IPv6 Configuration

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Configure NAT64 for IPv6-Enabled Deployment

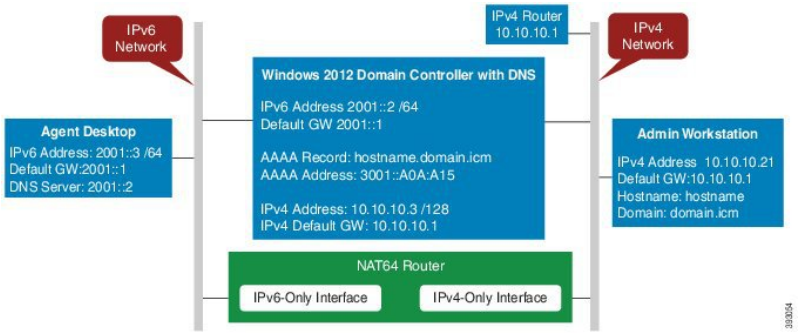
NAT64 allows communication between IPv6 and IPv4 networks. For IPv6-enabled deployments, you must set up NAT64 so that supervisors on an IPv6 network can access Unified CCE Administration web tools on an IPv4 network.

You can use either Stateful and Stateless NAT64. To read more about which translation type is the most appropriate for your deployment see Table 2. Comparison Between Stateless and Stateful NAT64 here: https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/enterprise-ipv6-solution/white_paper_c11-676278.html

Note NAT64 is NOT supported on M train IOS. T train is required.

For more information on *Contact Center Enterprise Compatibility Matrix*, see https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html.

The following example network diagram and interface configuration demonstrates Stateful NAT64 translation between an IPv6 network and an IPv4 network.




```
interface GigabitEthernet0/0
description ipv4-only interface
```

```
 ip address 10.10.10.81 255.255.255.128
 duplex auto
 speed auto
 nat64 enable
 no mop enabled

interface GigabitEthernet0/1
description ipv6-only interface
 no ip address
 duplex auto
 speed auto
 nat64 enable
 ipv6 address 2001::1/64
 ipv6 enable

ipv6 unicast-routing
ipv6 cef
!
nat64 prefix stateful 3001::/96
nat64 v4 pool POOL1 10.10.10.129 10.10.10.250
nat64 v6v4 list V6ACL1 pool POOL1 overload
ipv6 router rip RIPv6
!
ipv6 router rip RIP

!
ipv6 access-list V6ACL1
 permit ipv6 2001::/64 any
```

Configure DNS for IPv6

To meet the requirement that Unified CCE Administration be accessed by FQDN, a Forward lookup AAAA record for the AW must be created in DNS.

The steps in this procedure are for a Windows DNS server.

Procedure

Step 1 In Windows, navigate to **Administrative Tools > DNS**. This opens the DNS Manager.

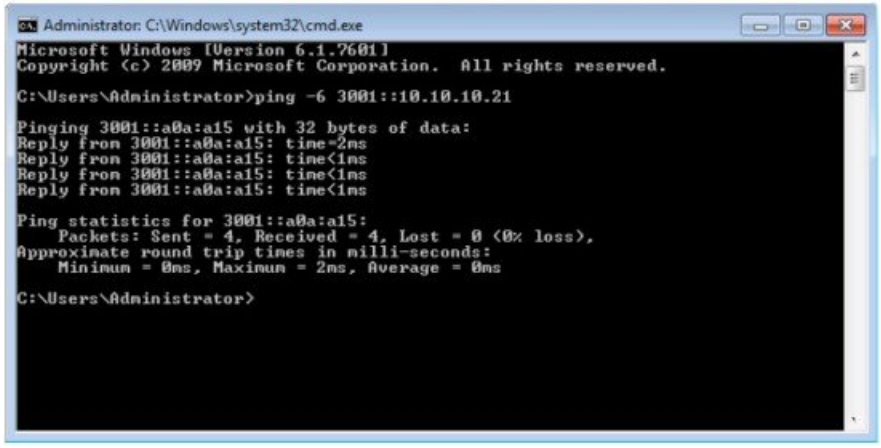
Step 2 In the Forward lookup zone, navigate to your deployment's domain name.

Step 3 Right-click the domain name and select **New Host (A or AAAA)**.

Step 4 In the New Host dialog box, enter the computer name and IP address of the AW. Click **Add Host**.

Determine IPv6 Translation of IPv4 Address for DNS Entry

You can determine the IPv6 address needed for the AAAA DNS record by running a ping command on any Windows machine using mixed notation. Type “ping -6” followed by your IPv6 Nat64 Prefix, two colons, and then the IPv4 address.



In the ping response, the IPv4 address is converted to the hexadecimal equivalent. Use this address in your static AAAA record.

Note Optionally, DNS64 can be used in place of static DNS entries. Use of DNS64 helps facilitate translation between IPv6 and IPv4 networks by synthesizing AAAA resource records from A resource records.

The *NAT64 Technology: Connecting IPv6 and IPv4 Networks* whitepaper gives an overview of DNS64 and how it is used with IPv6: https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/enterprise-ipv6-solution/white_paper_c11-676278.html.

Set Up IPv6 for VOS-Based Contact Center Applications

By default, only IPv4 is enabled for Unified Communications Manager, Cisco Finesse, and Unified Intelligence Center.

If you choose to enable IPv6 on these applications, you must enable it on both the publisher/primary nodes and subscriber/secondary nodes for those applications.

You can use Cisco Unified Operating System Administration or the CLI to enable IPv6.

See the *Solution Design Guide for Cisco Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html for more information about IPv6 support in Unified CCE.

Set Up IPv6 Using Cisco Unified Operating System Administration

To set up IPv6 using Cisco Unified Operating System Administration, perform the following procedure on the primary and secondary VOS servers.

Procedure

Step 1 Sign into Cisco Unified Operating System Administration on the Publisher/Primary node:.

- Unified Communications Manager and Unified Intelligence Center: `https://<host or IP address of the Publisher or Primary node>/cmplatform`
- Finesse: `https://FQDN of the Primary node:8443/cmplatform`

Step 2 Navigate to **Settings** > **IP** > **Ethernet IPv6**.

Step 3 Check the **Enable IPv6** check box.

Step 4 Enter values for **IPv6Address**, **Prefix Length**, and **Default Gateway**.

Step 5 Check the **Update with Reboot** check box.

Step 6 Click **Save**.
The server restarts.

Step 7 Repeat this procedure on the subscriber/secondary node.

Set Up IPv6 for VOS-Based Applications Using the CLI

To set up IPv6 using the CLI, perform the following procedure on both the primary and secondary VOS servers.

Procedure

Step 1 Access the CLI on the VOS server.

Step 2 To enable or disable IPv6, enter:
set network ipv6 service {enable | disable}

Step 3 Set the IPv6 address and prefix length:
set network ipv6 static_address *addr mask*

Example:

```
set network ipv6 static_address 2001:db8:2::a 64
```

Step 4 Set the default gateway:
set network ipv6 gateway *addr*

Step 5 Restart the system for the changes to take effect.
utils system restart

Step 6 To display the IPv6 settings, enter:
show network ipv6 settings