

## Creating a Series of Tagged VLANs (CLI Procedure)

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To identify which VLAN traffic belongs to, all frames on an Ethernet VLAN are identified by a tag, as defined in the IEEE 802.1Q standard. These frames are *tagged* and are encapsulated with 802.1Q tags. For a simple network that has only a single VLAN, all traffic has the same 802.1Q tag.

Instead of configuring VLANs and 802.1Q tags one at a time for a trunk interface, you can configure a VLAN range to create a series of tagged VLANs.

When an Ethernet LAN is divided into VLANs, each VLAN is identified by a unique 802.1Q tag. The tag is applied to all frames so that the network nodes receiving the frames know which VLAN the frames belong to. Trunk ports, which multiplex traffic among a number of VLANs, use the tag to determine the origin of frames and where to forward them.

For example, you could configure the VLAN **employee** and specify a tag range of 10-12. This creates the following VLANs and tags:

- VLAN **employee-10**, tag 10
- VLAN **employee-11**, tag 11
- VLAN **employee-12**, tag 12

Creating tagged VLANs in a series has the following limitations:

- Layer 3 interfaces do not support this feature.
- Because an access interface can only support one VLAN member, access interfaces also do not support this feature.
- Voice over IP (VoIP) configurations do not support a range of tagged VLANs.

To configure a series of tagged VLANs using the CLI (here, the VLAN is **employee**):

- a. Configure the series (here, a VLAN series from 120 through 130):

```
[edit]
user@switch# set vlans employee vlan-range 120-130
```

- b. Associate a series of tagged VLANs when you configure an interface in one of two ways:

- Include the name of the series:

```
[edit interfaces]
user@switch# set interfaces ge-0/0/22.0 family ethernet-switching vlan members employee
```

- Include the VLAN range:

```
[edit interfaces]
user@switch# set interfaces ge-0/0/22.0 family ethernet-switching vlan members 120-130
```

Associating a series of tagged VLANs to an interface by name or by VLAN range have the same result: VLANs **\_\_employee\_120\_\_** through **\_\_employee\_130\_\_** are created.



**NOTE:** When a series of VLANs are created using the **vlan-range** command, the VLAN names are prefixed and suffixed with a double underscore.

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#### Related Topics

- Verifying That a Series of Tagged VLANs Has Been Created
- Example: Setting Up Basic Bridging and a VLAN for an EX-series Switch
- Example: Setting Up Bridging with Multiple VLANs for EX-series Switches
- Example: Connecting an Access Switch to a Distribution Switch
- Understanding Bridging and VLANs on EX-series Switches