

## **FSOS**

# **IPv6 Security Command Line Reference**

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# 1 DHCPv6 Snooping Commands

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## 1.1 clear dhcpv6 snooping bindings

Use the `clear dhcpv6 snooping bindings` global configuration command on the switch to clear the dynamic DHCPv6 binding items.

### Command Syntax

```
clear dhcpv6 snooping bindings learning (ipv6 IP-ADDRESS | mac MAC-ADDRESS | vlan VLAN-ID | interface IFNAME )
```

<b>ipv6 <i>IP-ADDRESS</i></b>	Clear the binding entry with the IPv6 address
<b>mac <i>MAC-ADDRESS</i></b>	Clear the binding entry with the MAC address
<b>vlan <i>VLAN-ID</i></b>	Clear the binding entry with the VLAN
<b>interface <i>IFNAME</i></b>	Clear the binding entry with the Interface

### Command Mode

Privileged EXEC

### Default

No default is defined.

### Usage

This command is used to clear dynamic DHCPv6 snooping binding item.

## Examples

This example shows how to clear all DHCPv6 snooping binding items:

```
Switch# clear dhcpv6 snooping bindings learning
```

## Related Commands

**show dhcpv6 snooping binding**

## 1.2 clear dhcpv6 snooping statistics

Use the `clear dhcpv6 snooping statistics` privileged EXEC command on the switch to clear the DHCPv6 snooping statistics counters.

## Command Syntax

**clear dhcpv6 snooping statistics**

## Command Mode

Privileged EXEC

## Default

No default is defined.

## Usage

This command is used to clear DHCPv6 snooping statistics.

## Examples

This example shows how to clear the DHCPv6 snooping statistics counters:

```
Switch# clear dhcpv6 snooping statistics
```

## Related Commands

**show dhcpv6 snooping statistics**

## 1.3 dhcpv6 snooping

Use the dhcpv6 snooping global configuration command on the switch to globally enable DHCPv6 snooping. Use the no form of this command to return to the default setting.

### Command Syntax

**dhcpv6 snooping**

**no dhcpv6 snooping**

### Command Mode

Global Configuration

### Default

DHCPv6 snooping is disabled.

### Usage

For any DHCPv6 snooping configuration to take effect, you must globally enable DHCPv6 snooping. DHCPv6 snooping is not active until you enable snooping on a VLAN by using the dhcpv6 snooping vlan global configuration command.

### Examples

This example shows how to enable DHCPv6 snooping:

```
Switch(config)# dhcpv6 snooping
```

You can verify your settings by entering the show dhcpv6 snooping config privileged EXEC command.

## Related Commands

**dhcpv6 snooping vlan**

**show dhcpv6 snooping config**

## 1.4 dhcpv6 snooping binding

Use the dhcpv6 snooping binding global configuration command on the switch to configure the DHCPv6 snooping binding database and to add binding entries to the database.

### Command Syntax

**dhcpv6 snooping binding mac** *MAC-ADDRESS* **vlan** *VLAN-ID* **ipv6** *IP-ADDRESS*

**interface** *IFNAME* **expiry** *SECONDS*

**no dhcpv6 snooping bindings** (**ipv6** *IP-ADDRESS* | **mac** *MAC-ADDRESS* | **vlan** *VLAN-ID* |

**interface** *IFNAME* | )

<b>mac</b> <i>MAC-ADDRESS</i>	Specify a MAC address
<b>vlan</b> <i>VLAN-ID</i>	Specify a VLAN number. The range is 1 to 4094
<b>ipv6</b> <i>IP-ADDRESS</i>	Specify an IPv6 address
<b>interface</b> <i>IFNAME</i>	Specify an interface on which to add or delete a binding entry
<b>expiry</b> <i>SECONDS</i>	Specify the interval (in seconds) after which the binding entry is no longer valid. The range is 0 to 86400

### Command Mode

Global Configuration

### Default

No default database is defined.

## Usage

Use this command when you are testing or debugging the switch.

In the DHCPv6 snooping binding database, each database entry, also referred to a binding, has an IP address, an associated MAC address, the lease time, the interface to which the binding applies, and the VLAN to which the interface belongs.

Use the `show dhcpv6 snooping binding` privileged EXEC command to display the configured bindings.

## Examples

This example shows how to generate a DHCPv6 binding with an expiration time of 1000 seconds on a port in VLAN 1:

```
Switch(config)# dhcpv6 snooping binding mac 0001.000c.01ef vlan 1 ipv6 2001:1::1  
interface eth-0-1 expiry 1000
```

## Related Commands

**show dhcpv6 snooping binding**

## 1.5 dhcpv6 snooping database

Use the `dhcpv6 snooping database` global configuration command on the switch to configure the DHCPv6 snooping binding database agent. Use the `no` form of this command to reset the `write-delay` value.

## Command Syntax

**dhcpv6 snooping database auto-save interval *SECONDS***

<b>interval <i>SECONDS</i></b>	Specify the interval (in seconds) that how long to save the binding database. The range is 15 to 1200
--------------------------------	---

## Command Mode

Global Configuration

## Default

Default interval is 600 seconds.

## Usage

The DHCPv6 snooping database is save as flash:/dhcpv6snooping.

## Examples

The following is sample output from the dhcpv6 snooping database command:

```
Switch(config)# dhcpv6 snooping database auto-save interval 120
```

## Related Commands

**dhcpv6 snooping**

**dhcpv6 snooping binding**

## 1.6 dhcpv6 snooping trust

Use the dhcpv6 snooping trust interface configuration command on the switch to configure a port as trusted for DHCPv6 snooping purposes. Use the no form of this command to return to the default setting.

## Command Syntax

**dhcpv6 snooping trust**

**no dhcpv6 snooping trust**

## Command Mode

Interface configuration



## Default

DHCPv6 snooping trust is disabled.

## Usage

Configure as trusted ports those that are connected to a DHCPv6 server or to other switches or routers. Configure as untrusted ports those that are connected to DHCPv6 clients.

## Examples

This example shows how to enable DHCPv6 snooping trust on a port:

```
Switch(config-if)# dhcpv6 snooping trust
```

## Related Commands

```
show dhcpv6 snooping trusted-sources
```

## 1.7 dhcpv6 snooping vlan

Use the `dhcpv6 snooping vlan` global configuration command on the switch to enable DHCPv6 snooping on a VLAN. Use the `no` form of this command to return to the default setting.

## Command Syntax

```
dhcpv6 snooping vlan VLAN-RANGE
```

```
no dhcpv6 snooping vlan VLAN-RANGE
```

VLAN-RANGE	Specify a VLAN ID or a range of VLANs on which to enable DHCP snooping. The range is 1 to 4094
------------	--

## Command Mode

Global Configuration

## Default

DHCPv6 snooping is disabled on all VLANs.

## Usage

You can enter a single VLAN ID identified by VLAN ID number, a series of VLAN IDs separated by commas, a range of VLAN IDs separated by hyphens, or a range of VLAN IDs separated by entering the starting and ending VLAN IDs separated by a space.

You must first globally enable DHCPv6 snooping before enabling DHCPv6 snooping on a VLAN.

## Examples

This example shows how to enable DHCPv6 snooping on VLAN 10:

```
Switch(config)# dhcpv6 snooping vlan 10
```

## Related Commands

**show dhcpv6 snooping config**

## 1.8 debug dhcpv6 snooping

Use this command to turn on the debug switches of dhcpv6 snooping module.

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

## Command Syntax

**debug dhcpv6 snooping ( events | error | dump | packet | all )**

**no debug dhcpv6 snooping ( events | error | dump | packet | all )**

<b>events</b>	Snooping events
<b>error</b>	Error DHCPv6 message
<b>packet</b>	DHCPv6 message fields
<b>dump</b>	Dump message in hex format
<b>all</b>	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 snooping debug switches:

```
Switch# debug dhcpv6 snooping all
```

## Related Commands

**terminal monitor**

**show logging buffer**

## 1.9 show dhcpv6 snooping binding

Use the show dhcpv6 snooping binding privileged EXEC command to display the DHCPv6 snooping binding database and configuration information for all interfaces on a switch.

### Command Syntax

```
show dhcpv6 snooping binding ( (all | manual | learning ) (ipv4 IP-ADDRESS | mac MAC-ADDRESS | vlan VLAN-ID | interface IFNAME | ) summary)
```

<b>all</b>	Display all entries
<b>manual</b>	Display static entries
<b>learning</b>	Display dynamic entries
<b>mac</b> <i>MAC-ADDRESS</i>	Specify MAC address
<b>vlan</b> <i>VLAN-ID</i>	Specify a VLAN number. The range is 1 to 4094
<b>ipv4</b> <i>IP-ADDRESS</i>	Specify an IP address
<b>interface</b> <i>IFNAME</i>	Specify an interface on which to add or delete a binding entry
<b>summary</b>	Display summary information of DHCPv6 snooping bindings

### Command Mode

Privileged EXEC

### Default

None

### Usage

If DHCPv6 snooping is enabled and an interface changes to the down state, the switch does not delete the statically configured bindings.

## Examples

The following is sample output from the show dhcpv6 snooping binding command:

```
Switch# show dhcpv6 snooping binding all
```

```
DHCPv6 snooping binding table:
VLAN MAC Address      Interface  Lease(s)  IPv6 Address
=====
1      0001.0001.0001 eth-0-2   static    1:1::1:1
```

```
Switch# show dhcpv6 snooping binding summary
```

```
Total 1 DHCPv6 snooping binding entries
      0 learning entry, 1 configured entry
```

## Related Commands

**dhcpv6 snooping binding**

## 1.10 show dhcpv6 snooping config

Use the show dhcpv6 snooping privileged EXEC command to display the DHCPv6 snooping configuration.

### Command Syntax

**show dhcpv6 snooping config**

### Command Mode

Privileged EXEC

### Default

None

### Usage

This command is used to display the configuration of DHCPv6 snooping.

## Examples

The following is sample output from the show dhcpv6 snooping config command:

```
Switch# show dhcpv6 snooping config
```

```
dhcpv6 snooping service: enabled  
dhcpv6 snooping switch: enabled  
dhcpv6 snooping vlan 3
```

## Related Commands

**dhcpv6 snooping**

**dhcpv6 snooping vlan**

## 1.11 show dhcpv6 snooping trusted-sources

Use the show dhcpv6 snooping trusted-sources privileged EXEC command to display the DHCPv6 snooping trusted interface.

### Command Syntax

```
show dhcpv6 snooping trusted-sources
```

### Command Mode

Privileged EXEC

### Default

None

### Usage

This command is used to display the trusted interface of DHCPv6 snooping.

## Examples

The following is sample output from the show dhcpv6 snooping trusted-sources command:

```
Switch# show dhcpv6 snooping trusted-source
```

```
List of DHCPv6 snooping trusted interface(s):
```

```
=====
```

```
eth-0-20
```

## Related Commands

**dhcpv6 snooping trust**

## 1.12 show dhcpv6 snooping statistics

Use the show dhcpv6 snooping statistics privileged EXEC command to display DHCPv6 snooping statistics.

### Command Syntax

**show dhcpv6 snooping statistics**

### Command Mode

Privileged EXEC

### Default

None

### Usage

This command is used to display the statistics of DHCPv6 snooping.

### Examples

The following is sample output from the show dhcpv6 snooping statistics command:

```
Switch# show dhcpv6 snooping statistics
```

```
DHCPv6 snooping statistics:
```

```
=====
```

```
DHCPv6 packets
```

```
137
```

Packets forwarded	137
Packets invalid	0
Packets dropped	0

## Related Commands

**clear dhcpv6 snooping statistics**