

# Configure a Cisco vEdge Device as an NTP Parent

*Table 1: Feature History*

| Feature Name | Release Information | Feature Description |
|---|---|---|
| Configure a Cisco vEdge Device as an NTP Parent and Optionally to Support NTP in Symmetric Active Mode. | Cisco SD-WAN Release 20.4.1<br>Cisco vManage Release 20.4.1 | This feature enables configuring a Cisco vEdge device as an NTP parent and configuring the device to support NTP in symmetric active mode. |

You can configure a Cisco vEdge device as an NTP parent. You also can configure an NTP parent device to support NTP in symmetric active mode.


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# Configure an NTP Parent

Starting with Cisco SD-WAN Release 20.4.1, you can configure a supported Cisco vEdge device as an NTP parent device by using the device CLI template. A device that is configured in this way acts as the NTP server to which other nodes in the deployment synchronize their clocks. You can configure multiple devices as NTP parents. The NTP server functionality is supported for IPv4, but not for IPv6.

You also can configure a device that is configured as an NTP parent device to support NTP in symmetric active mode. See "Configure Support for NTP in Symmetric Active Mode."

Use the following commands to configure device as an NTP parent device using a Cisco vEdge device device CLI template. For more information about configuring device CLI template, see "Create a Device CLI Template" in *Systems and Interfaces Configuration Guide*.

```
Device# config terminal
Device(config)# system
Device(config-system) ntp
Device(config-ntp)# parent
Device(config-parent)# enable
Device(config-parent)# source-interface loopback511
Device(config-parent)# stratum 6
Device(config-parent)# vpn 511
Device(config-parent)# exit
```

### Restrictions and Limitations

- You can configure a device as an NTP parent only through a Cisco SD-WAN Manager CLI template. Cisco SD-WAN Manager feature templates do not support this configuration.
- The source interface must be in the same VPN that the vpn keyword defines.

### Verify Configuration

Use the following show command to verify NTP parent configuration. The sample output shows that the server also is configured to support NTP in symmetric active mode.

```
Device# show running-config system ntp

system
 ntp
  keys
  authentication 101 md5 $8$vV6PtHeLdiEcLqDNLqV/mCWN5X92yT8PUPOwDCQgS4c=
  authentication 108 md5 $8$NTzFC6sRZiFUYeHw/pOY2dEoiO6dxphecDs7YnRKeuY=
  trusted 101 108
!
parent
 enable
 stratum 6
 source-interface loopback511
 vpn 511
exit
server 10.20.25.1
 source-interface ge0/1
 vpn 511
 version 4
exit
peer 172.16.10.100
 key 101
 vpn 511
 version 4
 source-interface ge0/1
exit
```

# Configure Support for NTP in Symmetric Active Mode

Starting with Cisco SD-WAN Release 20.4.1, you can configure a Cisco vEdge device that is configured as an NTP parent to support NTP in symmetric active mode by using the device CLI template. When a device is configured in this way, it synchronizes its time with another device that is defined with this mode if it cannot reach its original NTP parent.

Use the following commands to configure a device to support NTP in symmetric active mode by using a Cisco vManage device CLI template. For more information about configuring device CLI template, see "Create a Device CLI Template" in *Systems and Interfaces Configuration Guide*.

```
Device# config terminal
Device# system
Device(config-system) ntp
Device(config-ntp)# peer 172.16.10.1
Device(config-peer)# key 101
Device(config-peer)# vpn 511
Device(config-peer)# version 4
Device(config-parent)# source-interface ge0/1
Device(config-parent)# exit
```

### Restrictions and Limitations

- You can configure a device support NTP in symmetric active mode only through a Cisco SD-WAN Manager CLI template. Cisco SD-WAN Manager feature templates do not support this configuration.
- You can configure up to two devices to support NTP in symmetric active mode.
- A device that is configured as an NTP peer should also be configured as an NTP parent.
- The source interface must be in the same VPN that the vpn keyword defines.
- Each peer must use the same source interface.

Use the following show command to verify NTP parent functional configuration. In the **show ntp peer** command output, the server with the .LOCL. REFID is the NTP parent.

```
Device# show ntp peer

INDEX REMOTE       REFID  ST TYPE WHEN POLL  REACH DELAY   OFFSET  JITTER
------------------------------------------------------------------------------
1     *10.20.25. 1 .GNSS. 1  u    186  1024  377   226.712 0.793   2.381
2     172.16.10.1  (loop) 3  s    760  1024  376   0.126   -1.307  1.397
3     172.16.10.10 .LOCL. 6  l    52h  64    0     0.000   0.000   0.000
```