

VXLAN Commands

This section describes the commands used to configure VXLAN.

- host-reachability protocol static, on page 2
- hw-module profile cef vxlan ipv6-tnl-scale , on page 3
- interface nve, on page 4
- member vni, on page 5
- overlay-encapsulation, on page 6
- nve overlay-encap guev1, on page 7
- nve overlay-encap guev1 udp-port destination, on page 9
- peer-ip lookup disable, on page 10
- show nve interface, on page 11
- show nve vni, on page 12
- source-interface loopback, on page 13

host-reachability protocol static

To configure the static control protocol for VXLAN tunnel endpoint reachability, use the **host-reachability protocol static** command in NVE interface configuration mode.

This command has no keywords or arguments.

Command Default

None

Command Modes

NVE interface configuration

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write
tunnel	read, write

Example

The following example shows control protocol configuration for VXLAN tunnel endpoint reachability.

```
Router(config)# interface nve1
Router(config-if)# member vni 2
Router(config-nve-vni)# vrf vrf1
Router(config-nve-vni)# host-reachability protocol protocol static
Router(config-nve-vni)# commit
```

hw-module profile cef vxlan ipv6-tnl-scale

To increase the VXLAN static routes, use the **hw-module profile cef vxlan ipv6-tnl-scale** command in the XR Config mode.

This command has no keywords or arguments.

Command Default

None

Command Modes

XR Config

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

VXLAN supports up to 160000 static routes by default. However, you can increase the scale value up to one million VXLAN static routes for IPv6 tunnel remote nexthop using the **hw-module profile cef vxlan ipv6-tnl-scale** command.

Task ID

Task ID	Operations
cef	read, write

Example

The following example shows how to increase the scale value of VXLAN static routes up to one million:

```
Router# configuration
Router(config)# hw-module profile cef vxlan ipv6-tnl-scale
Router(config)# commit
```

interface nve

To create a network virtualization endpoint (NVE) interface and enter the NVE interface configuration mode, use the **interface nve** command in XR Config mode. To remove the NVE interface, use the **no** form of this command.

interface nve *nve-id*

Syntax Description

nve-id	The NVE interface ID. It can take values from 1 to 65535.

Command Default

None

Command Modes

XR Config

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write

Example

The following example shows how to create an NVE interface and enter the NVE interface configuration mode.

```
Router(config)# interface nve 1
Router(config-if)#
```

member vni

To map a VXLAN to a network virtualization endpoint (NVE) interface, use the **member vni** command in the XR Config mode. To remove the VXLAN from the bridge domain, use the **no** form of this command.

member vni *number*

Syntax Description

vni	The member virtual network identifier (VNI).
number	The ID of the VXLAN to be mapped to the NVE. The valid values are from 1 to 16777215.

Command Default

None

Command Modes

Bridge-domain configuration

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write
tunnel	read, write

Example

The following example shows the VXLAN with VNI "2" associated with the NVE "1".

```
Router(config)# interface nve 1
Router(config-if)# member vni 2
```

overlay-encapsulation

To define the encapsulation type for Network Virtualization Endpoint (NVE) interface, use the **overlay-encapsulation** command in NVE interface configuration mode.

overlay-encapsulation vxlan

Syntax Description

vxlan	Sets VXLAN as an overlay encapsulation type for NVE interface.

Command Default

VXLAN

Command Modes

NVE interface configuration

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write
tunnel	read, write

Example

The following example shows an NVE interface configured for VXLAN encapsulation.

```
Router# configure
Router(config)# interface nve1
Router(config-if)# overlay-encapsulation vxlan
Router(config-nve-encap-vxlan)# commit
```

nve overlay-encap guev1

To enable GUE variant 1 encapsulation for IPv4 and IPv6 packets, use the **nve overlay-encap guev1** command in XR Config mode.

nve overlay-encap guev1

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values

Command Modes

XR Config mode

Command History

Release	Modification
Release 25.4.1	This command was introduced.

Usage Guidelines

Supported on routers with line cards based on Q200 Silicon systems.

Task ID

Task ID	Operations
tunnel	read, write

Examples

This example shows how to enable GUE variant 1 encapsulation for IPv4 packets:

```
Router# configure
Router(config-if)# nve overlay-encapsulation guev1
Router(config-nve-encap-guev1))# udp-port destination ipv4 8000
Router(config-if)# commit
```

This example shows how to enable GUE variant 1 encapsulation for IPv6 packets:

```
Router# configure
Router(config-if)# nve overlay-encapsulation guev1
Router(config-nve-encap-guev1))# udp-port destination ipv6 9000
Router(config-if)# commit
```

This example shows the default configuration if the GUE variant 1 encapsulation for IPv4 or IPv6 packets is not configured.

```
Router# show nve global
Fri Jul 11 16:11:10.172 UTC
 NVE Global details
   VNI Scope Local : No
   VxLAN l3vni bring up mode: V1
   GUEv1 UDP Destination Port (IPv4): 6080
   GUEv1 UDP Destination Port (IPv6): 6615
   GUEv1 UDP Destination Port (mpls): 6635
```

```
Count of NVE interfaces with mpls-udp encap: 0
Global system mac: 0033.3ebe.8f00
```

nve overlay-encap guev1 udp-port destination

To provide GUEv1 as the overlay encapsulation type for network virtualization endpoint (NVE) and send the encapsulated overlay traffic to IPv4, IPv6, and MPLS destinations with the specified UDP ports, use the **nve overlay-encap guev1 udp-port destination** command in XR Config mode.

nve overlay-encap guev1 udp-port destination { **ipv4** | **ipv6** | **mpls** } *port*

Syntax Description

ipv4*port*	Specifies the UDP port for IPv4.
ipv6*port*	Specifies the UDP port for IPv6.
mpls*port*	Specifies the UDP port for MPLS.

Command Default

None

Command Modes

XR Config

Command History

Release	Modification
Release 25.4.1	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write

This example shows how to configure NVE overlay encapsulation using GUEv1 and send encapsulated overlay traffic to IPv4, IPv6, and MPLS destinations using the specified UDP ports.

```
Router(config)# nve overlay-encap guev1 udp-port destination ipv4 6080
Router(config)# nve overlay-encap guev1 udp-port destination ipv6 6615
Router(config)# nve overlay-encap guev1 udp-port destination mpls 6635
```

peer-ip lookup disable

To disable lookup of peer IP address to accept packets from unknown peers, use the **peer-ip lookup disable** command in NVE interface configuration mode.

peer-ip lookup disable

This command has no keywords or arguments.

Command Default

None

Command Modes

NVE interface configuration

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read, write
tunnel	read, write

Example

The following example shows how to disable lookup of peer-ip to accept packets from unknown peers.

```
Router# configure
Router(config)# interface nve1
Router(config-if)# overlay-encapsulation vxlan
Router(config-nve-encap-vxlan)# peer-ip lookup disable
Router(config-nve-encap-vxlan)# commit
```

show nve interface

To display the network virtualization endpoint (NVE) interface information, use the **show nve interface** command in XR EXEC mode.

show nve interface [**detail** | **nve** *nve-id*]

Syntax Description

detail	Displays detailed information about NVE interfaces.
nve *nve-id*	Displays information only about the specified NVE interface.

Command Default

None

Command Modes

XR EXEC

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
interface	read

Example

This is the sample output of the **show interface nve** command anycast gateway parameters.

```
Router# show interface nve100 detail
Interface: nve100 State: Up Encapsulation: VxLAN
  Source Interface: Loopback1 (primary: 10.0.0.1)
  Source Interface State: Up
  NVE Flags: 0x1, Admin State: Up, Interface Handle 0xba0
  UDP Port: 4789
  Anycast Source Interface: Loopback100 (primary: 100.1.1.1)
```

show nve vni

To display list of all VNIs that are associated with various NVE interfaces and the associated multicast IP address that is used for multi-destination frames, use the **show nve vni** command in XR EXEC mode.

show nve vni [**vni_number** | **detail** | **interface nve** *nve-id*]

Syntax Description

vni_number	Displays output for the specific VNI.
detail	Displays more detailed output.
interface nve *nve-id*	Displays details for the specific NVE interface.

Command Default

None

Command Modes

XR EXEC

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
tunnel	read

Example

The following shows an example output of this show command:

```
Router# show nve vni
Interface  VNI          MCAST        VNI State        Mode
nve3       1002         0.0.0.0      Up               L3 Control (Static)
nve1       17001        0.0.0.0      Up               L3 Control (Static)
nve2       17002        0.0.0.0      Up               L3 Control (Static)
nve3       17003        0.0.0.0      Up               L3 Control (Static)
```

source-interface loopback

To specify a loopback interface whose IP address should be set as the IP address for the NVE interface, use the **source-interface loopback** command.

source-interface loopback *interface-id*

Syntax Description

loopback	Specifies a loopback interface as providing IP address for the NVE interface.
interface-id	Specifies the loopback interface ID. It can take values from 0 to 65535.

Command Default

None

Command Modes

NVE interface configuration

Command History

Release	Modification
Release 24.2.11	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
tunnel	read, write
interface	read, write

Example

The following example shows how to configure the IP address of an NVE interface as the IP address of a loopback interface.

```
Router(config)# interface nve 1
Router(config-if)# source-interface loopback 1
```