simultaneously.

Procedure

	Command or Action	Purpose
Step 1	Configure ANAT for a SIP Profile, on page 2	Configure a SIP Profile that supports both IPv4 and IPv6 stacks simultaneously.
Step 2	Apply ANAT to SIP Phone, on page 3	Apply the ANAT-enabled SIP Profile to a SIP phone. This allows the SIP phone to support both IPv4 and IPv6 stacks simultaneously.
Step 3	Apply ANAT to a SIP Trunk, on page 3	Apply the ANAT-enabled SIP Profile to a SIP trunk. This allows the trunk to support both IPv4 and IPv6 stacks simultaneously.
Step 4	Restart Services, on page 3	After configuring your system to support both IPv4 and IPv6 stacks simultaneously, restart essential services.

Configure ANAT for a SIP Profile

Use this procedure to configure a SIP Profile that supports Alternate Network Address Types (ANAT). SIP devices and trunks that use this profile can interoperate seamlessly between IPv4-only and IPv6-only networks.

Procedure

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- Step 1** From Cisco Unified CM Administration, choose **Device > Device Settings > SIP Profile**.
- Step 2** Do one of the following:
- Click **Add New** to create a new SIP Profile.
 - Click **Find** and select an existing SIP Profile.
- Step 3** Check the **Enable ANAT** check box.
- Step 4** Complete the remaining fields in the **SIP Profile Configuration** window. For more information on the fields and their configuration options, see the system Online Help.
- Step 5** Click **Save**.

You must apply the SIP Profile to a SIP phone or SIP trunk to enable those devices to support both IPv4 and IPv6 stacks simultaneously.

Apply ANAT to SIP Phone

Use this procedure to apply the Alternate Network Address Types (ANAT) configuration to a SIP phone. When ANAT is enabled, the phone can communicate with both IPv4-only and IPv6-only networks simultaneously.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
 - Step 2** Click **Find** and select an existing phone.
 - Step 3** From the **SIP Profile** drop-down list box, select the SIP Profile on which you enabled ANAT.
 - Step 4** Complete the remaining fields in the **Phone Configuration** window. For more information on the fields and their configuration options, see the system Online Help.
 - Step 5** Click **Save**.
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Apply ANAT to a SIP Trunk

Use this procedure to apply the Alternate Network Address Types configuration to an existing SIP trunk. This allows the SIP trunk to support both IPv4 and IPv6 stacks simultaneously.



Note For more information on SIP trunk configuration options, see [Configure SIP Trunks](#).

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Trunk**.
 - Step 2** Click **Find** and select an existing SIP trunk.
 - Step 3** From the **SIP Profile** drop-down list box, select the SIP Profile on which you enabled ANAT.
 - Step 4** Complete the remaining fields in the **Trunk Configuration** window. For more information on the fields and their configuration options, see the system Online Help.
 - Step 5** Click **Save**.
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Restart Services

After configuring your system to support both IPv4 and IPv6 stacks simultaneously, restart essential services.

Procedure

- Step 1** Log into Cisco Unified Serviceability and choose **Tools > Control Center - Feature Services**.

Step 2 Check the check box corresponding to each of the following services:

- Cisco CallManager
- Cisco CTIManager
- Cisco Certificate Authority Proxy Function
- Cisco IP Voice Media Streaming App

Step 3 Click **Restart**.

Step 4 Click **OK**.
