

IP Hardware Subnet Route Configuration Commands



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Chapter 1 IP Hardware Subnet Route Configuration Commands

1.1 ip exf destination

description

ip exf {*destination mask* | **default**}{ *address* *vlan vlanid* | **cpu**}

no ip exf *destination mask*

parameter

name	Description	Value range
<i>destination</i>	Destination subnetwork address	valid subnetwork address
<i>mask</i>	Destination subnetwork mask	valid ip mask
<i>address</i>	the next hop ip address	valid host address
<i>vlanid</i>	the next hop vlan	1~4094

default

none

instruction

This command is used to configure one item of hardware IP subnetwork route entry. You can use default to substitute for destination and mask when configuring default route entry, at this time, the next hop must be an IP address. This command is only valid in manual configuraton mode.

example

ip exf 192.168.20.0 255.255.255.0 192.168.26.3 vlan 3

1.2 ip exf

description

[no] ip exf

parameter

none

default

disabled

instruction

This command enables IP hardware subnetwork route feature. The hardware forwarding entry can still be configured without enabling this feature, but is invalid.

example

The following example shows how to enable IP hardware subnetwork route:

```
Switch_config#ip exf
```

1.3 show ip exf

description

show ip exf

parameter

none

default

none

instruction

Use this command to display the operation status of the current IP hardware subnetwork route.

example

The following command is the display of the operation status of the IP hardware subnetwork route on the current device:

```
Switch_config#show ip exf
```

```
Express forwarding state: enabled
```

```
Status Codes:
```

- A - No arp for next-hop IP address
- C - Next-hop vlan config error
- I - Vlan interface for next-hop vlan not exist
- D - Interface protocol down
- N - Nat enabled on vlan interface

V - Next-hop is configured to CPU, but there is no vlan interface in the sy

stem

Destination	Next-hop IP	Next-hop MAC	Vlan	Port	Status
192.168.20.0/24	192.168.26.1	00e0.0f00.4000	1	F0/1	-
192.168.1.0/24	CPU	00e0.0f00.211f	-	-	-
192.168.26.0/24	CPU	00e0.0f00.211f	-	-	-
192.168.0.0/16	192.168.26.3	00e0.0f00.442a	1	F0/2	-
10.0.0.0/8	192.168.1.4	00e0.0f00.5500	2	F0/4	-
0.0.0.0/0	192.168.1.6	00e0.0f00.6688	2	F0/20	-

it corresponds to the following configuration:

```
ip exf 192.168.20.0 255.255.255.0 nexthop 192.168.26.1 vlan 1
ip exf 192.168.1.0 255.255.255.0 cpu
ip exf 192.168.26.0 255.255.255.0 cpu
ip exf 192.168.0.0 255.255.0.0 nexthop 192.168.26.3 vlan 1
ip exf 10.0.0.0 255.0.0.0 nexthop 192.168.1.4 vlan 2
ip exf 0.0.0.0 0.0.0.0 nexthop 192.168.1.6 vlan 2
```

meaning of various error codes:

A	The ARP of the next hop ip address is not acquired
C	Vlan configuration conflicts with actual status in network.
I	The next hop vlan interface that a user configures doesn't exist.
D	The next hop vlan interface that a user configures has malfunction.
N	NAT is configured on the next hop vlan interface that a user configures.
V	The next hop that a user configures is CPU, but at that time there is no vlan interface in the current system.

1.4 debug ip exf

description

[no] debug ip exf

parameter

none

default

none

instruction

enable/disable debugging switch of ip exf feature

example

The following are several common debugging information outputs:

```
2004-7-30 15:50:40 [EXF]: EXF entry(destination 2.10.0.0/16) delete from hardware table, EXF disabled
```

The above command indicates that the user inputs the no ip exf command that leads to the malfunction of all esf entries.

```
2004-7-30 15:50:44 [EXF]: EXF entry(destination 2.10.0.0/16) add to hardware, NAT enabled, nexthop CPU
```

The above command indicates the next hop interface of the exf entry that a user configures has enabled NAT feature, at this time the packet of the exf entry will be delivered to CPU.

```
2004-7-30 15:52:03 [EXF]: EXF entry(destination 2.9.0.0/16) add to hardware, no ARP, nexthop CPU
```

The above command indicates the ARP of the next hop IP address of the exf entry that a user configures has not acquired, at this time the packet of the exf entry will be delivered to CPU.

```
2004-7-30 15:50:44 [EXF]: EXF entry(destination 2.3.0.0/16) add to hardware sucessfully
```

The above command indicates the configuration of the exf entry has been successful.

```
2004-7-30 15:56:00 [EXF]: EXF entry(destination 2.2.0.0/16) delete from hardware table by command
```

The above command indicates that the user has deleted the exf entry by using the command.

```
2004-7-30 15:56:59 [EXF]: EXF entry(destination 2.3.0.0/16) delete from hardware table, delete by interface
```

The above command indicates the link of the next hop interface of the exf entry that a user configures is down or configured nat on the interface and other reasons that lead to the exf entry malfunction.