SVI Interface in OTV VDC

Introduction

This document demonstrates expected behaviour when switch virtual interface (SVI) feature is combined with extension of a given vlan over OTV.

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Q. My vlan has been extended across OTV. Can I create SVI interface for that vlan in the same VDC?

A. Let's consider setup where test vlan 15 has been extended across OTV with the following basic configuration.

```
N7K-OTV# show running-config otv

version 7.3(1)D1(1)
feature otv

otv site-vlan 222

interface Overlay1
  otv join-interface Ethernet3/18
  otv control-group 239.1.1.1
  otv data-group 232.1.1.0/24
  otv extend-vlan 15, 20
  no shutdown
otv-isis default
  vpn Overlay1
otv site-identifier 0000.0000.0002

N7K-OTV#
```

Now, when you create SVI interface for extended vlan, the following error message is displayed.

```
N7K-OTV# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
N7K-OTV(config)# interface vlan 15
ERROR: Interface vlan/bdi 15 is OTV Extended VLAN

Error: Invalid range: Vlan15
N7K-OTV(config)
```

Above message informs that once a particular vlan has been extended across Overlay interface, corresponding SVI cannot be enabled in the same VDC.

Q. I have already enabled SVI for vlan. Can I now extend this vlan across OTV?

A. Let's consider setup where SVI for vlan 21 has been configured

```
N7K-OTV# show running-config interface vlan 21


version 7.3(1)D1(1)

interface Vlan21
  no shutdown

N7K-OTV#
```

OTV configuration in this scenario looks as follows, however vlan 21 hasn't been extended across OTV yet.

```
N7K-OTV# show running-config otv

version 7.3(1)D1(1)
feature otv

otv site-vlan 222

interface Overlay1
  otv join-interface Ethernet3/18
  otv control-group 239.1.1.1
  otv data-group 232.1.1.0/24
  otv extend-vlan 20
  no shutdown
otv-isis default
  vpn Overlay1
otv site-identifier 0000.0000.0002

N7K-OTV#
```

When an attempt is made to extend vlan with existing SVI, the following error message is displayed

```
N7K-OTV# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
N7K-OTV(config)# interface overlay 1
N7K-OTV(config-if-overlay)# otv extend-vlan add ?
  <1-3499,3628-4093>  VLAN IDs of VLANs to be extended

N7K-OTV(config-if-overlay)# otv extend-vlan add 21
Vlan 21 is configured as SVI. Cannot have same vlan extended.
N7K-OTV(config-if-overlay)#
```

Above message informs that once a particular vlan has SVI interface configured, it cannot be extended across OTV in the same VDC.

Q. I want to configure SVI as OTV join-interface, and don't plan to extend corresponding vlan across OTV. Is this supported?

A. Using SVI inteface as OTV join interface is supported. You can use SVI in OTV-enabled VDC, as long as its corresponding vlan is not extended across OTV.

Q. I have vlan extended and SVI configured in OTV-enabled VDC, and switch doesn't generate any errors. Does this mean my NX-OS version supports this feature combination?

A. NX-OS versions prior to 7.3 train didn't have corresponding checks enabled. This allowed SVI to be configured and corresponding vlan to be extended across OTV. However, these features cannot be functional at the same time: only feature (either SVI or OTV extension for a particular vlan) which is enabled first would be operational.

Related Information

CSCtf57053   SVI & OTV Extended VLANs need to be mutually exclusive

CSCvb28788   Cannot extend vlan1 over OTV in 7.3(0)DX1(1)