IP Telephony Migration Options

IP Telephony Migration Options Overview

For first-time installations of IPv6 with Cisco Unified Communications Manager (Unified CM) or an upgrade to a traditional deployment, we recommend the following guidelines:

**Deployment Models**

For Cisco Unified CM IPv6 is supported for single-site deployments, multi-site deployments with distributed call processing, and multi-site deployments with centralized call processing. Minimum IPv6 deployment requires the following products:

- Dual-stack IPv6 Unified CM server
- MTP for media interworking
- IPv6-only IP Phones

All other components and interfaces can remain in IPv4. Unified CM will insert MTPs to provide media interworking for various use cases.

**Campus Network and WAN**

Before you enable IPv6 in the Unified CM cluster, make sure that both the campus network and the WAN support both IPv4 and IPv6 traffic. Dual-stack (IPv4 and IPv6) routing is recommended for Layer 3 campuses and WANs.

**Cluster-Wide IPv6 Configuration Settings**

To maximize the amount of IPv6 traffic on your Unified Communications network, use the following settings for the cluster-wide IPv6 Enterprise Parameters:

- **Enable IPv6**: True
- **IP Addressing Mode Preference for Media**: IPv6
- **IP Addressing Mode Preference for Signaling**: IPv6
Common Device Configuration Profiles

Use multiple Common Device Configuration Profiles so that individual phones and trunks or groups of phones and SIP trunks can be selectively configured to support IPv6.

The Common Device Configuration Profile in Unified CM Administration (Device > Device Settings > Common Device Configuration) contains the following IPv6 configuration information:

• IP Addressing Mode
• IP Addressing Mode Preference for Signaling
• Allow Stateful Auto-Configuration for Phones

DHCP

Stateful DHCPv6 is recommended, although stateless DHCP can also be used with Stateless Address Auto-Configuration (SLAAC) for phones.

MTPs

For multi-site distributed call processing deployments, you will most likely need to use Cisco IOS media termination points (MTPs) for conversions between IPv4 and IPv6. These MTPs should be associated with both phone and SIP trunk media resource groups (MRGs).

IPv6 SIP Trunks

IPv6 SIP trunks should be configured as Delayed Offer without Alternative Network Address Types (ANAT) enabled. However, SIP trunks configured for Early Offer (MTP Required) using an MTP resource for every call are do not support video calls or encrypted calls.

IP Phones

IPv6-only phone support is a major feature of CSR 12.0, as it helps to mitigate IPv4 exhaustion. We recommend that you configure all IP Phones as IPv6-only where applicable. All other IP Phones must be configured as IPv4. Dual-stack IP Phones require ANAT which is not supported in Unified SRST call agents.

ISDN PSTN Gateway and SRST ISR 4000

To transition to an IPv6-only network and to reduce the MTP requirements, configure ISDN PSTN gateways and SRST ISR 4000 with Delay Offered SIP IPv6-only trunk.