



## Additional Characteristics Configuration Commands

As our products undergo continuous development the specifications are subject to change without prior notice.

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## Chapter 1 Port Additional Characteristics Configuration Commands

### 1.1 Configuring Port Isolation

#### 1.1.1 port-protected

##### Syntax

**[no] port-protected** *group-id*

Configure a port isolation group with the above command.

##### Parameter

Parameter	Description
<i>group-id</i>	Configure a port isolation group 1-28.

##### Default

None

##### Usage Guidelines

Configure the command in global configuration mode for the group-based isolation.

##### Example

Configure the port isolation group 1.

Switch\_config#port-protected 1

#### 1.1.2 description

##### Syntax

**description** *word*

Configure description of the port isolation group with the above command.

**no description**

Delete description with the above command.

##### Parameter

Parameter	Description
<i>Word</i>	Configure description of the port isolation group, no more than 31 characters.

**Default**

None

**Usage Guidelines**

Configure the command in global configuration mode for the description.

**Example**

The following example shows how to configure description g1 of the port isolation group 1.

```
Switch-config-p1#description g1
```

### 1.1.3 switchport protected

**Syntax**

**switchport protected** <group-id>

**no switchport protected**

Configure the port isolation with the above command.

**Parameter**

Parameter	Description
<i>group-id</i>	Choose the port isolation 1-28

**Default**

None

**Usage Guidelines**

The command works in the layer-2 interface. The default command is based on the non-group isolation that does not need to configure group-id in the end. If the command is based on group-based isolation, all ports need to configure group-based isolation in global configuration mode. Only after deleting isolations in all ports, the isolation type can be configure again.

**Example**

The following example shows how to configure the non-group based isolation on interface g0/1.

```
Switch_config_g0/1#switchport protected
```

## 1.2 Configuring Storm-control

**Syntax**

**storm-control** {broadcast | multicast | unicast} threshold *count*

**no storm-control {broadcast | multicast | unicast} threshold Parameter**

Configure the storm control function of the port.

**Parameter**

Parameter	Description
<b>broadcast   multicast   unicast</b>	Defines the storm control of the broadcast, multicast and unicast.
<i>count</i>	Defines the maximum flow of the storm control. The value ranges from 1 to 16384.

**Default**

The storm control function is not enabled.

**Usage Guidelines**

This command works in layer-2 port configuration mode.

**Example**

Set the storm control of the unknown unicast frame on interface g0/1 to 20PPS.

```
Switch_config#interface g0/1
```

```
Switch_config_g0/1#storm-control unicast threshold 20
```

### 1.3 Configuring Switchport Rate-limit

**Syntax**

**switchport rate-limit {band | *bandwidth* percent} { ingress|egress}**

**no switchport rate-limit{ ingress|egress}**

Configure the flow rate limitation for the port.

**Parameter**

Parameter	Description
<i>Band</i>	Flow rate. 64kbps-step rate limitation on a port
<i>percent</i>	Flow rate ratio, unit: 1%.
<b>ingress</b>	Functions at the ingress port.
<b>egress</b>	Functions at the egress port.

**Default**

The port has no port rate limitation.

**Usage Guidelines**

This command works in layer-2 port configuration mode.

**Example**

Set the incoming flow rate limitation on interface g0/1 to 1Mbps.

```
Switch_config#interface g0/1
```

```
Switch_config_g0/1#switchport rate-limit 16 ingress
```

## 1.4 Configuring Port Loop Check

**Syntax**

**[no] keepalive** *second*

To configure the interval for a port to transmit the loop check packets, run **keep alive** command.

**Parameter**

Parameter	Description
<i>Second</i>	Time interval. Unit: second.

**Default**

The time interval is 12 seconds by default.

**Usage Guidelines**

Configure in the physical port configuration mode.

**Example**

The following example shows how to set the transmission interval on interface g0/1 to 10 seconds.

```
Switch_config#interface g0/1
```

```
Switch_config_g0/1#keepalive 10
```

## 1.5 Configuring Port MAC-address learning

**Syntax**

**[no] switchport disable-learning**

Configure the learning MAC address on the port.

**Parameter**

None

**Default**

Enable the learning MAC address on the port.

**Usage guidelines**

Configure in the physical port configuration mode.

**Example**

The following example shows how to disable MAC address learning on the interface g0/1.

```
Switch_config#interface g0/1
Switch_config_g0/1#switchport disable-learning
```

## 1.6 Configuring Port Security

Port security commands include:

- (1) **switchport port-security mode**
- (2) **switchport port-security dynamic**
- (3) **switchport port-security static**
- (4) **switchport port-security sticky**

### 1.6.1 switchport port-security mode

**Syntax**

**switchport port-security mode {dynamic | static *accept|reject* | sticky}**

**[no] switchport port-security mode**

Set the static mode of the security port.

**Parameter**

None

**Default**

The port security function is not enabled.

**Usage guidelines**

Configure the command on the physical port configuration mode.

**Example**

The following example shows how to configure interface g0/1 in the dynamic interface security mode.

```
Switch_config#inter g0/1
Switch_config_g0/1#switchport port-security mode dynamic
```

## 1.6.2 switchport port-security dynamic

### Syntax

**switchport port-security dynamic maximum** *dynamic\_number*

**[no] switchport port-security dynamic maximum**

To configure the maximum number of MAC addresses when the port is in dynamic security mode, run **switchport port-security dynamic maximum** command.

### Parameter

Parameter	Description	Value ranges
<i>dynamic_number</i>	Means the maximum number of MAC addresses.	1-2048

### Default

The number of MAC addresses that can be learned is 1.

### Usage guidelines

Configure the command on the physical port configuration mode.

### Example

The following example shows how to apply maximum MAC addresses on interface g0/1 and set the learnable MAC address to 10.

```
Switch_config#inter g0/1
```

```
Switch_config_g0/1# switchport port-security dynamic maximum 10
```

## 1.6.3 switchport port-security static mac-address

### Syntax

**[no] switchport port-security static mac-address H.H.H**

Configure the static MAC address of the security port.

### Parameter

None

### Default

None

### Usage Guidelines

Configure the command on the physical port configuration mode.



**Example**

The following example shows how to configure mac: 0001.0002.0003 to static security mac.

```
Switch_config#inter g0/1
```

```
Switch_config_g0/1# switchport port-security static mac-address 1.2.3
```

**1.6.4 switchport port-security sticky****Syntax**

**Switchport port-security sticky {maximum *sticky\_number*| mac-address H.H.H| aging-time *aging\_time*}**

**[no] switchport port-security sticky {maximum | mac-address H.H.H| aging-time }**

Configure the port-security sticky of MAC address.

**Parameter**

Parameter	Description
<i>sticky_number</i>	The maximum number of addresses that can be learned on the port. Default is 100, range: 1-2048
H.H.H	Mac address
<i>aging_time</i>	Aging time. Unit: minutes. The default is 0, the range: 0-100

**Default**

The port sticky of MAC address is not enabled.

**Usage Guidelines**

Configure the command on the physical port configuration mode.

**Example**

The following example shows how to manually configure mac: 4433.0002.0021 to security sticky mac address.

```
Switch_config#inter g0/1
```

```
Switch_config_g0/1# switchport port-security sticky mac-address 4433.0002.0021
```

**1.7 Configuring Port Binding****Syntax**

**switchport port-security bind|block {ip|arp|both-arp-ip *ip-addr*| mac *mac-addr* }**

**no switchport port-security bind|block {ip|arp| both-arp-ip *ip-addr* mac *mac-addr* }**

To bind a MAC address to an IP address, run the first one of the above commands.

To cancel the address binding one by one or to exit the port binding state by cancelling all addresses on the port, run the no form of the command.

#### Parameter

Parameter	Description	Value ranges
<i>ip-addr</i>	IP address	A.B.C.D
<i>Mac-addr</i>	Mac address	H.H.H

#### Default

None

#### Description

This command works in layer-2 port configuration mode.

The port binding function is forbidden by default. However, if one address is bound, the port is then in binding state unless you use the negative form of this command to clear all bound address items.

#### Example

The following example shows how to bind IP address 1.2.3.4 to MAC address 0001.0001.1111 on interface g0/1 to decline the IP packets and ARP packets from the bound address.

```
Switch_config#inter g0/1
Switch_config_g0/1# switchport port-security block both-arp-ip 1.2.3.4 mac
0001.0001.1111
```

## 1.8 Configuring SVL/IVL

#### Syntax

**[no]vlan shared-learning**

The command is used to configure share vlan learning (SVL).

#### Parameter

None

#### Default

Configure Independent Vlan Learning (IVL) on the port.

#### Usage Guidelines

Configure the command in global configuration mode.

#### Example

The following example shows how to configure shared learning.

Switch\_config#vlan shared-learning

## 1.9 Configuring Link Scan

### Syntax

**[no] Link scan [normal | fast] *interval***

To set the scan interval of an interface, run the above command.

### Parameter

Parameter	Description
<b>[normal   fast]</b>	Normal: standard link scan mode Fas: fast link scan mode
<i>interval</i>	Scan interval, unit: 1ms, 10-1000

### Default

The default scan interval in the standard mode is 500ms;

The default scan interval in the fast mode is 10ms.

### Usage Guidelines

Configure the command in global configuration mode. The Fast mode is mainly used for collaborating with the protocol, such as RSTP. Discover the interface up/down in the normal mode.

### Example

The following example shows how to set the scan interval of a switch to 20ms.

Link scan normal 20

## 1.10 Configuring Port Enhanced Link Status Check

### Syntax

**[no] switchport enhanced-link**

To enable/disable status check of the port enhanced link, run the above command.

### Parameter

None

### Default

Disable status check of the port enhanced link.

**Usage Guidelines**

Configure the command in port configuration mode.

**Example**

The following example shows how to enable status check of the port g0/1 enhanced link.

```
Switch_config#interface g0/1
Switch_config_g0/1#switchport enhanced-link
```

## 1.11 Configuring System *mtu*

**Syntax**

**[no] system mtu *mtu***

The command is used to configure mtu.

**Parameter**

Parameter	Description
<i>mtu</i>	Configures system mtu, the value ranges from 1500 to 9216.

**Default**

The default mtu is 1500 bytes.

**Usage Guidelines**

Configure the command in the global configuration mode.

**Example**

The following example shows how to configure mtu to 2000 bytes.

```
Switch#config
Switch_config#system mtu 2000
```