

FCoE Over FEX

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Overview

The Fibre Channel over Ethernet (FCoE) over Fabric Extenders (FEX) feature allows Fibre Channel traffic to be carried on a FEX port. The FEX is connected to a Cisco Nexus 9000 device that is in FCoE NPV mode through a Fabric Port Channel (FPC). FCoE over FEX enables the provisioning of FCoE on host connections.

For more information about FEX, see the *Cisco Nexus 2000 Series NX-OS Fabric Extender Configuration Guide for Cisco Nexus 9000 Series Switches*.

Note For the list of Cisco Nexus 9000 Series switches and line cards that support FCoE over FEX, refer to the table cisco-nexus-9000-series-nx-os-fc-npv-and-fcoe-npv-configuration-guide-106x_chapter2.pdf#nameddest=unique_14 unique_14_Connect_42_title_a4d_dsg_s3c.

Note See the Nexus Switch Platform Support Matrix to determine which Cisco Nexus 9000 and 3000 Series switches and NX-OS releases support the FCoE over FEX feature.

FCoE Over FEX with vPC

FCoE over FEX with virtual Port Channel (vPC) allows Fibre Channel traffic to be carried over a FEX using a virtual Port Channel (vPC).

LAN Shutdown

The LAN shutdown feature detects the capability of the FCoE host to support Data Center Bridging (DCBX). DCBX allows the switch to send the LAN Logical Link status (LLS) messages in a type-length-value (TLV)

format. The LAN shutdown feature enables bring up and bring down of LAN links on a unified link carrying both FCoE and LAN traffic. When you use the **shutdown lan** command, only the LAN traffic stops while the FCoE traffic continues.

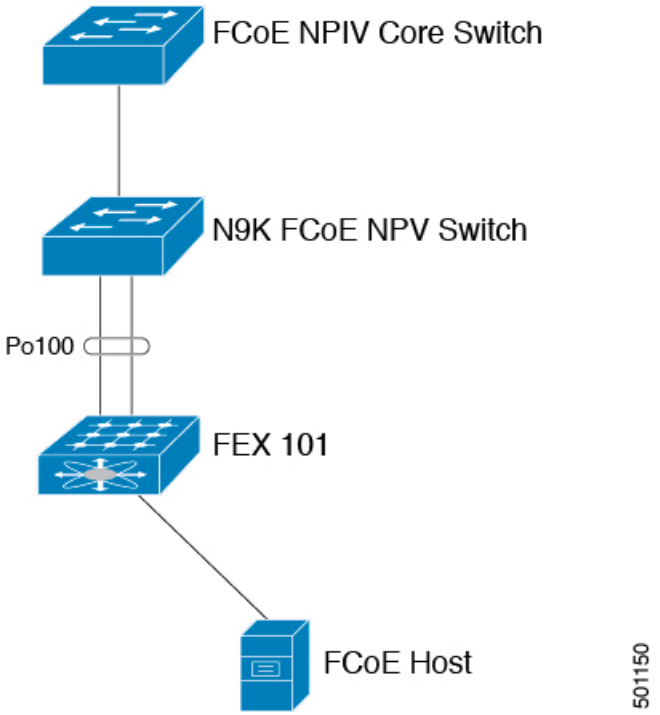
The **shutdown lan** command is supported for FEX HIF ports and port-channels.

FCoE Over FEX Topologies

FCoE over FEX is supported in the following topologies:

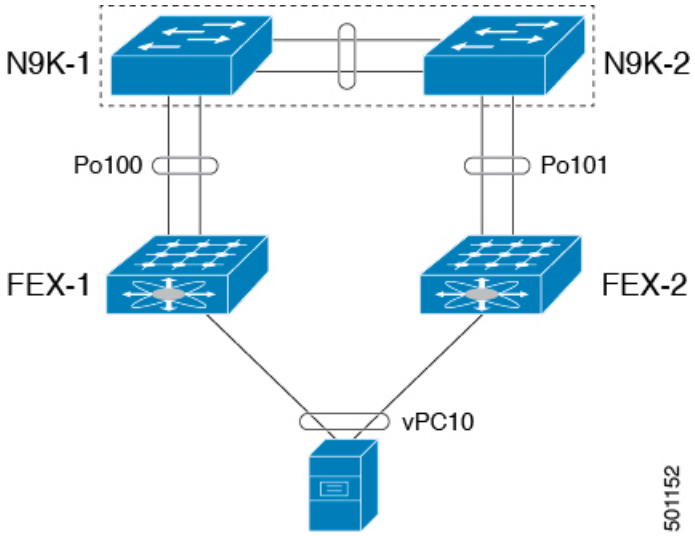
Straight Through FEX with Host Topology

The straight through FEX with host topology is supported with Cisco NX-OS Release 9.3(3) and later.



Straight Through FEX with Host VPC Topology

The straight through FEX with host VPC topology is supported with Cisco NX-OS Release 9.3(3) and later.



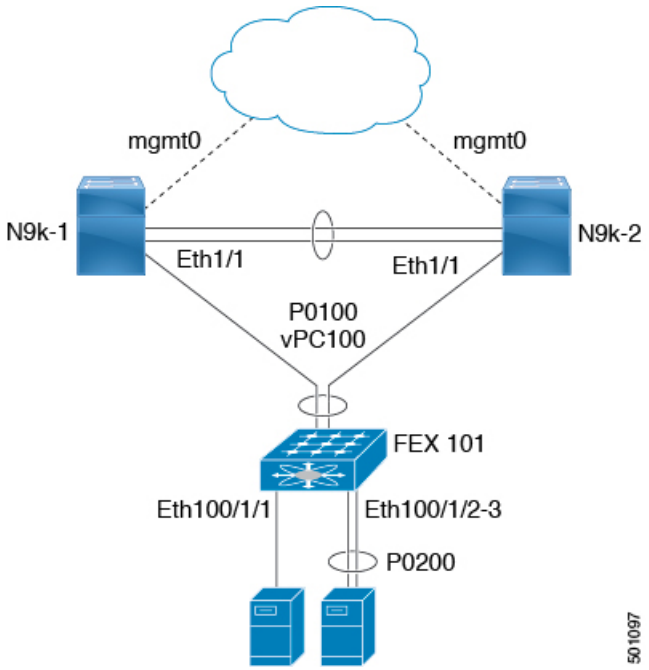
Dual-Homed FEX Topology (Active/Active FEX Topology)

The dual-homed FEX topology is supported with Cisco NX-OS Release 9.3(3) and later with Cisco Nexus 9300-EX and 9300-FX Series switches.

The following topology shows that each FEX is dual-homed with two Cisco Nexus 9000 Series switches. The FEX-fabric interfaces for each FEX are configured as a vPC on both peer switches. The host interfaces on the FEX appear on both peer switches.

Note The host interfaces configuration should be the same on both switches.

Figure 1: Dual-Homed FEX Topology



Operational vPC is mandatory for the dual-homed FEX topology. In the Dual-Homed FEX Active/Active Topology, the vPC is already operational. FEX 101 is dual-homed to both parent switches: N9k-1 and N9k-2 on FEX-fabric interfaces Ethernet 1/1.

Note Only the following support an active-active FEX topology:

- N2K-C2232PP
- N2K-C2348UPQ
- NB22IBM
- NB22HP

Note A port channel within the same FEX is supported on Cisco Nexus 2200 Series Fabric Extenders.

Guidelines and Limitations for FCoE Over FEX

- In FEX AA configuration, if FCoE pinning is done on the secondary switch, the FCoE traffic is disrupted when the peer link is flapped.
- FCoE host connected to the FEX can login via both FC and FCoE NP uplinks in N9K-C93180YC-FX.

- If a traffic map is configured for HIF ports for Cisco Nexus 93180YC-FX switches, make sure that all the hosts in the same FEX are mapped to the same NP link. For other Cisco Nexus (older) switches, traffic maps for the FEX HIF ports work the same way as before.
- Any or all VSANs that are configured as port VSAN of HIFs should be allowed on all the NP links (external interfaces).
- N9K-C93180LC-EX supports FCoE over FEX only on the N2K-C2348UPQ. Other FEX models are not supported with this device.
- FEX HIF ports only support vFC in F mode. NP mode vFCs are not supported over FEX HIF ports.
- N9K-C93180YC-FX3 switch supports FEX when used with the N9K-C93180YC-FX parent switch only. Ensure that you follow the below guidelines while configuring FEX on the switch:
  - Make sure to disable auto-negotiation when using 40G or 100G FEX NIF uplink ports.
  - For a 10G connection, make sure to connect to uplink ports 49 or higher.
- A Fabric Port Channel cannot exceed a maximum of eight member ports.
- 4q policies are supported on FCoE over FEX.
- 8q policies are not supported on FCoE over FEX.
- FC ports are not supported on FEX.



Note For information about scalability, see the Cisco Nexus 9000 Series NX-OS Verified Scalability Guide.

Configuring FCoE Over FEX

Configuring Straight Through FEX with Host

Note Considerations for FEX Fabric Port Channel (FPC):

- Priority flow control (PFC) requires to be enabled explicitly for Pause to work.

```
interface "port-channel"
priority-flow-control mode on
```

- If the switch is connected to a host that does not have DCBX support, PFC needs to be enabled explicitly on HIF interfaces.

```
interface "hif interface"
priority-flow-control mode on
```

- The LLDP feature should be enabled on the switch with the **feature lldp** command.
- First attach the interfaces to the fex-fabric port-channel and then enable the priority-flow-control mode with the **priority-flow-control mode on** command.
- The **fcoe enable-fex** command is required for the FCoE host logins to work properly when connected to the FEX HIF ports. This command is supported and required only on the following Cisco Nexus 9000 series switches such as N9K-C9332PQ, N9K-C9372PX-E, N9K-C9372PX, N9K-C9396PX, N9K-X9464PX line cards, and N9K-X9564PX line cards.

Before you begin

- Ensure configuration of FEX. For more information, see the *Cisco Nexus 2000 Series NX-OS Fabric Extender Configuration Guide for Cisco Nexus 9000 Series Switches*.
- Ensure the configuration of FCoE NPV. For more information, see the section: *Configuring FCoE NPV*.
- You must apply the QoS policy at the system (global) level and to the Host Interfaces (HIF's) to honor the pause frames in the FCoE traffic.

```
switch(config)# system qos
switch(config-sys-qos)# service-policy type queuing input policy-name
switch(config-sys-qos)# service-policy type queuing output policy-name
switch(config-sys-qos)# service-policy type network-qos policy-name
switch(config-sys-qos)# service-policy type qos input policy-name
```

SUMMARY STEPS

1. **configure terminal**
2. **interface port-channel** <*port_num*>
3. **switchport**

4. **switchport mode fex-fabric**
5. **fex associate** *<fex_id>*
6. **mtu 9216**
7. **no shutdown**
8. **exit**
9. **interface ethernet** *slot/port*
10. **switchport**
11. **switchport mode fex-fabric**
12. **fex associate** *<fex_id>*
13. **mtu 9216**
14. **channel-group** *<port_number>*
15. **no shutdown**
16. **exit**
17. **interface ethernet** *chassis_id/slot/port_number*
18. **switchport mode trunk**
19. **service-policy type qos input fcoe**
20. **no shutdown**
21. **exit**

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**interface port-channel** *<port_num>* **Example:** `switch(config)#interface port-channel 101`	Creates port-channel and enters the interface configuration mode.
Step 3	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 4	**switchport mode fex-fabric** **Example:** `switch(config-if)#switchport mode fex-fabric`	Sets the interface type to be a uplink port for a Fabric extender (FEX).

	Command or Action	Purpose
Step 5	**fex associate** *<fex_id>* **Example:** `switch(config-if)#fex associate 101`	Associates a Fabric Extender (FEX) to a Fabric interface.
Step 6	**mtu 9216** **Example:** `switch(config-if)#mtu 9216`	Configures the MTU value to that of jumbo frames to carry FCoE traffic through the NIF ports.
Step 7	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 8	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 9	**interface ethernet** *slot*/*port* **Example:** `switch(config)#interface Ethernet1/1`	Enters interface configuration mode.
Step 10	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 11	**switchport mode fex-fabric** **Example:** `switch(config-if)#switchport mode fex-fabric`	Sets the interface type to be an uplink port for a fabric extender (FEX).
Step 12	**fex associate** *<fex_id>* **Example:** `switch(config-if)#fex associate 101`	Associates a Fabric Extender (FEX) to a Fabric interface.
Step 13	**mtu 9216** **Example:** `switch(config-if)#mtu 9216`	Configures the MTU value to that of jumbo frames to carry FCoE traffic through the NIF ports.
Step 14	**channel-group** *<port_number>* **Example:**	Sets the Fabric interface a member of the Fabric port channel.

	Command or Action	Purpose
	`switch(config-if)channel-group 101`	
Step 15	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 16	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 17	**interface ethernet** *chassis_id*/*slot*/*port_number* **Example:** `switch(config)interface ethernet 101/1/1`	Configures a FEX satellite interface or HIF (host interface) port and enters interface configuration mode.
Step 18	**switchport mode trunk** **Example:** `switch(config-if)#switchport mode trunk`	Sets interface type to be a trunk port.
Step 19	**service-policy type qos input fcoe** **Example:** `switch(config-if)# service-policy type qos input fcoe`	Sets the QoS policy on the HIF port channel to a no drop policy. **Note** For more information about queuing policy configurations, see the section: *Configuring QoS for no-drop support*.
Step 20	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 21	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.

Example

The following is an example of FEX bring up in straight through mode with a host.

```
install feature-set fex
feature-set fex

fex 101
  pinning max-links 1
```

```
  description "2232PP-1"

interface port-channel101
  switchport
  switchport mode fex-fabric
  fex associate 101
  mtu 9216

interface Ethernet1/1
  switchport
  switchport mode fex-fabric
  fex associate 101
  mtu 9216
  channel-group 101
  no shutdown

interface Ethernet101/1/1
  switchport mode trunk
  service-policy type qos input fcoe-qo-policy
  no shutdown
```

Binding vFC to FEX Interface Explicitly

SUMMARY STEPS

1. **configure terminal**
2. **interface vfc** < *vfc-id*>
3. **bind interface ethernet** [*chassid-id*/*slot*/*port*]
4. **no shutdown**
5. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**interface vfc** < *vfc-id*> **Example:** `N9k(config)# interface vfc 1`	Creates a virtual Fibre Channel interface and enters the interface configuration mode. The chassis-id range is from 101 to 199.
Step 3	**bind interface ethernet** [*chassid-id*/*slot*/*port*] **Example:** `N9k(config-if)# bind interface ethernet101/1/1`	Explicitly binds the virtual fibre channel interface to the specified interface. Use the **no** form of the command to unbind the interface. Chassis id range is from 101 to 199.

	Command or Action	Purpose
Step 4	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Brings up the interface (administratively).
Step 5	**end** **Example:** `N9k(config-if)#end`	Returns to exec mode.

Example

```
interface vfc1
  bind interface ethernet 101/1/1
  switchport trunk mode on
  no shutdown
```

Binding VFC to FEX Interface Implicitly

SUMMARY STEPS

1. **configure terminal**
2. **interface vfc** < *chassis-id*>/<*slot*>/<*port*>
3. **no shutdown**
4. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**interface vfc** < *chassis-id*>/<*slot*>/<*port*> **Example:** `switch(config)# interface vfc 101/1/1`	Creates a virtual fibre Channel Interface and enters interface configuration mode; implicitly binding it to the underlying Ethernet interface (ethernet chassid-id/slot/port). The chassis-id range is from 101 to 199.

	Command or Action	Purpose
Step 3	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Brings up the interface (administratively).
Step 4	**end** **Example:** `switch(config-if)#end`	Returns to exec mode.

Example

```
interface vfc101/1/1
  switchport trunk mode on
  no shutdown
```

Binding vFC to MAC Address

A MAC address bound vFC can also be created for a FEX host interface (HIF) port.

Note A MAC bound vFC can be configured to a host sitting behind a FIP Snooping Bridge (FSB).

When both MAC bound vFC and port-bound vFC are configured for the same interface, the port-bound vFC takes precedence.

As a best practice, you should have either a MAC bound vFC or a port- bound vFC for a physical Ethernet port or a port-channel. However, you cannot have both.

SUMMARY STEPS

1. **configure terminal**
2. **interface vfc** <*number*>
3. **bind mac-address** <*mac-address*>

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**configure terminal**	Enters global configuration mode.
Step 2	**interface vfc** <*number*>	Creates a virtual fibre Channel Interface.
Step 3	**bind mac-address** <*mac-address*>	Binds the MAC address.

Example

The following example shows how to bind a virtual Fibre Channel interface to a MAC address:

```
switch# configure terminal
switch(config)# interface vfc 2
switch(config-if)# bind mac-address 00:0a:00:00:00:36
```

Configuring Straight Through FEX with Host vPC

Before you begin

- Ensure configuration of vPC between two Cisco Nexus 9000 Series switches. For more information, see the *Cisco Nexus 9000 Series NX-OS Interfaces Configuration Guide*.
- Ensure configuration of FEX. For more information, see the *Cisco Nexus 2000 Series NX-OS Fabric Extender Configuration Guide for Cisco Nexus 9000 Series Switches*.
- Ensure the configuration of FCoE NPV. For more information, see the section: *Configuring FCoE NPV*.

SUMMARY STEPS

1. **configure terminal**
2. **interface port-channel** <*port_num*>
3. **switchport**
4. **switchport mode fex-fabric**
5. **fex associate** <*fex_id*>
6. **mtu 9216**
7. **no shutdown**
8. **exit**
9. **interface ethernet** *slot*/*port*
10. **switchport**
11. **switchport mode fex-fabric**
12. **fex associate** <*fex_id*>
13. **mtu 9216**
14. **channel-group** <*port_number*>
15. **no shutdown**
16. **exit**
17. **interface ethernet** *chassis_id*/*slot*/*port_number*
18. **switchport mode trunk**
19. **channel group** <*host_port_num*>
20. **no shutdown**
21. **exit**
22. **interface port-channel** <*host_port_number*>
23. **switchport**
24. **switchport mode trunk**

25. **service-policy type qos input fcoe**
26. **vpc 3**
27. **no shutdown**
28. **exit**

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**interface port-channel** <*port_num*> **Example:** `switch(config)#interface port-channel 101`	Creates port-channel and enters the interface configuration mode.
Step 3	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 4	**switchport mode fex-fabric** **Example:** `switch(config-if)#switchport mode fex-fabric`	Sets the interface type to be a uplink port for a Fabric extender (FEX).
Step 5	**fex associate** <*fex_id*> **Example:** `switch(config-if)#fex associate 101`	Associates a Fabric Extender (FEX) to a Fabric interface.
Step 6	**mtu 9216** **Example:** `switch(config-if)#mtu 9216`	Configures the MTU value to that of jumbo frames to carry FCoE traffic through the NIF ports.
Step 7	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).

	Command or Action	Purpose
Step 8	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 9	**interface ethernet** *slot*/*port* **Example:** `switch(config)#interface Ethernet1/1`	Enters the interface configuration mode.
Step 10	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 11	**switchport mode fex-fabric** **Example:** `switch(config-if)#switchport mode fex-fabric`	Sets the interface type to be an uplink port for a fabric extender (FEX).
Step 12	**fex associate** <*fex_id*> **Example:** `switch(config-if)#fex associate 101`	Associates a Fabric Extender (FEX) to a Fabric interface.
Step 13	**mtu 9216** **Example:** `switch(config-if)#mtu 9216`	Configures the MTU value to that of jumbo frames to carry FCoE traffic through the NIF ports.
Step 14	**channel-group** <*port_number*> **Example:** `switch(config-if)channel-group 101`	Sets the Fabric interface a member of the Fabric port channel.
Step 15	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 16	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 17	**interface ethernet** *chassis_id*/*slot*/*port_number* **Example:**	Configures a FEX satellite interface or HIF (host interface) port and enters interface configuration mode.

	Command or Action	Purpose
	`switch(config)interface ethernet 101/1/1`	
Step 18	**switchport mode trunk** **Example:** `switch(config-if)#switchport mode trunk`	Sets interface type to be a trunk port.
Step 19	**channel group** <*host_port_num*> **Example:** `switch(config-if)# channel group 1`	Makes the HIF port a member of a port-channel
Step 20	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 21	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 22	**interface port-channel** <*host_port_number*> **Example:** `switch(config)#interface port-channel 1`	Creates a HIF port-channel.
Step 23	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 24	**switchport mode trunk** **Example:** `switch(config-if)#switchport mode trunk`	Sets the interface to be a trunk port.
Step 25	**service-policy type qos input fcoe** **Example:** `switch(config-if)# service-policy type qos input fcoe`	Sets the QoS policy on the HIF port channel to a no drop policy. **Note** For more information about queuing policy configurations, see the section: *Configuring QoS for no-drop support*.
Step 26	**vpc 3**	Configures VPC on the HIF port-channel. The VPC id on both the peers should be same for this Host VPC.

	Command or Action	Purpose
Step 27	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 28	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.

Example

The following is an example of FEX bring up in straight through mode with a host vPC.

- Configuration on Peer-1

```
install feature-set fex
feature-set fex

fex 101
  pinning max-links 1
  description "2232PP-1"

interface port-channel101
  switchport
  switchport mode fex-fabric
  fex associate 101
  mtu 9216

interface Ethernet1/1
  switchport
  switchport mode fex-fabric
  fex associate 101
  mtu 9216
  channel-group 101
  no shutdown

interface Ethernet101/1/1
  switchport mode trunk
  channel-group 1
  no shutdown

interface port-channel1
  switchport
  switchport mode trunk
  service-policy type qos input fcoe
  vpc 3

interface vfc-po1      /*** Implicit binding with VFC bound to port-channel ***/
  bind interface port-channel1
  switchport trunk mode on
  no shutdown

interface vfc101/1/1   /*** Implicit binding with VFC bound to member port ***/
  bind interface ethernet101/1/1
  switchport trunk mode on
```

```
  no shutdown
```

- Configuration on Peer-2

```
install feature-set fex
feature-set fex

fex 102
  pinning max-links 1
  description "2348UPQ-2"

interface port-channel102
  switchport
  switchport mode fex-fabric
  fex associate 102
  mtu 9216

interface Ethernet102/1/1
  switchport mode trunk
  channel-group 1
  no shutdown

interface port-channel1
  switchport
  switchport mode trunk
  service-policy type qos input fcoe
  vpc 3

interface vfc1   /*** Explicit binding with VFC bound to port-channel ***/
  bind interface port-channel1
  switchport trunk mode on
  no shutdown

interface vfc2   /*** Explicit binding with VFC bound to member port ***/
  bind interface ethernet102/1/1
  switchport trunk mode on
  no shutdown
```



Note The vFC binding should be either to the port-channel or to the member host interface.

Configuring Dual-Homed FEX

SUMMARY STEPS

1. **configure terminal**
2. **fex fex-chassis_ID**
3. **fcoe**
4. **interface port-channel** <*port_num*>
5. **switchport**
6. **switchport mode fex-fabric**
7. **fex associate** <*fex_id*>
8. **mtu 9216**

9. **vpc 1**
10. **no shutdown**
11. **exit**
12. **interface ethernet** *slot*/*port*
13. **switchport**
14. **switchport mode trunk**
15. **service-policy type qos input fcoe-qo-policy**
16. **no shutdown**
17. **exit**

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**fex fex-chassis_ID**
	Example:
	`switch# fex 101`
	`switch(config)#`
		Enters the configuration mode for the specified FEX. The range for fex-chassis_ID is from 101 to 199.

Step 3	**fcoe**
	Example:
	`switch# fcoe`
	`switch(config)#`
		Configures the FEX to send FCoE traffic only to this switch.
		Note
		Cisco recommends that FCOE pinning is configured on the primary vPC switch in case of dual homed FEX.

Step 4	**interface port-channel** <*port_num*> **Example:** `switch(config)#interface port-channel170`	Creates port-channel and enters the interface configuration mode.
Step 5	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 6	**switchport mode fex-fabric** **Example:** `switch(config-if)#switchport mode fex-fabric`	Sets the interface type to be a uplink port for a Fabric extender (FEX).

	Command or Action	Purpose
Step 7	**fex associate** *<fex_id>* **Example:** `switch(config-if)#fex associate 170`	Associates a Fabric Extender (FEX) to a Fabric interface.
Step 8	**mtu 9216** **Example:** `switch(config-if)#mtu 9216`	Configures the MTU value to that of jumbo frames to carry FCoE traffic through the NIF ports.
Step 9	**vpc 1**	Configures VPC on the HIF port-channel.
Step 10	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).
Step 11	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode.
Step 12	**interface ethernet** *slot*/*port* **Example:** `switch(config)#interface Ethernet170/1/18`	Enters interface configuration mode.
Step 13	**switchport** **Example:** `switch(config-if)#switchport`	Sets Layer 2 switching port.
Step 14	**switchport mode trunk** **Example:** `switch(config-if)#switchport mode trunk`	Sets the interface to be a trunk port.
Step 15	**service-policy type qos input fcoe-qo-policy** **Example:** `switch(config-if)# service-policy type qos input fcoe`	Sets the QoS policy on the HIF port channel to a no drop policy. **Note** For more information about queuing policy configurations, see the section: *Configuring QoS for no-drop support*.
Step 16	**no shutdown** **Example:** `switch(config-if)#no shutdown`	Sets the port-channel to up (administratively).

	Command or Action	Purpose
Step 17	**exit** **Example:** `switch(config-if)#exit`	Exits the interface configuration mode. **Note** The same configuration should be performed on the other side for the Active-Active FEX to be up on both the sides.

Example

Note Cisco recommends that FCOE pinning is configured on the primary vPC switch in case of dual homed FEX.

- Peer 1

```
fex 170
  pinning max-links 1
  description "2232PP-3 AA"
  fcoe

interface port-channel170
  switchport
  switchport mode fex-fabric
  fex associate 170
  mtu 9216
  vpc 1

interface Ethernet170/1/18
  switchport mode trunk
  service-policy type qos input fcoe-qo-policy
  no shutdown

interface vfc1718     /*** Explicit binding ***/
  bind interface Ethernet170/1/18
  switchport trunk mode on
  no shutdown

interface vfc170/1/18 /*** Implicit binding ***/
  bind interface Ethernet170/1/18
  switchport trunk mode on
  no shutdown
```

- Peer 2

```
fex 170
  pinning max-links 1
  description "2232PP-3 AA"

interface port-channel170
  switchport
  switchport mode fex-fabric
  fex associate 170
  mtu 9216
  vpc 1
```

```
interface Ethernet170/1/18
  switchport mode trunk
  service-policy type qos input fcoe-qo-policy
  no shutdown
```



Note

- HOST vPC is not supported with dual-homed FEX.
- The vFC binding must be either to port-channel or to member host interface. vFC cannot be bound to port channel if it has more than one member. vFC cannot be bound to host interface if it is part of a multi member port channel.

Configuring FC NPV

For more information on configuring FC NPV, see Cisco Nexus 9000 Series NX-OS FC NPV Configuration Guide.