

## IP ACL Application Configuration Commands

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## Chapter 1 IP ACL Application Commands

### 1.1 Configuration Commands for Applying IP ACL

The commands for applying the IP Access Control List (ACL) are shown below:

- `ip access-group`
- `ipv6 access-group`

#### 1.1.1 `ip access-group`

To designate an access group, run the **ip access-group**. To cancel the designated access group, run **no ip access-group**.

To apply a created IP ACL on a port, run the following command:

**[no] ip access-group *name* [egress]**

To apply a created IP ACL globally, run the following command:

**[no] ip access-group *name* [egress | vlan {*word* | add *word* | remove *word*}]**

You can use this command to apply the established IP ACL to an interface or globally or cancel the applied IP ACL on an interface or globally.

#### Parameter

| Parameter     | Description                               |
|---------------|---|
| <i>name</i>   | Stands for the name of IP ACL.            |
| <b>egress</b> | Applies the ACL in an outbound direction. |
| <b>Vlan</b>   | Applies the ACL in an inbound VLAN.       |
| <i>Word</i>   | Stands for the VLAN range table.          |
| <b>add</b>    | Adds a VLAN range table.                  |
| <b>remove</b> | Cancels a VLAN range table.               |

#### Command mode

Global or port configuration mode

## Explanation

Most rules in the ACL take effect through hardware; those that hardware does not support give no errors but they have no actual effects; a few rules such as time-range take effect through software.

### Note:

The IPv4 standard ACL supports the following rules:

*any*: means any source IP address.

*source-addr source-mask*: means matching up the source address.

*reverse-mask source-addr source-mask*: means to use the reverse source address for match-up.

The IPv4 extended ACL supports the following rules:

*any*: means any IP address.

*ip-protocol*: means the IP protocol ID.

*ip-addr source-mask*: means IP address match-up.

Interface *interface-id*: means layer-3 interface match-up.

*eq/gt/lt/src-portrange*: means TCP/UDP port ID match-up.

*totalen*: means the length match-up of IP packets.

*established/tos/is-fragment/not-fragment/precedence/ttl/offset-not-zero/offset-zero/donotfragment-set/ donotfragment-notset/icmp-type*: means field match-up, among which **ttl** must be set to **equal**.

## Example

The following example shows how to apply the ACL filter at the ingress direction of interface g0/1.

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

```
Switch_config_g0/1# ip access-group filter
```

### 1.1.2 ipv6 access-group

To designate an access group, run the **ipv6 access-group**. To cancel the designated access group, run **no ipv6 access-group**.

To apply a created IPv6 ACL on a port, run the following command:

**[no] ipv6 access-group *name* [egress]**

To apply a created IPv6 ACL globally, run the following command:

**[no] ipv6 access-group *name* [egress | vlan {*word* | add *word* | remove *word*}]**

You can use this command to apply the established IPv6 ACL to an interface or globally or cancel the applied IPv6 ACL on an interface or globally.

#### Parameter

| Parameter     | Description                                    |
|---------------|--|
| <i>name</i>   | Stands for the name of IPv6 ACL.               |
| <b>egress</b> | Applies the IPv6 ACL in an outbound direction. |
| <b>Vlan</b>   | Applies the IPv6 ACL in an inbound VLAN.       |
| <i>Word</i>   | Stands for the VLAN range table.               |
| <b>add</b>    | Adds the VLAN range table.                     |
| <b>remove</b> | Cancels the VLAN range table.                  |

#### Command mode

Global configuration mode or port configuration mode

#### Explanation

Most rules in the ACL take effect through hardware; those that hardware does not support give no errors but they have no actual effects; a few rules such as time-range take effect through software.

#### Note:

The IPv6 ACL supports the following rules:

any: means any IPv6 address.

*ipv6-addr*/host *ipv6-addr*: means IPv6 address match-up.

*ipv6-protocol*: means the IPv6 protocol ID.

eq/gt/lt/src-portrange: means TCP/UDP port ID match-up.

dscp/flow-label: means field match-up.

### Example

The following example shows how to apply the ACL filter at the ingress direction of interface g0/1.

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

```
Switch_config_g0/1# ipv6 access-group filter
```