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## V Commands

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This chapter describes the Cisco NX-OS unicast routing commands that begin with the letter V.

# vrf

To create a VPN routing and forwarding instance (VRF) or enter the VRF configuration mode and configure submode commands for the Intermediate System-to-Intermediate System Intradomain Routing Protocol (IS-IS), use the **vrf** command. To remove a VRF instance or disable the VRF configuration mode, use the **no** form of this command.

**vrf** *name* | **management**

**no vrf** | **management**

## Syntax Description

	Name of the VRF.
<b>management</b>	Specifies a configurable VRF name.

## Command Default

## Command Modes

Address-family configuration  
Router configuration  
VRF configuration

## Supported User Roles

network-admin  
vdc-admin

## Command History

Release	Modification
4.0(1)	This command was introduced.

## Usage Guidelines

Each VRF mode serves as a separate instance within the IS-IS process. All configuration commands available in the global configuration mode are available in the new VRF mode. For example, each VRF mode must have its own NET configured for that particular instance to be operational. All EXEC commands can be specified to be per-VRF, else with no arguments, it will be applied to the default VRF. Note that interfaces belong to a particular VRF and the appropriate interface will only be applied to the particular interface with the `ip/ipv6 router isis` command.

The VRF does not become active until you create an identically named VRF in global configuration mode.

When you enter the VRF configuration mode, the following commands are available:

- **address-family**—Configures an address family. See the **address-family (BGP)** command for additional information.
- **authentication key-chain**—Sets the authentication key chain string. See the **authentication key-chain** command for additional information.
- **authentication-check**—Checks the authentication. See the **authentication-check** command for additional information.

- authentication-type**— Sets the authentication type. See the **authentication-type** command for additional information.
- default-information originate (IS-IS)**— Controls the origination of a default route. See the **default-information originate (IS-IS)** command for additional information.
- distance**—Configures the administrative distance. See the **distance (IS-IS)** command for additional information.
- distribute**—Distributes routes between ISIS levels. See the **distribute** command for additional information.
- exit**—Exits from the current command mode.
- graceful-restart**—Enables the graceful restart for IS-IS process. See the **graceful-restart (BGP)** command for additional information.
- hostname**—Configures the dynamic hostname for IS-IS. See the **hostname dynamic** command for additional information.
- is-type**—Configures the IS type for this IS-IS process. See the **is-type** command for additional information.
- log-adjacency-changes**—Logs the changes in adjacency state. See the **log-adjacency-changes (IS-IS)** command for additional information.
- lsp-gen-interval**—Configures the LSP generation interval. See the **lsp-gen-interval** command for additional information.
- lsp-mtu**—Sets the LSP MTU. See the **lsp-mtu** command for additional information.
- max-lsp-lifetime**—Sets the maximum LSP lifetime. See the **max-lsp-lifetime** command for additional information.
- maximum-paths**—Sets the maximum paths per destination. See the **maximum-paths (IS-IS)** command for additional information.
- net**—Configures the Network Entity Title for this IS-IS process. See the **net** command for additional information.
- no**—Negates a command or set its defaults.
- redistribute**—Redistributes the information from another routing protocol. See the **redistribute (IS-IS)** command for additional information.
- reference-bandwidth**—Changes the reference bandwidth used for setting interface metric. See the **reference-bandwidth** command for additional information.
- set-overload-bit**—Signals other routers not to use us for transit. See the **set-overload-bit** command for additional information.
- shutdown**—Shuts down this IS-IS process. See the **shutdown (IS-IS)** command for additional information.
- spf-interval**—Configures the SPF interval. See the **spf-interval** command for additional information.
- summary-address**—Configures the IP address summaries. See the **summary-address** command for additional information.
- wide-metric-only**—Advertises only wide metric. See the **wide-metric-only** command for additional information.

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## Examples

```
switch(config)# router isis 100  
switch(config-router)# vrf management  
switch(config-router-vrf)#
```

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# vrf context

router BGP configuration command. To remove a VRF entry, use the `no` form of this command.

```
router vrf { vrf-name }  
  address-family { af-name }  
    { command | ... }
```

Syntax Description	<i>name</i>	Name of the VRF. The <i>name</i> can be any case-sensitive, alphanumeric string up to 32 characters.
		Specifies a configurable VRF name.

**Command Default** This command has no default settings.

**Command Modes** Neighbor address-family configuration  
Router bgp configuration

**Supported User Roles** network-admin  
vdc-admin

**Command History**

4.0(1)	This command was introduced.
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**Usage Guidelines** The VRF does not become active until you create an identically named VRF in global configuration mode.

When you enter the VRF configuration mode, the following commands are available:

- `address-family { af-name } { command | ... }`—Configures an address-family. See the `address-family` command for additional information.
- `route-reflector cluster-id { cluster-id | cluster-ip-addr }`—Configures the Route Reflector Cluster-ID (router, vrf). Range: 1 to 4294967295. You can enter the cluster identification as a 32-bit quantity or as an IP address. To remove the cluster ID, use the `no` form of this command. Together, a route reflector and its clients form a cluster. When a single route reflector is deployed in a cluster, the cluster is identified by the router ID of the route reflector.

The `route-reflector cluster-id` command is used to assign a cluster ID to a route reflector when the cluster has one or more route reflectors. Multiple route reflectors are deployed in a cluster to increase redundancy and avoid a single point of failure. When multiple route reflectors are configured in a cluster, the same cluster ID is assigned to all route reflectors. This allows all route reflectors in the cluster to recognize updates from peers in the same cluster and reduces the number of updates that need to be stored in BGP routing tables.

**Note**

All route reflectors must maintain stable sessions between all peers in the cluster. If stable sessions cannot be maintained, then overlay route reflector clusters should be used instead (route reflectors with different cluster IDs).

- —Exits from the current command mode.
- —Configure Graceful Restart functionality. See the `graceful restart` command for additional information.
- —Configure Graceful Restart Helper mode functionality. See the `graceful restart helper` command for additional information.
- —Enables logging of the BGP neighbor resets. To disable the logging of changes in BGP neighbor adjacencies, use the `no log-neighbor-changes` form of this command. The `log-neighbor-changes` command enables logging of BGP neighbor status changes (up or down) and resets for troubleshooting network connectivity problems and measuring network stability. Unexpected neighbor resets might indicate high error rates or high packet loss in the network and should be investigated.

Using the `log-neighbor-changes` command to enable status change message logging does not cause a substantial performance impact, unlike, for example, enabling per BGP update debugging. If the UNIX syslog facility is enabled, messages are sent to the UNIX host running the syslog daemon so that the messages can be stored and archived. If the UNIX syslog facility is not enabled, the status change messages are retained in the internal buffer of the router, and are not stored to disk. You can set the size of this buffer, which is dependent upon the available RAM, using the `log-neighbor-changes` command.

The neighbor status change messages are not tracked if the `no log-neighbor-changes` command is disabled, except for the reset reason, which is always available as output of the `show bgp ipv4 neighbors` and `show bgp ipv6 neighbors` commands.

The `eigrp log-neighbor-changes` command enables logging of Enhanced Interior Gateway Routing Protocol (EIGRP) neighbor adjacencies, but messages for BGP neighbors are logged only if they are specifically enabled with the `log-neighbor-changes` command.

Use the `show logging command` to display the log for the BGP neighbor changes.

**neighbor**—Configures a BGP neighbor. See the `neighbor` command for additional information.

**no**—Negates a command or set its defaults

**router-id** *ip-address* —Specifies the IP address to use as the router-id.

**timers** *bestpath-timeout*

```
router bgp 64496
  vrf context management
```

```
router bgp 64496
  neighbor 192.168.70.24 route-reflector-client
  cluster-id 10.0.1.2
```

# vrf member

*vrf-name*

*vrf-name*

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## Syntax Description

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## Command Default

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## Command Modes

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## Supported User Roles

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## Command History

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## Usage Guidelines

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## Examples

```
track 1 ip route 10.10.10.0/8 reachability
switch(config-track)# vrf member Red
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# vrrp

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## Syntax

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## Defaults

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## Command Modes

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## Supported User Roles

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## Command History

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## Usage Guidelines

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## Examples

```
switch(config-if-vrrp)# vrrp 7
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```
switch# config terminal
switch(config)# interface ethernet 2/1
switch(config-if)# vrrp 7
switch(config-if-vrrp)# address 10.0.0.10
switch(config-if-vrrp)# no shutdown
```





