

# Nexus 7000: Configuring OTV VLAN Mapping using VLAN Translation on a Trunk Port

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## Introduction

Beginning with Cisco NX-OS Release 6.2(2), you can map a VLAN on the local site to a VLAN with a different VLAN ID on the remote site. When you map two VLANs with different VLAN IDs across sites, they get mapped to a common VLAN called the transport VLAN. For example, when you map VLAN 1 on Site A to VLAN 2 on Site B, both VLANs are mapped to a transport VLAN. All traffic originating from VLAN 1 on Site A is translated as going from the transport VLAN. All traffic arriving at Site B from the transport VLAN is translated to VLAN 2.

This document provides a configuration example for accomplishing Vlan mapping across OTV.

There are 2 methods to configure vlan translation across OTV:

1. Vlan translation on trunk port (OTV Internal Interface).
2. Vlan translation configured on Overlay (currently not supported on F3 modules).

This document will discuss the 1st method - VLAN translation on trunk port(OTV Internal Interface).

The second method is covered in a separate document.

## Prerequisites

## Requirements

Cisco recommends that you have knowledge of these topics:

- OTV
- Virtual port channel (vPC)

## Components Used

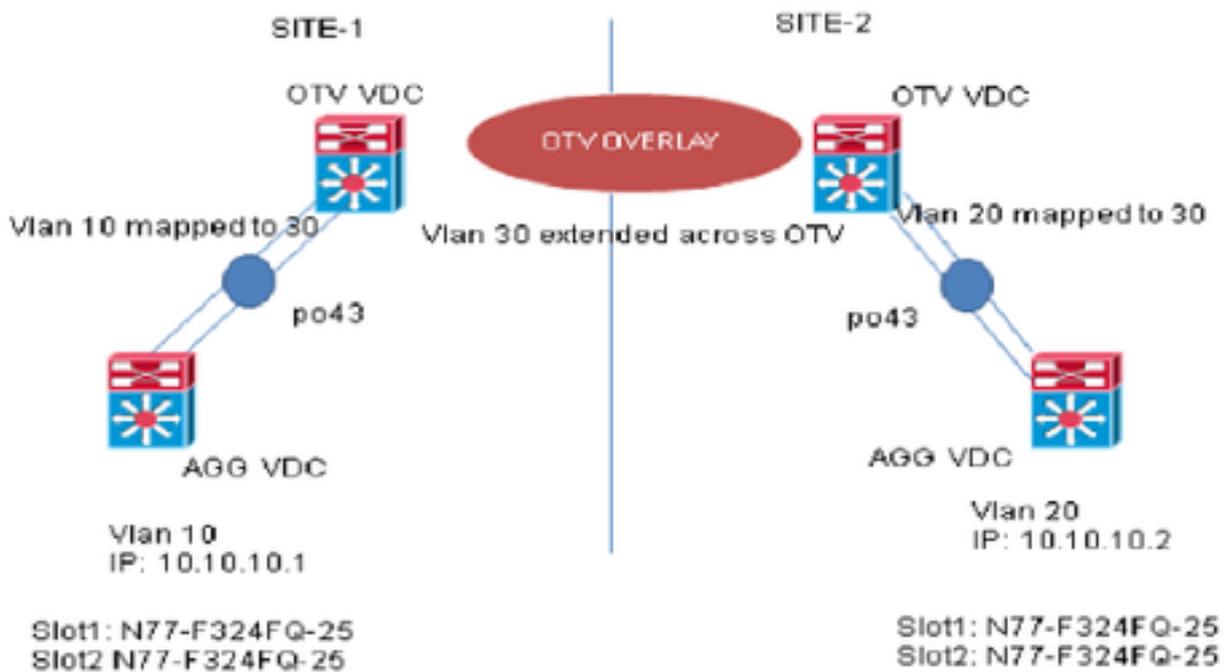
The information in this document is based on the following

- Cisco Nexus 7000 Series Switches with Supervisor 2 Module.
- F3 linecards
- SW version:7.3(0)DX(1)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## Configure

### Network Diagram



## Configurations

You can configure VLAN translation between the ingress VLAN and a local VLAN on a port. The traffic arriving on the ingress VLAN maps to the local VLAN at the ingress of the trunk port and the traffic that is internally tagged with the translated VLAN ID is mapped back to the original VLAN ID before leaving the switch port. This configuration method does not have OTV dependency.

**SITE-1:**

**AGG VDC:**

```
interface port-channel43
switchport
switchport mode trunk
```

```
switchport trunk allowed vlan 10
mtu 9216
```

```
interface Vlan10
no shutdown
ip address 10.10.10.1/24
```

**OTV VDC:**

```
N7K-Site-1-OTV# sh port-channel summary interface po43
```

```
Flags: D - Down P - Up in port-channel (members)
```

```
I - Individual H - Hot-standby (LACP only)
```

```
s - Suspended r - Module-removed
```

```
b - BFD Session Wait
```

```
S - Switched R - Routed
```

```
U - Up (port-channel)
```

```
M - Not in use. Min-links not met
```

```
-----
Group Port- Type Protocol Member Ports
Channel
-----
```

```
43 Po43(SU) Eth LACP Eth1/23(P) Eth2/23(P)
```

```
//vlan 10 is the local vlan and it will be mapped to vlan 30(transport vlan).
```

```
//Transport vlan is only defined in the OTV VDC.
```

```
interface port-channel43
```

```
switchport
```

```
switchport mode trunk
```

```
switchport vlan mapping enable >> This command shows up only under member ports config all
```

```
switchport vlan mapping 10 30 >> Mapping vlan 10 to vlan 30
```

```
switchport trunk allowed vlan 30
```

```
mtu 9216
```

```
interface Overlay0
```

```
description Overlay trunk to DCI
```

```
otv join-interface port-channelXX
```

```
otv control-group X.X.X.X
```

```
otv data-group X.X.X.X
```

```
otv extend-vlan 30
```

**SITE-2:**

**AGG VDC:**

```
interface port-channel43
```

```
switchport
```

```
switchport mode trunk
```

```
switchport trunk allowed vlan 20
```

```
mtu 9216
```

```
interface Vlan20
```

```
no shutdown
```

```
ip address 10.10.10.2/24
```

**OTV VDC:**

```
N7K-Site-2-OTV# sh port-channel summary interface po43
```

```
Flags: D - Down P - Up in port-channel (members)
```

```
I - Individual H - Hot-standby (LACP only)
```

```
s - Suspended r - Module-removed
```

```
b - BFD Session Wait
```

```
S - Switched R - Routed
```

```
U - Up (port-channel)
```



30 8c60.4f89.71c2 42 2d20h overlay F340.22.11-N77-C7706-1-otv <----- Remote Vlan 20 MAC showing up as Vlan 30 MAC in OTV VDC

30 8c60.4fac.b9c2 1 2d20h site port-channel43 <----- Local Vlan 10 MAC showing up as Vlan 30 MAC in OTV VDC

## Reference

[OTV Configuration Guide](#)

[General VLAN Translation Configuration Guide](#)