

FiberstoreOS

IPv6 Service Command Line Reference

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1 Tunnel Commands

1.1 interface

Use this command to create a new tunnel interface. Use the no form of this command to destroy the tunnel interface.

Command Syntax

interface tunnel *tunnelid*
no interface tunnel *tunnelid*

<i>tunnelid</i>	The id range should be 0~1023
-----------------	-------------------------------

Command Mode

Global Configuration

Default

None

Usage

None

Examples

This example shows how to create a tunnel interface.

```
Switch# configure terminal  
Switch(config)# interface tunnel 1
```

Related Commands

show interface tunnel

1.2 tunnel mode ipv6ip

Use this command to specify the IPv6 transition tunnel protocol. Use the no form of this command to unset the tunnel protocol.

Command Syntax

tunnel mode ipv6ip (**6to4** | **isatap** |)
no tunnel mode

6to4	Set the tunnel as automatic tunnel 6to4, which use 2002::/16 as its prefix
isatap	Set the tunnel as automatic tunnel ISATAP, which

	use ::5efe:a.b.c.d as its suffix
gre	When the destination of tunnel is single, the mode of the tunnel
multi-dst-gre	When the destinations of tunnel are multi, the mode of the tunnel

Command Mode

Interface Configuration

Default

None

Usage

This command specifies a tunnel encapsulation mode for IPv6 in IPv4. When the keywords “**6to4**” or “**isatap**” is not specified, then it is a manual tunnel. Tunnel mode is not allowed to change from 6to4 to ISATAP when 6to4 relay routes are configured. Users should unset the tunnel destination before change from manual tunnel to automatic tunnel.

Examples

This example shows how to create a 6to4 Tunnel.

```
Switch# configure terminal
```

```
Switch(config)# interface tunnel 1
```

```
Switch(config-if)# tunnel mode ipv6ip 6to4
```

Related Commands

tunnel source

tunnel destination

1.3 tunnel source

Use this command to specify the tunnel source. Use the no form of this command to unset the tunnel source.

Command Syntax

tunnel source (A.B.C.D | *IFNAME*)

no tunnel source

A.B.C.D	Specify a tunnel source in the IPv4 address format
<i>IFNAME</i>	Specify a tunnel source in the IFNAME format, the IFNAME should be layer3 interface, like routed port, vlan interface, loopback.

Command Mode

Interface Configuration

Default

None

Usage

Every tunnel must have a tunnel source. If users specify the IFNAME format, system will choose the primary address as tunnel source.

Examples

This example shows how to set the tunnel source.

```
Switch# configure terminal
Switch(config)# interface tunnel 1
Switch(config-if)# tunnel source 3.3.3.3
```

Related Commands

tunnel mode ipv6ip
tunnel destination

1.4 tunnel destination

Use this command to specify a tunnel destination address in an IPv4 portion. Use the no parameter to un-specify the address.

Command Syntax

tunnel destination A.B.C.D
no tunnel destination

A.B.C.D	Specify the tunnel destination IPv4 address
----------------	---

Command Mode

Interface Configuration

Default

None

Usage

Automatic tunnel such as 6to4 and ISATAP must not configure tunnel destination.

Examples

This example shows how to set the tunnel destination.

```
Switch# configure terminal
Switch(config)# interface tunnel 1
Switch(config-if)# tunnel destination 4.4.4.4
```

Related Commands

tunnel source
tunnel mode ipv6ip

1.5 tunnel enable

Use this command to enable tunnel decapsulation for interfaces. Use the form of this command to restore the default configuration.

Command Syntax

tunnel (enable|disable)

enable	Enable tunnel decapsulation
disable	Disable tunnel decapsulation

Command Mode

Interface Configuration

Default

By default, tunnel decapsulation is disabled on all interfaces.

Usage

None

Examples

This example shows how to enable tunnel decapsulation on interface eth-0-1.

```
Switch# configure terminal
```

```
Switch(config)# interface eth-0-1
```

```
Switch(config-if)# tunnel enable
```

Related Commands

interface

1.6 tunnel multi-destination

Use this command to configure tunnel destinations IP address.

Use the form of this command to unset this configuration: no tunnel multi-destination A.B.C.D

Command Syntax

tunnel multi-destination A.B.C.D

A.B.C.D	destinations IP address
----------------	-------------------------

Command Mode

Interface Configuration

Default

None

Usage

Automatic tunnel such as 6to4 and ISATAP must not configure tunnel destination (multi destination).

Examples

This example shows how to enable tunnel decapsulation on interface tunnel 1.

```
Switch(config-if)# tunnel multi-destination 1.1.1.1
```

```
Switch(config-if)# tunnel multi-destination 2.2.2.2
```

Related Commands

tunnel source

tunnel mode (multi-dst-gre|gre)

1.7 tunnel gre key

Use this command to configure the tunnel gre key value.

Use the form of this command to unset this configuration: no tunnel gre key.

Command Syntax

tunnel gre key *key_value*

<i>key_value</i>	gre key value <1-4294967295>
------------------	------------------------------

Command Mode

Interface Configuration

Default

None

Usage

Improve the security of the gre tunnel, configure the gre key to do the checkout of point to point.

Examples

This example shows how to enable tunnel decapsulation on interface tunnel 1.

```
Switch(config-if)# tunnel gre key 100
```

Related Commands

show running-config interface tunnel

1.8 tunnel extend-header (dst-load-balance|)

Before the mirror traffic passes through the tunnel, encapsulate the traffic with the extend header.

Use the form of this command to unset this configuration: no tunnel extend-header (dst-load-balance|).

Command Syntax

tunnel extend-header (dst-load-balance|)

dst-load-balance	(optional)the new hash covers the old hash, and be saved in the extend header
------------------	---

Command Mode

Interface Configuration

Default

None

Usage

```

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-----+-----+-----+-----+-----+-----+-----+-----+
|0 0 1 0 0 0|      spanid      |                               | ③ |
+-----+-----+-----+-----+-----+-----+-----+-----+
|                               | PacketInfo.ptpCorrectionFieldHigh (34, 3) |
+-----+-----+-----+-----+-----+-----+-----+-----+
|                               | PacketInfo.timestamp (61, 30) |
+-----+-----+-----+-----+-----+-----+-----+-----+
|①|②|                               | PacketInfo.timestamp (29, 0) |
+-----+-----+-----+-----+-----+-----+-----+-----+

```


说明:

①spanExtendHeaderCopyHash, using the new hash or not;

②PacketInfo.skipTimeInfoUpdate, fixed with 1;

③if spanExtendHeaderCopyHash is 1, the field consist with hash (8 bit) and 0 (8 bit); if spanExtendHeaderCopyHash is 0, the field consist with source port of the mirror (16 bit).

Without dst-load-balance parameter, spanExtendHeaderCopyHash will be 0, and extend-header field does not contain the hash value;

with dst-load-balance parameter, spanExtendHeaderCopyHash will be 1, and extend-header field contain the hash value.

Examples

This example shows how to enable tunnel decapsulation on interface tunnel 1.

```
Switch(config-if)# tunnel extend-header
```

```
Switch(config-if)# tunnel extend-header dst-load-balance
```

Related Commands

show running-config interface tunnel

1.9 tunnel extend-header id

Use this command to configure the extend header id.

Use the form of this command to unset this configuration: no tunnel extend-header id.

Command Syntax

tunnel extend-header id *id_value*

<i>id_value</i>	the id value <0,1023>
-----------------	-----------------------

Command Mode

Interface Configuration

Default

None

Usage

None

Examples

This example shows how to enable tunnel decapsulation on interface tunnel 1.

```
Switch(config-if)# tunnel extend-header id 30
```

Related Commands

show running-config interface tunne

1.10 tunnel dscp

Use this command to specify a value of Differentiated Services Code Point (DSCP) in the tunnel IPv4 encapsulation header. Use the no parameter to inheriting the underlying physical interface value by default.

Command Syntax

tunnel dscp *DSCP*

no tunnel dscp

<i>DSCP</i>	The outer IPv4 header DSCP value, range is 0~63
-------------	---

Command Mode

Interface Configuration

Default

By default, the DSCP value is inherited from original IPv6 packet.

Usage

None

Examples

This example shows how to set the outer IPv4 header DSCP value as 40.

```
Switch# configure terminal
```

```
Switch(config)# interface tunnel 1
```

```
Switch(config-if)# tunnel dscp 40
```

Related Commands

interface

1.11 ipv6 mtu

Use this command to specify the Tunnel interface MTU. Use the no form of this command to restore to 1480 by default.

Command Syntax

ipv6 mtu *MTU*

no ipv6 mtu

<i>MTU</i>	Set the tunnel interface MTU, range is 1280~9500
------------	--

Command Mode

Interface Configuration

Default

1480

Usage

System does not support Path MTU Discovery on tunnel interface. This command is only allowed on tunnel interface.

Examples

This example sets the tunnel interface MTU to 1280.

```
Switch# configure terminal
Switch(config)# interface tunnel 1
Switch(config-if)# ipv6 mtu 1280
```

Related Commands

tunnel ttl

1.12 show interface tunnel

Use this command to display the tunnel information.

Command Syntax

show interface tunnel *tunnelid*

<i>tunnelid</i>	The id range should be 0~1023
-----------------	-------------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example displays the tunnel information.

```
Switch# show interface tunnel1
```

```
Interface tunnel1
Interface current state: UP
Hardware is Tunnel
Index 8193 , Metric 1 , Encapsulation TUNNEL
VRF binding: not bound
Tunnel protocol/transport IPv6/IP, Status Valid
Tunnel source 1.1.1.1(eth-0-1), destination 2.2.2.2
Tunnel DSCP inherit, Tunnel TTL 64
Tunnel transport MTU 1480 bytes
```

Related Commands

show ipv6 interface tunnel

1.13 show resource tunnel

Use this command to display the tunnel peers resource information.

Command Syntax

show resource tunnel

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example displays the tunnel peers resource information.

Switch# show resource tunnel

Tunnel Resource	Used	Capability
Peers	1	64

Related Commands

None

2

NDP Commands

2.1 ipv6 neighbor

Use this command to configure a static neighbor entry.

To delete the static neighbor entry, use the no form of this command.

Command Syntax

ipv6 neighbor *IPV6ADDR* *MAC* (*IFNAME*)

no ipv6 neighbor *IPV6ADDR* (*IFNAME*)

<i>IPV6ADDR</i>	IPv6 address in X:X::X:X format
<i>MAC</i>	MAC address in HHHH.HHHH.HHHH format
<i>IFNAME</i>	Interface name

Command Mode

Global Configuration

Default

By default, there is not any static ipv6 neighbor entry exist.

Usage

Use this command to configure a static neighbor entry. If the IPv6 address is link-local, the interface name must be specified.

Using the no form of this command should not remove any dynamic neighbor entries.

Examples

This example shows how to add a static neighbor entry:

```
Switch# configure terminal
```

```
Switch (config)# ipv6 neighbor 2001::1 0000.0000.0001
```

```
Switch (config)# ipv6 neighbor fe80::1 0000.0000.0002 eth-0-1
```

Related Commands

show ipv6 neighbors

2.2 clear ipv6 neighbors

Use this command to clear the dynamic neighbor entries.

Command Syntax

clear ipv6 neighbors (**interface** *IFNAME*)

clear ipv6 neighbors *IPV6ADDR* (*INTERFACE*)

interface <i>IFNAME</i>	Clear neighbor cache on the interface
<i>IPV6ADDR</i>	IPv6 address in X:X::X:X format. Clear IPv6 neighbor cache by address
<i>INTERFACE</i>	Interface name is required when IPV6ADDR is link-local

Command Mode

EXEC

Default

None

Usage

Use this command to clear the dynamic neighbor entries.

User can clear dynamic ipv6 address by interface or address. If the specified address is link-local, the interface is required.

Examples

This example shows how to clear the neighbor entries:

```
Switch# clear ipv6 neighbors
```

Related Commands

show ipv6 neighbors

2.3 ipv6 hop-limit

Use this command to set the ipv6 hop limit of the packets.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 hop-limit *HOP_LIMIT*

no ipv6 hop-limit

hop-limit <i>HOP_LIMIT</i>	Hop limit. Between 1 and 255
-----------------------------------	------------------------------

Command Mode

Global Configuration

Default

By default, the value is 64.

Usage

The hop limit setting should affect all IPv6 packets send from this device, unless the hop-limit is overwritten by up layer application, for example, OSPF, etc.

Examples

This example shows how to set the hop limit:

Switch (config)# ipv6 hop-limit 255

Related Commands

None

2.4 ipv6 nd ra hop-limit

Use this command to set the "Current hop limit" in RA packets.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd ra hop-limit *HOP_LIMIT*

no ipv6 nd ra hop-limit

hop-limit <i>HOP_LIMIT</i>	Set cur hop limit. Between 0 and 255
-----------------------------------	--------------------------------------

Command Mode

Interface Configuration

Default

By default, the value is 0.

Usage

None

Examples

This example shows how to set the "Current hop limit" in RA packets:

```
Switch(config-if)# ipv6 nd ra hop-limit 255
```

Related Commands

None

2.5 ipv6 nd dad attempts

Use this command to set the attempt times of DAD (Duplicate Address Detect).

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd dad attempts *DAD_ATTEMPTS*

no ipv6 nd dad attempts

<i>DAD_ATTEMPTS</i>	Set attempts number. Between 0 and 600
---------------------	--

Command Mode

Interface Configuration

Default

By default, the value is 1.

Usage

Use this command to set the attempt times of DAD (Duplicate Address Detect). "0" means DAD feature is disabled

Examples

This example shows how to set the dad attempt:
Switch (config-if)# ipv6 nd dad attempts 3

Related Commands

None

2.6 ipv6 nd ns-interval

Use this command to set the interval of NS packets.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd ns-interval *NS_INTERVAL*

no ipv6 nd ns-interval

<i>NS_INTERVAL</i>	Set IPv6 neighbor solicitation interval. Between 1000 and 3600000 (milliseconds)
--------------------	--

Command Mode

Interface Configuration

Default

By default, the value is 1000

Usage

This configuration should affect the interval of NS packet during the DAD period or neighbor discovery period.

Examples

This example shows how to set the ns interval:
Switch (config-if)# ipv6 nd ns-interval 2000

Related Commands

None

2.7 ipv6 nd ra suppress

Use this command to enable the RA suppress function.

To disable this function, use the no form of this command.

Command Syntax

ipv6 nd ra suppress

no ipv6 nd ra suppress

Command Mode

Interface Configuration

Default

By default, RA suppress is enabled.

Usage

When RA suppress function is enabled, no RA/RS packet should be sent from this interface even a RS packet is received.

Examples

This example shows how to enable the RA suppress function:

```
Switch (config-if)# ipv6 nd ra suppress
```

This example shows how to disable the RA suppress function:

```
Switch (config-if)# no ipv6 nd ra suppress
```

Related Commands

ipv6 nd ra interval

ipv6 nd ra lifetime

2.8 ipv6 nd ra mtu suppress

Use this command to enable the RA MTU suppress function.

To disable this function, use the no form of this command.

Command Syntax

ipv6 nd ra mtu suppress

no ipv6 nd ra mtu suppress

Command Mode

Interface Configuration

Default

By default, RA MTU suppress is disabled.

Usage

When RA MTU suppress function is enabled, no MTU option should be sent in the RA packets from this interface.

Examples

This example shows how to enable the RA MTU suppress function:

```
Switch (config-if)# ipv6 nd ra mtu suppress
```

This example shows how to disable the RA MTU suppress function:

```
Switch (config-if)# no ipv6 nd ra mtu suppress
```

Related Commands

None

2.9 ipv6 nd ra interval

Use this command to set the interval of the RA packets.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd ra interval *MAX* (*MIN* |)
no ipv6 nd ra interval

<i>MAX</i>	RA max interval (sec). Between 4 and 1800
<i>MIN</i>	RA min interval (sec). Between 3 and 1350

Command Mode

Interface Configuration

Default

By default, MAX interval should be 600 second; MIN interval should be 0.33*MAX.

Usage

The valid range should be between 4 and 1800 second for the max value. The valid range should be between 3 and 0.75 * MAX for the minimum value.

If the minimum value is not specified, it should be 0.33*MAX when MAX >= 9, and it should be equal to the MAX when MAX < 9.

Examples

This example shows how to set the RA interval:

```
Switch (config-if)# ipv6 nd ra interval 300
```

Related Commands

ipv6 nd ra suppress
ipv6 nd ra lifetime

2.10 ipv6 nd ra lifetime

Use this command to set the life time of the RA packets.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd ra lifetime *LIFE_TIME*
no ipv6 nd ra lifetime

<i>LIFE_TIME</i>	Set IPv6 router advertisement lifetime. 0-9000 seconds
------------------	--

Command Mode

Interface Configuration

Default

By default, RA life time is 3* MAX RA interval.

Usage

None

Examples

This example shows how to set the ra life time:

```
Switch (config-if)# ipv6 nd ra lifetime 1000
```

Related Commands

ipv6 nd ra suppress

ipv6 nd ra interval

2.11 ipv6 nd reachable-time

Use this command to set reachable time of the neighbor entries.

To restore the default configuration, use the no form of this command.

Command Syntax

ipv6 nd reachable-time *REACHABLE_TIME*

no ipv6 nd reachable-time

<i>REACHABLE_TIME</i>	Reachability time in milliseconds. Between 0 and 3600000 ms
-----------------------	---

Command Mode

Interface Configuration

Default

By default, the value is 30000 ms

Usage

A reachable time 0 means to restore the default value 30000.

After the reachable time expired, the neighbor entries which state is "REACH" should change to "STALE".

Examples

This example shows how to set the reachable time:

```
Switch (config-if)# ipv6 nd reachable-time 3600000
```

Related Commands

None

2.12 ipv6 nd managed-config-flag

Use this command to set "Managed address configuration" flag.

To unset this configuration, use the no form of this command.

Command Syntax

ipv6 nd managed-config-flag

no ipv6 nd managed-config-flag

Command Mode

Interface Configuration

Default

By default, the "Managed address configuration" is not set.

Usage

None

Examples

This example shows how to set the "Managed address configuration" flag:

```
Switch (config-if)# ipv6 nd managed-config-flag
```

Related Commands

ipv6 nd other-config-flag

2.13 ipv6 nd other-config-flag

Use this command to set the "Other configuration" flag.

To unset this configuration, use the no form of this command.

Command Syntax

ipv6 nd other-config-flag

no ipv6 nd other-config-flag

Command Mode

Interface Configuration

Default

By default, the "Other configuration" flag is not set.

Usage

None

Examples

This example shows how to set the "Other configuration" flag:

```
Switch (config-if)# ipv6 nd other-config-flag
```

Related Commands

ipv6 nd managed-config-flag

2.14 ipv6 nd prefix

Use this command to set prefix for route advertise (RA).

To unset a prefix to advertise, use the no form of this command.

Command Syntax

ipv6 nd prefix *IPv6_PREFIX* (*VALID_TIME*|infinite) (*PERFERRED_TIME*|infinite) (*{off-link|no-autoconfig}*)

no ipv6 nd prefix *IPv6_PREFIX*

ipv6 nd prefix default (*VALID_TIME* |infinite) (*PERFERRED_TIME* |infinite) (*{off-link|no-autoconfig}*)

no ipv6 nd prefix default

<i>IPv6_PREFIX</i>	Configure IPv6 routing prefix advertisement. IPv6 prefix in X:X::X:X/M format
<i>VALID_TIME</i>	Valid lifetime. 0-4294967295 second
<i>PERFERRED_TIME</i>	Preferred lifetime. 0-4294967295 second

Command Mode

Interface Configuration

Default

The valid range of valid life time should be between 0 and 4294967295 seconds. User can also use the keyword "infinite" to indicate the value 4294967295(0xFFFFFFFF) . The default value should be 2592000 seconds (30 days).

The valid range of preferred life time should be between 0 and 4294967295 seconds. User can also use the keyword "infinite" to indicate the value 4294967295 (0xFFFFFFFF) . The default value should be 604800 seconds (7 days).

Usage

None

Examples

This example shows how to set the prefix:

```
Switch (config-if)# ipv6 nd prefix 2001::1/64 3000 3000
```

Related Commands

show ipv6 interface *IFNAME* prefix

2.15 show ipv6 interface *IFNAME* prefix

Use this command to show the prefix for route advertise (RA) on the specified interface.

Command Syntax

```
show ipv6 interface IFNAME prefix
```

<i>IFNAME</i>	Name of the interface to show
---------------	-------------------------------

Command Mode

EXEC

Default

None

Usage

None

Examples

This example shows the result of this command:

```
Switch # show ipv6 interface eth-0-1 prefix
```

```
IPv6 Prefix Advertisements eth-0-1
Codes: A - Address, P - Prefix-Advertisement
```

```

D - Default, N - Not advertised
L - On link, A - Auto-config
default [LA] Valid lifetime 2592000, preferred lifetime 604800
P 2001::/64 [LA] Valid lifetime 3000, preferred lifetime 3000

```

Related Commands

ipv6 nd prefix

2.16 show ipv6 neighbors

Use this command to show all ipv6 neighbor entries.

Command Syntax

show ipv6 neighbors (dynamic|static|interface IFNAME| *IPv6_ADDR*|statistics|)

interface IFNAME	Name of the interface to show
<i>IPv6_ADDR</i>	IPv6 address in X:X::X:X format

Command Mode

EXEC

Default

None

Usage

Neighbor entries should be able to show globally, by interface, or by prefix. Dynamic and static entries can be displayed separately.

Examples

This example shows the result of this command:

Switch # show ipv6 neighbors

```

IPv6 address           Age      Link-Layer Addr State Interface
2001::2                7        40f2.fd60.ac00 REACH eth-0-9
fe80::42f2:fdff:fe60:ac00 6        40f2.fd60.ac00 STALE eth-0-9

```

Related Commands

ipv6 neighbor

2.17 debug ipv6 nd

Use this command to open the debug of ipv6 ND feature.

To close the debug of ipv6 ND feature, use the no form of this command.

Command Syntax

debug ipv6 nd (packet|events|error|dump|info|all)

no debug ipv6 nd (packet|events|error|dump|info|all)

packet	IPv6 ND packet
events	IPv6 ND events
error	IPv6 ND Error message
dump	Dump message in hex format

info	IPv6 ND information
all	Turn all debugging on

Command Mode

EXEC

Default

By default, the ipv6 nd debug is closed.

Usage

None

Examples

This example shows how to open the ipv6 ND debug:

```
Switch # debug ipv6 nd all
```

```
Switch # terminal monitor
```

Related Commands

None

3 DHCPv6 Relay Commands

3.1 dhcpv6 relay

To enable the DHCPv6 relay service, use the `dhcpv6 relay` command in global configuration mode. To disable this function, use the `no` form of this command.

Command Syntax

dhcpv6 relay
no dhcpv6 relay

Command Mode

Global Configuration

Default

DHCPv6 relay is disabled.

Usage

The DHCPv6 service must be enabled with the `dhcpv6 service` command before DHCPv6 relay service can be used.

Examples

The following example shows how to enable DHCPv6 relay agent:

```
Switch(config)# dhcpv6 relay
```

Related Commands

service dhcpv6

3.2 dhcpv6-server (global)

To create a DHCPv6 server group, use the `dhcpv6-server` command in global configuration mode. To remove a DHCPv6 server group, use the `no` form of this command.

Command Syntax

dhcpv6-server *NUMBER ADDRESS interface IFNAME*
no dhcpv6-server *NUMBER (ADDRESS (interface IFNAME))*

<i>NUMBER</i>	Number of the DHCPv6 server group. The range is from 1 to 16
<i>ADDRESS</i>	The IPv6 address list of the DHCPv6 server. The range in number of the servers in a list is 1 to 8
<i>IFNAME</i>	The name of supported interface

Command Mode

Global Configuration

Default

No DHCPv6 server group is defined.

Usage

This command is used to specify the remote DHCPv6 server or relay.

Examples

The following example shows how to configure dhcpv6-server group globally:

```
Switch(config)# dhcpv6-server 1 2001:1::1
```

```
Switch(config)# dhcpv6-server 1 fe80::1 interface vlan1
```

Related Commands

service dhcpv6

dhcpv6-server (interface)

3.3 dhcpv6-server (interface)

To add an interface into a DHCPv6 server group, use the dhcpv6-server command in interface configuration mode. To remove this interface from the DHCPv6 server group, use the no form of this command.

Command Syntax

dhcpv6-server *NUMBER*

no dhcpv6-server

<i>NUMBER</i>	Number of the DHCPv6 server group. The range is from 1 to 16
---------------	--

Command Mode

Interface Configuration

Default

No DHCPv6 server group is configured for the interface.

Usage

This command is used to specify DHCPv6 server group which is configed by the command dhcpv6-server in global mode.

Examples

The following example shows how to configure dhcpv6-server group for interface:

```
Switch(config-if)# dhcpv6-server 1
```

Related Commands

service dhcpv6

3.4 dhcpv6 relay remote-id option

To enable remote-id option, use the `dhcpv6 relay remote-id option` command in global configuration mode. To disable remote-id option, use the `no` form of this command.

Command Syntax

dhcpv6 relay remote-id option
no dhcpv6 relay remote-id option

Command Mode

Global Configuration

Default

Remote-id option is not added into DHCPv6 RELAY_FORW packet sent by relay.

Usage

None

Examples

The following example shows how to enable remote-id option:

```
Switch(config)# dhcpv6 relay remote-id option
```

Related Commands

dhcpv6 relay remote-id format

3.5 dhcpv6 relay remote-id format

To specify the format of remote-id, use the `dhcpv6 relay remote-id format` command in global configuration mode. To restore the default format, use the `no` form of this command.

Command Syntax

dhcpv6 relay remote-id format { vlan | ifname | duid }
no dhcpv6 relay remote-id format

vlan	The ID of the vlan attached by client
ifname	The name of the interface received packet from client
duid	The duid of relay

Command Mode

Global Configuration

Default

The remote-id format is "duid:ifname:".

Usage

The format of remote-id can be a combination of vlan, interface name, DUID. This command specify the existing keywords in the combination.

Examples

The following example shows how to specify the format of remote-id.

```
Switch(config)# dhcpv6 relay remote-id format vlan
```

Related Commands

dhcpv6 relay remote-id option

3.6 dhcpv6 relay pd route

To enable learning route from prefix-delegation option, use the `dhcpv6 relay pd route` command in global configuration. To disable the function, use the `no` form of this command.

Command Syntax

dhcpv6 relay pd route
no dhcpv6 relay pd route

Command Mode

Global Configuration

Default

The DHCPv6 relay won't learn prefix-delegation route.

Usage

The DHCPv6 relay can learn route from prefix delegated by server to client. This kind of route should not replace static one. Use this command to enable this function.

Examples

The following example shows how to enable learning route from prefix-delegation option

```
Switch(config)# dhcpv6 relay pd route
```

Related Commands

clear dhcpv6 relay pd route
dhcpv6 relay pd route distance

3.7 dhcpv6 relay pd route distance

To configure the default distance for route learned by relay, use the `dhcpv6 relay pd route distance` command in global configuration. To restore the default value, use the `no` form of this command..

Command Syntax

dhcpv6 relay pd route distance <1-255>
no dhcpv6 relay pd route distance

Command Mode

Global Configuration

Default

The default value of distance is 254.

Usage

Use this command to configure the distance of the route learned by relay from prefix-delegation.

Examples

The following example shows how to configure the distance of route added by DHCPv6 relay:

```
Switch(config)# dhcpv6 relay pd route distance 233
```

Related Commands

dhcpv6 relay pd route

3.8 service dhcpv6

To enable the Dynamic Host Configuration Protocol (DHCP)V6 relay agent features on your router, use the `service dhcpv6` command in global configuration mode. To disable the DHCPv6 relay agent features, use the `no` form of this command.

Command Syntax

```
service dhcpv6 enable  
service dhcpv6 disable
```

Command Mode

Global Configuration

Default

DHCPv6 service is disabled globally.

Usage

Only the main DHCPv6 service is enabled by the `service dhcpv6` command, can other DHCPv6 services be used, such as `dhcpv6 relay`.

Examples

The following example shows how to enable DHCPv6 service globally:

```
Switch(config)# service dhcpv6 enable
```

Related Commands

dhcpv6 relay

3.9 debug dhcpv6 relay

Use this command to turn on the debug switches of DHCPv6 relay module.

To restore the default, use the **no** form of this command

Command Syntax

```
debug dhcpv6 relay ( events | error | dump | packet | all )  
no debug dhcpv6 relay ( events | error | dump | packet | all )
```

events	Relay events
error	Error DHCP message
packet	DHCP message fields
dump	Dump message in hex format
all	Turn all debugging on

Command Mode

Privileged EXEC

Default

None

Usage

Use command “terminal monitor” to make debug messages print on the VTY immediately.

Use command “show logging buffer” to check the debug messages in the logging buffer.

Examples

The following is sample to open dhcpv6 relay debug switches:

```
Switch# debug dhcpv6 relay all
```

Related Commands

terminal monitor

show logging buffer

3.10 show dhcpv6-server

To display the DHCPv6 server groups, use the show dhcpv6-server command in privileged EXEC mode.

Command Syntax

show dhcpv6-server

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to display all the DHCPv6 server groups configured with command dhcpv6-server in global mode.

Examples

The following example shows how to display dhcpv6-server group information:

```
Switch# show dhcpv6-server
```

```
DHCPv6 server group information:
```

```
=====
```

```
group 1 ipv6 address list:
```

```
[1] 2001:1::1
```

Related Commands

dhcpv6-server (global)

3.11 show dhcpv6 relay interfaces

To display to which dhcpv6-server group the interface belongs, use the show dhcpv6 relay interfaces command in privileged EXEC mode.

Command Syntax

show dhcpv6 relay interfaces

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to display the interface which is confined DHCPv6 relay.

Examples

The following example shows how to display dhcpv6 relay interfaces information:

Switch# show dhcpv6 relay interfaces

```
List of DHCPv6 relay enabled interface(s):
DHCPv6 relay service status: enabled
Interface Name      DHCPv6 server group
=====
eth-0-1             1
```

Related Commands

show dhcpv6-server

3.12 show dhcpv6 relay pd client

To display the result of DHCPv6 relay's prefix-delegation route function, use the show dhcpv6 relay pd client command in privileged EXEC mode.

Command Syntax

show dhcpv6 relay pd client

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

The following example shows how to display information of prefix-delegation route:

Switch# show dhcpv6 relay pd client

```
DHCPv6 prefix-delegation client information:
=====
Interface   : vlan2
Client DUID  : 0001000117e9357b606da182030
Client IPv6 address : fe80::626d:a1ff:fe82:300
```

```
IA ID : a18230
IA Prefix : 2002:2:10::/64
preferred/max lifetime : 280/300
expired time : 2012-09-17 11:43:59
=====
```

Related Commands

dhcpv6 relay pd route
dhcpv6 relay pd route distance

3.13 show dhcpv6 relay statistics

To display the statistics of DHCPv6 packets relayed by the switch, use the `show dhcpv6 relay statistics` command in privileged EXEC mode.

Command Syntax

show dhcpv6 relay statistics

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to display detail DHCPv6 statistics which processed by the switch.

Examples

The following example shows how to display DHCPv6 relay statistics:

```
Switch# show dhcpv6 relay statistics
```

```
DHCPv6 relay packet statistics:
```

```
=====
Client relayed packets: 48
Server relayed packets: 48

Client error packets: 0
Server error packets: 0
```

Related Commands

clear dhcpv6 relay statistics

3.14 clear dhcpv6 relay statistics

To reset the statistics of DHCPv6 packets relayed by the switch, use the `clear dhcpv6 relay statistics` command in privileged EXEC mode.

Command Syntax

clear dhcpv6 relay statistics

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to reset DHCPv6 statistics.

Examples

The following example shows how to clear DHCPv6 relay statistics:

```
Switch# clear dhcpv6 relay statistics
```

Related Commands

show dhcpv6 relay statistics

3.15 clear dhcpv6 relay pd route

To clear the route learned by DHCPv6 relay from prefix-delegation, use the clear dhcpv6 relay pd route command in privileged EXEC mode.

Command Syntax

clear dhcpv6 relay pd route (**prefix** *PREFIX*) (**interface** *IFNAME*) (*ADDRESS*)

<i>PREFIX</i>	The prefix delegated to client
<i>ADDRESS</i>	The IPv6 address of PD client
<i>IFNAME</i>	The name of supported interface

Command Mode

Privileged EXEC

Default

None

Usage

If no parameter is specified, all route will be cleared.

Examples

The following example shows how to clear route learned by DHCPv6 relay:

```
Switch# clear dhcpv6 relay pd route interface eth-0-1
```

Related Commands

dhcpv6 relay pd route

show dhcpv6 relay pd client