

FiberstoreOS

VPN Command Line Reference

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1 VRF Commands

1.1 ip vrf

To configure a VPN routing and forwarding (VRF) routing table, use the `ip vrf` command in global configuration mode. To remove a VRF routing table, use the `no` form of this command.

Command Syntax

`ip vrf VRF-NAME`

`no ip vrf VRF-NAME`

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
-----------------	--------------------------------------

Command Mode

Global Configuration

Default

None

Usage

None

Examples

```
Switch(config)# ip vrf ComA
```

```
Switch(config-vrf)# route-target both 100:2
```

```
Switch(config-vrf)# route-target import 200:1
```

Related Commands

`ip vrf forwarding`

1.2 show ip vrf

To show the set of defined VRFs and associated interfaces, use the show ip vrf command in Privileged EXEC mode.

Command Syntax

show ip vrf (bgp (brief | detail) | interfaces | ospf | rip |) (VRF-NAME)

bgp	Border Gateway Protocol (BGP)
interfaces	Show VPN Routing/Forwarding interface information
ospf	Open Shortest Path First (OSPF)
rip	Routing Information Protocol (RIP)
<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
brief	Brief VPN Routing/Forwarding instance information
detail	Detailed VPN Routing/Forwarding instance information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

Switch# show ip vrf

Related Commands

None

1.3 ip vrf forwarding

To associate a VPN routing and forwarding (VRF) instance with an Layer3 interface (except VLAN interface), use the `ip vrf forwarding` command in interface configuration mode (except VLAN interface). To disassociate a VRF, use the `no` form of this command.

Command Syntax

ip vrf forwarding *VRF-NAME*

no ip vrf forwarding

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
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Command Mode

Interface configuration

Default

None

Usage

Executing this command on an interface removes the IP address on this interface, The IP address should be reconfigured.

Examples

```
Switch# configure terminal
Switch(config)# ip vrf ComA
Switch(config-vrf)# exit
Switch(config)# interface eth-0-1
Switch(config-if)# no switchport
Switch(config-if)# ip vrf forwarding ComA
```

Related Commands

ip vrf

ip route vrf

1.4 ip route vrf

To establish static routes for a VPN routing and forwarding (VRF) instance, use the `ip route vrf` command in global configuration mode. To disable static routes, use the `no` form of this command.

Command Syntax

ip route vrf *VRF-NAME DST_NET NH_ADDR*

no ip route vrf *VRF-NAME DST_NET NH_ADDR*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>DST_NET</i>	Destination IP subnet, the format can be target IP address with masklen(A.B.C.D/M) or target IP address with netmask (A.B.C.D A.B.C.D)
<i>NH_ADDR</i>	Next-hop IP address, the format should be A.B.C.D

Command Mode

Global Configuration

Default

None

Usage

None

Examples

```
Switch(config)# ip route vrf VPN-NAME 2.2.2.0/24 1.1.1.2
```

Related Commands

show ip route vrf

clear ip route vrf

1.5 arp vrf

To add a permanent entry in the Address Resolution Protocol (ARP) cache for VRF, use the `arp vrf` command in global configuration mode. To remove an entry from VRF ARP cache, enter the `no` form of this command.

Command Syntax

arp vrf *VRF_NAME* *A.B.C.D* *MAC*

no arp vrf *VRF_NAME* *A.B.C.D*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>A.B.C.D</i>	IP address of the ARP entry
<i>MAC</i>	Hardware address of the ARP entry in HHHH.HHHH.HHHH format

Command Mode

Global Configuration

Default

None

Usage

None

Examples

Switch# configure terminal

Switch(config)# arp vrf vpn3 1.1.1.1 0000.1111.2222

Related Commands

show ip arp vrf *VRF-NAME*

clear ip arp vrf *VRF-NAME* *A.B.C.D*

1.6 show ip arp vrf

Use this command to show arp entry in VRF instance.

Command Syntax

show ip arp vrf *VRF-NAME*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
-----------------	--------------------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display all arp entry in the arp table of the VRF.

Switsh# show ip arp vrf ComA

Protocol	Address	Age (min)	Hardware Addr	Interface
Internet	1.1.1.1	-	0000.1111.2222	

Related Commands

arp vrf

1.7 clear ip arp vrf

Use this command to refresh a specific dynamic ARP entry from ARP cache for the VRF.

Command Syntax

clear ip arp vrf *VRF-NAME* *A.B.C.D*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>A.B.C.D</i>	Dynamic learned ARP entry IP address

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to refresh a dynamic arp entry in VRF.

```
Switch(config)# clear ip arp vrf ComA 1.1.1.1
```

Related Commands

arp vrf

1.8 ping vrf

Use this command to ping address in VRF.

Command Syntax

ping vrf *VRF-NAME* *WORD*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>WORD</i>	Ping destination address or hostname

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

```
Switch# ping vrf vpn 1.1.1.1
```

```
PING 1.1.1.1 (1.1.1.1) 56(84) bytes of data:
64 bytes from 1.1.1.1: icmp_seq=0 ttl=64 time=0.114 ms
64 bytes from 1.1.1.1: icmp_seq=1 ttl=64 time=0.087 ms
64 bytes from 1.1.1.1: icmp_seq=2 ttl=64 time=0.087 ms
64 bytes from 1.1.1.1: icmp_seq=3 ttl=64 time=0.097 ms
64 bytes from 1.1.1.1: icmp_seq=4 ttl=64 time=0.133 ms

--- 1.1.1.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4041ms
rtt min/avg/max/mdev = 0.087/0.103/0.133/0.020 ms, pipe 2
```

Related Commands

None

1.9 traceroute vrf

Use this command to trace route in VRF.

Command Syntax

```
traceroute vrf VRF-NAME WORD
```

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>WORD</i>	Trace route destination address or hostname

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

```
Switch# traceroute vrf vpn 1.1.1.1
```

```
traceroute to 1.1.1.1 (1.1.1.1), 30 hops max, 38 byte packets
1 1.1.1.1 (1.1.1.1) 0.222 ms 0.169 ms 0.169 ms
```

Related Commands

None

1.10 telnet vrf

Use this command to telnet in VRF.

Command Syntax

telnet vrf *VRF-NAME* *WORD*

<i>VRF-NAME</i>	VPN Routing/Forwarding instance name
<i>WORD</i>	The destination address or hostname for telnet

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

```
Switch# telnet vrf vpn 9.9.9.2
```

```
Trying 9.9.9.2...
Connected to 9.9.9.2.
Escape character is '^]'.
Fedora Core release 4 (Stentz)
Kernel 2.6.32.23 on an i686
login: root
Password:
```

Related Commands

None

1.11 rd

Use this command to set route distinguisher.

Command Syntax

rd *RD-VALUE*

<i>RD-VALUE</i>	Route distinguisher value. <i>ASN:nn</i> or <i>IP-address:nn</i>
-----------------	--

Command Mode

VRF Mode

Default

None

Usage

None

Examples

Switch(config-vrf)# rd 1.1.1.1:1

Related Commands

None

1.12 route-target

Use this command to set route target.

Command Syntax

route-target (**both** | **export** | **import**) *RT-VALUE*

both	Import and export
export	Export

import	Import
<i>RT-VALUE</i>	Route-target value. <i>ASN:nn</i> or <i>IP-address:nn</i>

Command Mode

VRF Mode

Default

None

Usage

None

Examples

```
Switch(config-vrf)# route-target import 100:1
```

Related Commands

None

1.13 import map

Use this command to set import map.

Command Syntax

```
import map WORD
```

<i>WORD</i>	Pointer to route-map entries
-------------	------------------------------

Command Mode

VRF Mode

Default

None

Usage

None

Examples

```
Switch(config-vrf)# import map 100
```

Related Commands

export map

1.14 export map

Use this command to set export map.

Command Syntax

export map *WORD*

<i>WORD</i>	Pointer to route-map entries
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Command Mode

VRF Mode

Default

None

Usage

None

Examples

```
Switch(config-vrf)# export map 100
```

Related Commands

import map

1.15 router-id

Use this command to set router-id.

Command Syntax

router-id *A.B.C.D*

<i>A.B.C.D</i>	Router identifier in IP address format
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Command Mode

VRF Mode

Default

None

Usage

None

Examples

Switch(config-vrf)# router-id 1.1.1.1

Related Commands

show ip vrf

1.16 description

Use this command to specific VRF description.

Command Syntax

description *LINE*

<i>LINE</i>	Characters describing this VRF, the name length should be no more than 20
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Command Mode

VRF Mode

Default

None

Usage

None

Examples

```
Switch(config-vrf)# description VrfName1
```

Related Commands

show ip vrf