# I Commands

This chapter describes the system management commands that begin with I.

# ip access-list (session)

To create an IPv4 access control list (ACL) within a configuration session, use the **ip access-list** command. To remove an ACL from a configuration session, use the **no** form of this command.

**ip access-list** *ACL-name*

**no ip access-list** *ACL-name*

## Syntax Description

| | |
|---|---|
| *ACL-name* | Name of the IPv4 ACL. The name can be up to 64 alphanumeric characters and cannot contain a space or quotation mark. |

## Command Default

No IPv4 ACLs are defined by default.

## Command Modes

Global session configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Examples

This example shows how to create an IPv4 ACL for a configuration session:

```
switch# configure session MySession1
switch(config-s)# ip access-list myACL
switch(config-s-acl)#
```

## Related Commands

| Command | Description |
|---|---|
| **configure session** | Creates a configuration session. |
| **deny** | Configures a deny rule in an IPv4 ACL. |
| **permit** | Configures a permit rule in an IPv4 ACL. |
| **show configuration session** | Displays the contents of the session. |

# ip dns source-interface

To configure the source interface for the Domain Name Server (DNS) domain lookup, use the **ip dns source-interface** command. To revert to the default settings, use the **no** form of this command.

**ip dns source-interface** {**ethernet** *slot*/[*QSFP-module*/]*port* | **loopback** *intf-num*} [**vrf** {*vrf-name* | **default** | **management**}]

**no ip dns source-interface** {**ethernet** *slot*/[*QSFP-module*/]*port* | **loopback** *intf-num*} [**vrf** {*vrf-name* | **default** | **management**}]

## Syntax Description

| | |
|---|---|
| **ethernet** *slot*/[*QSFP-module*/]*port* | Specifies the Ethernet interface to use as the destination SPAN port. The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128. |
| **loopback** *intf-num* | Specifies the loopback interface to use as the source interface. The range of values is from 0 to 1023. |
| **vrf** | (Optional) Specifies the virtual routing and forwarding (VRF) instance. |
| *vrf-name* | (Optional) VRF name. The name is case sensitive and can be a maximum of 32 characters. |
| **default** | (Optional) Specifies the default VRF. |
| **management** | (Optional) Specifies the management VRF. |

## Command Default

None

## Command Modes

Global configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

This command does not require a license.

## Examples

This example shows how to configure an Ethernet interface as the source interface for a DNS lookup:

```
switch# configure terminal
switch(config)# ip dns source-interface ethernet 1/5
switch(config)#
```

## Related Commands

| Command | Description |
|---|---|
| **ip domain-lookup** | Enables the DNS lookup feature. |
| **show ip dns source-interface** | Displays information about the DNS source interfaces. |

# ip domain-list

To configure the IP domain list, use the **ip domain-list** command. To disable the IP domain list, use the **no** form of the command.

**ip domain-list** *domain-name* [**use-vrf** *name*]

**no ip domain-list** *domain-name* [**use-vrf** *name*]

## Syntax Description

| | |
|---|---|
| **domain-list** | Specifies the domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 63 characters. |
| **use-vrf** *name* | (Optional) Specifies the virtual routing and forwarding (VRF) to use to resolve the domain domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 32 characters. |

## Command Default

None

## Command Modes

Global configuration mode
VRF context configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

Use the **ip domain-list** command to configure additional domain names for the device. Use the **vrf context** command to enter the VRF context mode to configure additional domain names for a particular VRF.

## Examples

This example shows how to configure the IP domain list for the default VRF:

```
switch# config terminal
switch(config)# ip domain-list Mysite.com
```

This example shows how to configure the IP domain list for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip domain-list Mysite.com
```

This example shows how to configure the IP domain list for the default VRF to use the management VRF as a backup if the domain name cannot be resolved through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
switch(config)# ip domain-list Mysite2.com
```

**Related Commands**

| Command | Description |
|---|---|
| **show hosts** | Displays information about the IP domain name configuration. |

# ip domain-lookup

To enable the Domain Name Server (DNS) lookup feature, use the **ip domain-lookup** command. Use the **no** form of this command to disable this feature.

**ip domain-lookup**

**no ip domain-lookup**

## Syntax Description

This command has no arguments or keywords.

## Command Default

None

## Command Modes

Global configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

Use the **ip domain-lookup** command to enable DNS.

## Examples

This example shows how to configure the DNS server lookup feature:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
switch(config)# ip domain-lookup
switch(config)#
```

## Related Commands

| Command | Description |
|---|---|
| **show hosts** | Displays information about the DNS. |

# ip domain-name

To configure a domain name, use the **ip domain-name** command. To delete a domain name, use the **no** form of the command.

**ip domain-name** *domain-name* [**use-vrf** *name*]

**no ip domain-name** *domain-name* [**use-vrf** *name*]

## Syntax Description

| | |
|---|---|
| *domain-name* | Domain name. The name can be any case-sensitive, alphanumeric string up to 63 characters. |
| **use-vrf** *name* | (Optional) Specifies the virtual routing and forwarding (VRF) to use to resolve the domain name. The name can be any case-sensitive, alphanumeric string up to 32 characters. |

## Command Default

None

## Command Modes

Global configuration mode
VRF context configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

Use the **ip domain-name** command to configure the domain name for the device. Use the **vrf context** command to enter the VRF context mode to configure the domain monastery for a particular VRF.

## Examples

This example shows how to configure the IP domain name for the default VRF:

```
switch# config terminal
switch(config)# ip domain-name Mysite.com
switch(config)#
```

This example shows how to configure the IP domain name for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip domain-name Mysite.com
switch(config-vrf)#
```

This example shows how to configure the IP domain name for the default VRF to use the management VRF as a backup if the domain name cannot be resolved through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
```

## Related Commands

| Command | Description |
|---|---|
| **ip domain-list** | Configures the IP domain list. |
| **ip domain-lookup** | Enables the Domain Name Server (DNS) lookup feature. |
| **show hosts** | Displays information about the IP domain name configuration. |

# ip dscp (ERSPAN)

To configure the differentiated dervices code point (DSCP) value of the packets in the Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic, use the **ip dscp** command. To revert to the default value, use the **no** form of this command.

**ip dscp** *dscp_value*

**no ip dscp** *dscp_value*

## Syntax Description

| | |
|---|---|
| *dscp_value* | DSCP value of the packets in the ERSPAN traffic. The range is from 0 to 63. |

## Command Default

0

## Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

## Command History

| Release | Modification |
|---|---|
| 7.0(0)N1(1) | This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode. |
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

This command does not require a license.

## Examples

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for an ERSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# ip dscp 10
switch(config-erspan-src)#
```

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for a SPAN-on-Drop ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-dropn-erspan
switch(config-span-on-drop-erspan)# ip dscp 20
switch(config-span-on-drop-erspan)#
```

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for a SPAN-on-Latency ERSPAN session:

```
switch# configure terminal
```

```
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# ip dscp 30
switch(config-span-on-latency-erspan)#
```

## Related Commands

| Command | Description |
|---|---|
| **ip prec** | Configures the IP precedence value of the ERSPAN traffic. |
| **ip ttl** | Configures the IP time-to-live (TTL) value of the ERSPAN traffic. |
| **monitor-session** | Enters the monitor configuration mode for configuring an ERSPAN session for analyzing traffic between ports. |

# ip host

To define static hostname-to-address mappings in the Domain Name System (DNS) hostname cache, use the **ip host** command. To remove a hostname-to-address mapping, use the **no** form of this command.

**ip host** *name address1* [*address2... address6*]

**no ip host** *name address1* [*address2... address6*]

## Syntax Description

| | |
|---|---|
| *name* | Hostname. The *name* can be any case-sensitive, alphanumeric string up to 80 characters. |
| *address1* | IPv4 address in the x.x.x.x format. |
| *address2 ...address6* | (Optional) Up to five additional IPv4 addresses in the x.x.x.x format. |

## Command Default

None

## Command Modes

Global configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

Use the **ip host** command to add a static hostname to DNS.

## Examples

This example shows how to configure a static hostname:

```
switch(config)# ip host mycompany.com 192.0.2.1
```

## Related Commands

| Command | Description |
|---|---|
| **show hosts** | Displays information about the IP domain name configuration. |

# ip name-server

To configure a name server, use the **ip name-server** command. To disable this feature, use the **no** form of the command.

**ip name-server** *ip-address* [**use-vrf** *name*]

**no ip name-server** *ip-address* [**use-vrf** *name*]

## Syntax Description

| | |
|---|---|
| *ip-address* | IP address for the name server. |
| **use-vrf** *name* | (Optional) Specifies the virtual routing and forwarding (VRF) to use to reach the name-server. The name can be any case-sensitive, alphanumeric string up to 32 characters. |

## Command Default

None

## Command Modes

Global configuration mode
VRF context configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

Use the **ip name-server** command to configure the name server for the device. Use the **vrf context** command to enter the VRF context mode to configure the domain names for a particular VRF.

## Examples

This example shows how to configure the IP name server for the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
```

This example shows how to configure the IP name server for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip name-server 192.0.2.1
```

This example shows how to configure the IP name server for the default VRF to use the management VRF as a backup if the IP name server cannot be reached through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1 use-vrf management
```

**Related Commands**

| Command | Description |
|---|---|
| **ip domain-list** | Defines a list of domains. |
| **ip domain lookup** | Enables DNS-based host name-to-address translation. |
| **show hosts** | Displays information about the IP domain name configuration. |
| **vrf context** | Creates a virtual routing and forwarding (VRF) instance. |

# ip port access-group (session)

To apply an IPv4 access control list (ACL) to an interface as a port ACL, use the **ip port access-group** command. To remove an IPv4 ACL from an interface, use the **no** form of this command.

**ip port access-group** *access-list-name* {**in** | **out**}

**no ip port access-group** *access-list-name* {**in** | **out**}

## Syntax Description

| | |
|---|---|
| *access-list-name* | Name of the IPv4 ACL. The name can be up to 64 alphanumeric, case-sensitive characters long. |
| **in** | Specifies that the ACL applies to inbound traffic. |
| **out** | Specifies that the ACL applies to outbound traffic. |

## Command Default

None

## Command Modes

Session interface configuration mode

## Command History

| Release | Modification |
|---|---|
| 6.0(2)N1(1) | This command was introduced. |

## Examples

This example shows how to apply an IPv4 ACL named ip-acl-01 to the Ethernet interface 1/2 as a port ACL:

```
switch# configure session MySession1
switch(config-s)# interface ethernet 1/2
switch(config-s-if)# ip port access-group ip-acl-01 in
switch(config-s-if)#
```

This example shows how to remove an IPv4 ACL named ip-acl-01 from Ethernet interface 1/2:

```
switch(config-s)# interface ethernet 1/2
switch(config-s-if)# no ip port access-group ip-acl-01 in
switch(config-s-if)#
```

## Related Commands

| Command | Description |
|---|---|
| **show access-lists** | Displays all ACLs. |
| **show configuration session** | Displays the contents of the session. |

# ip ttl (ERSPAN)

To configure the IP time-to-live (TTL) value of the Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic, use the **ip ttl** command. To revert to the default configuration, use the **no** form of this command.

**ip ttl** *ttl_value*

**no ip ttl** *ttl_value*

## Syntax Description

| | |
|---|---|
| *ttl_value* | IP TTL value of the ERSPAN traffic. The range is from 1 to 255. |

## Command Default

255

## Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

## Command History

| Release | Modification |
|---|---|
| 7.0(0)N1(1) | This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode. |
| 6.0(2)N1(1) | This command was introduced. |

## Usage Guidelines

This command does not require a license.

## Examples

This example shows how to configure the IP TTL value of the ESRSPAN source:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# ip ttl 30
switch(config-erspan-src)#
```

This example shows how to remove the IP TTL value from the ESRSPAN source:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# no ip ttl 30
switch(config-erspan-src)#
```

This example shows how to configure the IP TTL value in a SPAN-on-Drop ESRSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop-erspan
switch(config-span-on-drop-erspan)# ip ttl 30
switch(config-span-on-drop-erspan)#
```

This example shows how to remove the IP TTL value in a SPAN-on-Latency ESRSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-drop-latency)# no ip ttl 30
switch(config-span-on-drop-latency)#
```

## Related Commands

| Command | Description |
|---|---|
| **ip dscp** | Configures the DSCP value of the packets in the ERSPAN traffic. |
| **monitor-session** | Enters the monitor configuration mode for configuring an ERSPAN session for analyzing traffic between ports. |