



## Dual WAN Support

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Dual WAN support is introduced to provide a backup link to NFVIS connectivity in case the primary link is down. NFVIS connectivity can be maintained through multiple ports in case connectivity is lost over the primary WAN or management port. For all supported platforms on NFVIS, IP configuration is moved under bridges and user generated bridges can specify IP or DHCP connectivity.

Starting from NFVIS 3.10.1 release, a second WAN bridge configured with DHCP by default is supported on ENCS 5000 series platform.

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## Bridge IP Configurations

Both default bridges and user generated bridges contain IP/DHCP configuration to allow IP configurations on any port. NFVIS provides two ports by default for zero touch deployment, with dhclient actively requesting DHCP IP configurations.

Each bridge can be configured with:

- IPv4 DHCP
- Static IPv4
- IPv6 DHCP
- IPv6 SLAAC
- Static IPv6
- VLAN tag

Except for ENCS 5400 management port configuration which continues to remain under **system settings mgmt**, use the Bridge APIs and Commands to enable IP configurations and move away from the previous System Settings APIs and commands.

On ENCS5100 use **system settings mgmt** for management IP configuration and **bridges bridge lan-br** for LAN IP configuration.

## Restrictions for Bridge IP Configurations

IPv4:

- IPv4 DHCP can only be configured on one bridge at a time
- Cannot configure IPv4 DHCP on any bridge if system wide default gateway is configured
- Cannot configure **system settings default-gw** if IPv4 DHCP is configured on any bridge.

IPv6:

- IPv6 DHCP can only be configured on one bridge at any time, and cannot be applied on any bridge if IPv6 SLAAC is applied on any bridge or if system wide IPv6 default gateway is configured.
- IPv6 SLAAC can only be configured on one bridge at any time, and cannot be applied on any bridge if IPv6 DHCP is applied on any bridge or if system wide IPv6 default gateway is configured.
- Cannot configure **system settings default-gw-ipv6** if IPv6 DHCP or IPv6 SLAAC is configured on any bridge.

## Dual WAN Bridge and DHCP Toggle

**Note**

This feature is supported only on ENCS 5000 series devices.

In zero touch deployment, NFVIS requests for IPv4 assignments through DHCP for two WAN ports. A second WAN bridge and network are default configurations and GE0-1 is attached to the WAN2 bridge. NFVIS toggles between the two default WAN bridges activating dhclient on any one of the WAN bridges at a time, for 30 seconds interval. The toggling stops as soon as a WAN bridge is assigned with an IP address through DHCP. The bridge with the assigned IP address is considered an active WAN bridge and DHCP configurations are applied to that bridge. dhclient is deactivated for the remaining bridge.

If neither bridge is assigned with an IP address through DHCP, you can terminate DHCP toggle by terminating zero touch deployment from NFVIS. DHCP is then applied to the WAN bridge and dhclient is activated.

After the zero touch deployment, the toggle feature is terminated. To backup NFVIS connectivity, you can add static IP address to the other WAN bridge, and setup static routing. You cannot configure default gateway, as the system default gateway is set through DHCP. You can also configure static IP address on both WAN bridges and setup static routing.

**Restrictions**

- The DHCP toggle behaviour is not supported in upgrade from NFVIS 3.9.x releases.
- Does not support active or standby WAN bridges. NFVIS does not detect connectivity failure from active WAN bridge to switchover to another WAN bridge. In case connectivity fails on the primary WAN bridge, connectivity through other WAN bridge is established only if static IP is enabled and static routing is configured.
- Does not support IPv6.

- If wan2-br is the primary WAN bridge, you must remove DHCP from wan2-br to apply default gateway from static IP configurations.

