



# **Configure VLANs over physical ports**

## **ONTAP System Manager**

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# Configure VLANs over physical ports

VLANs provide logical segmentation of networks by creating separate broadcast domains that are defined on a switch port basis as opposed to the traditional broadcast domains, defined on physical boundaries. A VLAN can span multiple physical network segments. The end-stations belonging to a VLAN are related by function or application.

For example, end-stations in a VLAN might be grouped by departments, such as engineering and accounting, or by projects, such as release1 and release2. Because physical proximity of the end-stations is not essential in a VLAN, you can disperse the end-stations geographically and still contain the broadcast domain in a switched network.

You can manage VLANs by creating, deleting, or displaying information about them.



You should not create a VLAN on a network interface with the same identifier as the native VLAN of the switch. For example, if the network interface e0b is on native VLAN 10, you should not create a VLAN e0b-10 on that interface.

## Create a VLAN

You can create a VLAN for maintaining separate broadcast domains within the same network domain by using the `network port vlan create` command.

### Before you begin

Your network administrator must have confirmed that the following requirements have been met:

- The switches deployed in the network must either comply with IEEE 802.1Q standards or have a vendor-specific implementation of VLANs.
- For supporting multiple VLANs, an end-station must be statically configured to belong to one or more VLANs.
- The VLAN is not attached to a port hosting a cluster LIF.
- The VLAN is not attached to ports assigned to the Cluster IPspace.
- The VLAN is not created on an interface group port that contains no member ports.

### About this task

In certain circumstances, if you want to create the VLAN port on a degraded port without correcting the hardware issue or any software misconfiguration, then you can set the `-ignore-health-status` parameter of the `network port modify` command as true.

Creating a VLAN attaches the VLAN to the network port on a specified node in a cluster.

When you configure a VLAN over a port for the first time, the port might go down, resulting in a temporary disconnection of the network. Subsequent VLAN additions to the same port do not affect the port state.

Note: You should not create a VLAN on a network interface with the same identifier as the native VLAN of the switch. For example, if the network interface e0b is on native VLAN 10, you should not create a VLAN e0b-10 on that interface.

### Step

1. Use the `network port vlan create` command to create a VLAN.
2. You must specify either the `vlan-name` or the `port` and `vlan-id` options when creating a VLAN. The VLAN name is a combination of the name of the port (or interface group) and the network switch VLAN identifier, with a hyphen in between. For example, `e0c-24` and `e1c-80` are valid VLAN names.

The following example shows how to create a VLAN `e1c-80` attached to network port `e1c` on the node `cluster-1-01`:

```
network port vlan create -node cluster-1-01 -vlan-name e1c-80
```

3. VLANs are automatically placed into appropriate broadcast domains about one minute after their creation.

For more information about this command, see the man page.

## Delete a VLAN

You might have to delete a VLAN before removing a NIC from its slot. When you delete a VLAN, it is automatically removed from all of the failover rules and groups that use it.

### Before you begin

There must be no LIFs associated with the VLAN.

### About this task

Deletion of the last VLAN from a port might cause a temporary disconnection of the network from the port.

### Step

Use the `network port vlan delete` command to delete a VLAN.

The following example shows how to delete VLAN `e1c-80` from network port `e1c` on the node `cluster-1-01`:

```
network port vlan delete -node cluster-1-01 -vlan-name e1c-80
```

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