FiberstoreOS

Device Management Command Line Reference
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1.1 **stm prefer**

Use the `stm prefer` Global Configuration command to configure the profile used in Switch Table Management (STM) resource allocation. You can use profile to allocate system memory to best support the features being used in your application. Use profile to approximate the maximum number of unicast MAC addresses, quality of service (QoS) access control entries (ACEs) and unicast routes. Use the no form of this command to return to the default profile.

**Command Syntax**

```plaintext
stm prefer PROFILE
no stm prefer
```

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>provide balance to all features</td>
</tr>
<tr>
<td>layer2</td>
<td>provide maximum FDB entries. This profile maximizes system memory for use as a Layer 2 switch</td>
</tr>
<tr>
<td>layer3</td>
<td>provide maximum Host Route/Indirect Route entries. You would typically use this profile for a router or aggregator in the middle of a network</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

System use the default profile when first boot up, this profile balance all the features.

**Usage**

Users must reload the switch for the configuration to take effect.

**Examples**

This example shows how to configure the ipv4 profile on the switch:

```plaintext
Switch(config)# stm prefer layer3
Switch(config)# exit
Switch# reload
```

You can verify your settings by entering the `show stm prefer` in privileged EXEC mode.

**Related Commands**

`show stm prefer`
1.2 show stm prefer

Use the show stm prefer privileged EXEC command to display information about the profiles that can be used to maximize system resources for a particular feature, or use the command without a keyword to display the profile in use.

Command Syntax

```
show stm prefer PROFILE
```

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>Provide balance to all features.</td>
</tr>
<tr>
<td>layer2</td>
<td>Provide maximum FDB entries. This profile maximizes system memory for use as a Layer 2 switch.</td>
</tr>
<tr>
<td>layer3</td>
<td>Provide maximum Host Route/Indirect Route entries.</td>
</tr>
</tbody>
</table>

You would typically use this profile for a router or aggregator in the middle of a network.

Command Mode

Privileged EXEC

Default

None

Usage

If you did not reload the switch after entering the stm prefer Global Configuration command, the show stm prefer privileged EXEC command displays the profile currently in use and not the newly configured profile.

The numbers displayed for each profile represent an approximate maximum number for each feature resource.

Examples

This is an example of output from the show stm prefer command, displaying the profile currently in use:

```
Switch# show stm prefer
Current profile is :default
  number of vlan instance      : 1/4094
  number of unicast & multicast mac address : 0/65536
  number of backhole mac address      : 0/128
  number of max applied vlan mapping  : 0/1024
  number of mac based vlan class      : 0/512
  number of ipv4 based vlan class     : 0/512
  number of dot1x mac based           : 0/2048
  number of unicast ipv4 host routes  : 0/4096
  number of unicast ipv4 indirect routes : 0/8192
  number of unicast ipv4 ecmp groups  : 0/256
  number of unicast ipv4 policy based routes : 0/16
  number of unicast ip tunnel peers  : 0/8
  number of multicast ipv4 routes     : 0/1023
  number of multicast ipv4 routes member : 0/1024
  number of ipv4 source guard entries : 0/1024
  number of ipv4 acl/qos flow entries : 0/511
  number of link aggregation (static & lacp) : 0/55
```
Related Commands

stm prefer
2 Syslog Commands

2.1 clear logging buffer

To clear messages from the logging buffer, use the clear logging buffer command in Privileged EXEC mode.

Command Syntax

clear logging buffer

Command Mode

Privileged EXEC

Default

None

Usage

Clear log messages in logging buffer

Examples

The following shows how to clear logging buffer:
Switch# clear logging buffer

Related Commands

show logging buffer

2.2 logging alarm-trap

To limit messages logged to the syslog servers based on severity, use the logging alarm-trap command in Global Configuration mode. To restore the default level, use the no form of this command.

Command Syntax

logging alarm-trap (enable | disable | level (high | lower | middle | minor))

no logging alarm-trap level

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>Enable logging traps</td>
</tr>
<tr>
<td>disable</td>
<td>Disable logging traps</td>
</tr>
<tr>
<td>level high</td>
<td>The high alarm level</td>
</tr>
<tr>
<td>level lower</td>
<td>The lower alarm level.</td>
</tr>
<tr>
<td>level middle</td>
<td>The middle alarm level</td>
</tr>
<tr>
<td>level minor</td>
<td>The minor alarm level</td>
</tr>
</tbody>
</table>
Command Mode
Global Configuration

Default
Logging trap is disabled.

Usage
A trap is an unsolicited message sent to a remote network management host. Logging traps should not be confused with SNMP traps.

Examples
The following shows how to limit messages logged to the log servers based on severity.
Switch(config)# logging alarm-trap enable
Switch(config)# logging alarm-trap level high

Related Commands
logging alarm-trap level middle

2.3 logging file
To enable writing logs into files, use the logging file command in Global Configuration mode.

Command Syntax
logging file (enable | disable)

<table>
<thead>
<tr>
<th>enable</th>
<th>Enable writing logs to file</th>
</tr>
</thead>
<tbody>
<tr>
<td>disable</td>
<td>Disable writing logs to file</td>
</tr>
</tbody>
</table>

Command Mode
Global Configuration

Default
Logging file is enabled

Usage
If logging file will enabled, the log will be saved to flash:/syslog every 10 minutes.

Examples
The following shows how to enable logging file function.
Switch(config)# logging file enable

Related Commands
show logging
2.4 logging level file

To set severity level while writing logs into files, use the logging level file command in Global Configuration mode. To return the logging to the default level, use the no form of this command.

**Command Syntax**

```
logging level file (alert | critical | debug | emergency | error | information | notice | warning | severity-level)

no logging level file
```

<table>
<thead>
<tr>
<th>Severity-Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 emergency</td>
<td>System is unusable</td>
</tr>
<tr>
<td>1 alert</td>
<td>Immediate action needed</td>
</tr>
<tr>
<td>2 critical</td>
<td>Critical conditions</td>
</tr>
<tr>
<td>3 error</td>
<td>Error conditions</td>
</tr>
<tr>
<td>4 warning</td>
<td>Warning conditions</td>
</tr>
<tr>
<td>5 notice</td>
<td>Normal but significant conditions</td>
</tr>
<tr>
<td>6 information</td>
<td>Informational messages</td>
</tr>
<tr>
<td>7 debug</td>
<td>Debugging messages</td>
</tr>
<tr>
<td>severity-level</td>
<td>Severity level. The range is 0 to 7</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

Logging file level is warning.

**Usage**

Specifying a severity-level causes messages only at that level and numerically lower levels to files.

**Examples**

In the following example, the user specifies that only messages of the levels error, critical, alerts, and emergency be logged to files:

```
Switch(config)# logging level file 3
```

**Related Commands**

logging level module

2.5 logging buffer

To set the number of logs saved in system buffer, use the logging buffer command in Global Configuration mode. To return the logging to the default value, use the no form of this command.

**Command Syntax**

```
logging buffer buffersize

no logging buffer
```
buffersize | < 10-1000 > logging buffer size

**Command Mode**
Global Configuration

**Default**
500

**Usage**
Specifying the max number of messages showed in CLI `show logging buffer`.

**Examples**
In the following example, the user save 1000 logging entries in system:
Switch(config)# logging buffer 1000

**Related Commands**
`show logging buffer`

### 2.6 logging level module

To set severity level, use the logging level module command in Global Configuration mode. To return the logging to the default level, use the no form of this command.

**Command Syntax**

```plaintext
logging level module (alert | critical | debug | emergency | error | information | notice | warning | severity-level)
no logging level module
```

<table>
<thead>
<tr>
<th>severity-level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>emergency</td>
</tr>
<tr>
<td>1</td>
<td>alert</td>
</tr>
<tr>
<td>2</td>
<td>critical</td>
</tr>
<tr>
<td>3</td>
<td>error</td>
</tr>
<tr>
<td>4</td>
<td>warning</td>
</tr>
<tr>
<td>5</td>
<td>notice</td>
</tr>
<tr>
<td>6</td>
<td>information</td>
</tr>
<tr>
<td>7</td>
<td>debug</td>
</tr>
<tr>
<td>severity-level</td>
<td>Severity level. The range is 0 to 7</td>
</tr>
</tbody>
</table>

**Command Mode**
Global Configuration

**Default**
Logging file level is debugging.
Usage

Specifying a severity-level causes messages only at that level and numerically lower levels of the modules.

Examples

In the following example, the user specifies that only messages of the levels error, critical, alerts, and emergency be logged:

Switch(config)# logging level module 3

Related Commands

logging level file

2.7 logging merge

To enable the logging mergence, use the logging merge command in Global Configuration mode. To restore to default value, use the no form of this command.

Command Syntax

logging merge (enable | disable | fifo-size size | timeout seconds)
no logging merge (fifo-size | timeout)

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>Enable logging mergence</td>
</tr>
<tr>
<td>disable</td>
<td>Disable logging mergence</td>
</tr>
<tr>
<td>fifo-size size</td>
<td>Set fifo size. The range is 100 to 10240, default value is 1024</td>
</tr>
<tr>
<td>timeout seconds</td>
<td>Set timeout. The range is 1 to 300 seconds, default value is 10 seconds</td>
</tr>
</tbody>
</table>

Command Mode

Global Configuration

Default

Logging mergence is enabled.

Usage

The logging merge command merges all the same logs into one during a specified time range. During this time, the switch buffered these same logs. You can use the timeout keyword to set the time range, and use the fifo-size to set the buffer size.

Examples

The following shows how to enable logging merge function.

Switch(config)# logging merge enable

Related Commands

logging merge timeout 30

2.8 logging sync

To sync log to logging buffer, use the logging sync command in privileged EXEC mode.
### Command Syntax

**logging sync**

### Command Mode

Privileged EXEC

### Default

None

### Usage

When enabled log merge, system will merge all the same logs into one during a specified time range. During this time log will not send to logging buffer. If user wants to sync log to logging buffer, use this command.

### Examples

The following shows how to enable logging sync function.

Switch# logging sync

### Related Commands

logging merge enable

### 2.9 logging operate

To log the operations, and use the logging operate command in Global Configuration mode.

#### Command Syntax

**logging operate (enable | disable)**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>Enable logging operations</td>
</tr>
<tr>
<td>disable</td>
<td>Disable logging operations</td>
</tr>
</tbody>
</table>

#### Command Mode

Global Configuration

#### Default

Logging operations is disabled

#### Usage

If logging operate is enabled, all the CLI in configure mode or higher will be save to logger buffer.

#### Examples

The following shows how to enable logging operate function.

Switch(config)# logging operate enable

### Related Commands

logging server
2.10 **logging server**

To enable the logging to the remote logging servers, use the **logging server command** in Global Configuration mode.

**Command Syntax**

```
logging server (enable | disable)
```

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>Enable logging server</td>
</tr>
<tr>
<td>disable</td>
<td>Disable logging server</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

Logging operations is disabled.

**Usage**

This command is used to send logger to a remote server.

**Examples**

The following shows how to use logging server command.

```
Switch(config)# logging server enable
```

**Related Commands**

- `logging server severity`

2.11 **logging server address**

To log system messages and debug output to a remote server, use the **logging server address command** in Global Configuration mode. To remove a specified logging server from the configuration, use the **no** form of this command.

**Command Syntax**

```
logging server address (mgmt-if | ) (ipv4-address | ipv6-address)
no logging server address (mgmt-if | ) (ipv4-address | ipv6-address)
```

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mgmt-if</td>
<td>Management port</td>
</tr>
<tr>
<td>ipv4-address</td>
<td>IPv4 address of the server that will receive the system logging messages</td>
</tr>
<tr>
<td>ipv6-address</td>
<td>IPv6 address of the server that will receive the system logging messages</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

System logging messages are not sent to any remote server.
Usage

The logging server address command identifies a remote server (usually a device serving as a syslog server) to receive logging messages. By issuing this command more than once, you can build a list of servers that receive logging messages.

Examples

In the following example, messages are logged to a server at 209.165.202.169:

Switch(config)# logging server address 209.165.202.169

Related Commands

logging server

2.12 logging server facility

To configure the syslog facility in which error messages are sent, use the logging server facility command in Global Configuration mode. To revert to the default of local7, use the no form of this command.

Command Syntax

logging server facility facility-type

no logging server facility

Command Mode

Global Configuration

Default

Default is local4

Usage

The following table describes the acceptable keywords for the facility-type argument.

<table>
<thead>
<tr>
<th>Facility-type keyword</th>
<th>Facility-id</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>auth</td>
<td>4</td>
<td>Authorization system</td>
</tr>
<tr>
<td>authpriv</td>
<td>10</td>
<td>Authorization priv system</td>
</tr>
<tr>
<td>cron</td>
<td>9</td>
<td>Cron facility</td>
</tr>
<tr>
<td>daemon</td>
<td>3</td>
<td>System daemon</td>
</tr>
<tr>
<td>ftp</td>
<td>11</td>
<td>FTP system</td>
</tr>
<tr>
<td>kern</td>
<td>0</td>
<td>Kernel</td>
</tr>
<tr>
<td>local0-7</td>
<td>16-23</td>
<td>Reserved for locally defined messages</td>
</tr>
<tr>
<td>lpr</td>
<td>6</td>
<td>Line printer system</td>
</tr>
<tr>
<td>mail</td>
<td>2</td>
<td>Mail system</td>
</tr>
<tr>
<td>news</td>
<td>7</td>
<td>USENET news</td>
</tr>
<tr>
<td>syslog</td>
<td>5</td>
<td>System log</td>
</tr>
<tr>
<td>user</td>
<td>1</td>
<td>User</td>
</tr>
<tr>
<td>uucp</td>
<td>8</td>
<td>UNIX-to-UNIX</td>
</tr>
</tbody>
</table>
Examples

The following shows how to use logging file command:

Switch(config)# logging server facility local3

Related Commands

logging server

2.13 logging server severity

To set severity level while writing logs into servers, use the logging server severity command in Global Configuration mode. To revert to the default severity level, use the no form of this command.

Command Syntax

logging server severity (alert | critical | debug | emergency | error | information | notice | warning | severity-level)

no logging server severity

<table>
<thead>
<tr>
<th>severity-level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>emergency</td>
</tr>
<tr>
<td>1</td>
<td>alert</td>
</tr>
<tr>
<td>2</td>
<td>critical</td>
</tr>
<tr>
<td>3</td>
<td>error</td>
</tr>
<tr>
<td>4</td>
<td>warning</td>
</tr>
<tr>
<td>5</td>
<td>notice</td>
</tr>
<tr>
<td>6</td>
<td>information</td>
</tr>
<tr>
<td>7</td>
<td>debug</td>
</tr>
</tbody>
</table>

Usage

This command is used to set severity level while writing logs into servers.

Examples

In the following example, the user specifies that only messages of the levels error, critical, alerts, and emergency be logged to server.

Switch(config)# logging server severity 3

Related Commands

logging level module
logging level file
2.14 logging timestamp

To configure the system to apply a time-stamp to debugging messages or system logging messages, use the logging timestamps command in Global Configuration mode. To restore the default timestamp format, use the no form of this command.

Command Syntax

```
logging timestamp (bsd | date | iso | none | rfc3164 | rfc3339)
no logging timestamp
```

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bsd</td>
<td>BSD style (RFC 3164)</td>
</tr>
<tr>
<td>date</td>
<td>Date command style</td>
</tr>
<tr>
<td>iso</td>
<td>ISO style (RFC 3339)</td>
</tr>
<tr>
<td>none</td>
<td>No timestamp</td>
</tr>
<tr>
<td>rfc3164</td>
<td>RFC 3164 style (bsd)</td>
</tr>
<tr>
<td>rfc3339</td>
<td>RFC 3339 style (iso)</td>
</tr>
</tbody>
</table>

Command Mode

Global Configuration

Default

Default timestamp format is BSD.

Usage

This command is used to specify the timestamp in logger message.

Examples

The following shows how to set the timestamp to iso.

```
Switch(config)# logging timestamp iso
```

Related Commands

`show logging`

2.15 show logging

To display the state of system logging (syslog), use the show logging command in privileged EXEC mode.

Command Syntax

```
show logging
```

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to display the configuration of the log.
Examples

The following shows how to display the configuration of the log.

Switch# show logging

Current logging configuration:
============================================================================
logging buffer 500
logging timestamp date
logging file enable
logging level file warning
logging level module debug
logging server disable
logging server severity warning
logging server facility local7
logging alarm-trap enable
logging alarm-trap level middle
logging merge disable
logging merge fifo-size 1024
logging merge timeout 10
logging operate disable

Related Commands

logging level

2.16 show logging buffer

To display the contents of the standard system logging buffer, use the show logging buffer command in privileged EXEC mode.

Command Syntax

show logging buffer (number | statistics)

Command Mode

Privileged EXEC

Default

None

Usage

This command is used to display the contents in logging buffer.

Examples

The following shows how to use show logging buffer command.

Switch# show logging buffer statistics

Logging buffer statistics:
============================================================================
Total processed 153 entries
Total dropped 0 entries
Current have 153 entries
The latest message is:
Aug 6 16:06:44 Switch3 IMISH-6: ready to service
The oldest message is:
Aug 6 13:38:38 Switch LOGGING-5: logging starting up; version='2.0rc4'

**Related Commands**

`show logging`
3 Mirror Commands

3.1 monitor session destination interface

Use this command to set mirror destination interface.
To remove this setting, use the no form of this command.

**Command Syntax**

```
monitor session session destination interface interface
no monitor session session destination
```

<table>
<thead>
<tr>
<th>session</th>
<th>&lt;1-3&gt; mirror session number</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination interface</td>
<td>mirror destination interface</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

None

**Usage**

The destination interface can only be physical port. It can be neither VLAN interface nor Aggregator interface.

Same session can’t configure both local destination interface and remote destination VLAN.(About the remote destination VLAN, please refer to chapter “monitor session destination remote”.)

**Examples**

- This example shows how to set the mirror destination port to eth-0-1 in session 1.
  ```
  Switch(config)# monitor session 1 destination interface eth-0-1
  ```
- This example shows how to remove this setting.
  ```
  Switch(config)# no monitor session 1 destination
  ```

**Related Commands**

- monitor session session-id source interface
- monitor session session-id source vlan
- show monitor
3.2 **monitor session destination group**

Use this command to create mirror multi destination group and enter mirror destination group mode.

To remove this setting, use the no form of this command.

**Command Syntax**

```
monitor session session destination group groupid
no monitor session session destination
```

<table>
<thead>
<tr>
<th>session</th>
<th>&lt;1-3&gt; mirror session number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination group groupid</td>
<td>&lt;1-32&gt; mirror destination group id number</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

None

**Usage**

Only one session can configure to multi-dest group. The session type only support local destination interface. One session can have multi destination group members which port is physical port. Same session can’t configure both local destination interface and remote destination VLAN.(About the remote destination VLAN, please refer to chapter "monitor session destination remote").

**Examples**

- This example shows how to create the mirror to multi-destination group in session 1.
  ```
  Switch(config)# monitor session 1 destination group 1
  ```
- This example shows how to remove this setting.
  ```
  Switch(config)# no monitor session 1 destination
  ```

**Related Commands**

```
monitor session session-id source interface
member
show monitor
```

3.3 **member**

Use this command to add a group member mirror destination interface for a mirror destination group.

To remove this setting, use the no form of this command.

**Command Syntax**

```
member IFPHYSICAL
member IFPHYSICAL
```
member IFPHYSICAL

mirror destination interface

**Command Mode**

Mirror Destination Group Configuration

**Default**

None

**Usage**

The destination interface only can be physical port. It can be neither VLAN interface nor Aggregator interface.
Same session can't configure both local destination interface and multi-destination interface

**Examples**

- This example shows how to add the mirror destination eth-0-1 to group of multi-destination session.
  Switch(config)# member eth-0-1
- This example shows how to remove this setting.
  Switch(config)# no member eth-0-1

**Related Commands**

- `monitor session session-id source interface`
- `monitor session destination group`

### 3.4 show monitor monitor session source interface

Use this command to set mirror source interface.
To remove this setting, use the no form of this command.

**Command Syntax**

```
monitor session session-id source interface (both | tx | rx)
```

```
no monitor session session-id source interface (both | tx | rx)
```

<table>
<thead>
<tr>
<th>session</th>
<th>&lt;1-3&gt; mirror session number</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination interface</td>
<td>mirror source interface</td>
</tr>
<tr>
<td>interface</td>
<td></td>
</tr>
<tr>
<td>both</td>
<td>monitor received and transmitted traffic on that interface</td>
</tr>
<tr>
<td>rx</td>
<td>monitor received traffic only on that interface</td>
</tr>
<tr>
<td>tx</td>
<td>monitor transmitted traffic only on that interface</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

None
Usage

The mirror source interface can be either physical port or Aggregator interface. (e.g. eth-0-1, agg1).

If the parameter for direction [both|tx|rx] is not specified, the default value is both.

Examples

- This example shows how to set the mirror source port to eth-0-11 in session 1.
  Switch(config)# monitor session 1 source interface eth-0-11
- This example shows how to remove this setting.
  Switch(config)# no monitor session 1 source interface eth-0-11

Related Commands

- `monitor session session-id destination`
- `show monitor`

3.5 monitor session source vlan

Use this command to set mirror source vlan.
To remove this setting, use the no form of this command.

Command Syntax

```
monitor session session source vlan vlan (both | tx | rx)
no monitor session session source vlan vlan (both | tx | rx)
```

<table>
<thead>
<tr>
<th>parameter</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>session</td>
<td>&lt;1-3&gt; mirror session number</td>
</tr>
<tr>
<td>vlan</td>
<td>&lt;1-4094&gt; the source vlan id to be mirrored</td>
</tr>
<tr>
<td>both</td>
<td>monitor received and transmitted traffic on that interface</td>
</tr>
<tr>
<td>rx</td>
<td>monitor received traffic only on that interface</td>
</tr>
<tr>
<td>tx</td>
<td>monitor transmitted traffic only on that interface</td>
</tr>
</tbody>
</table>

Command Mode

Global Configuration

Default

None

Usage

If the parameter for direction (both|tx|rx) is not specified, the default value is both.
Before configure the monitor session source vlan, User should create vlan by command "vlan database", and create vlan interface by command "interface vlan" first.

Examples

This example shows how to create vlan and vlan interface.
Switch (config)# vlan database
Switch (config-vlan)# vlan 2
Switch (config-vlan)# exit
Switch(config)#interface vlan2
Switch(config-if)#exit
This example shows how to set the mirror source to vlan2 in session 1.
Switch(config)# monitor session 1 source vlan 2 both
This example shows how to set the mirror source to vlan2 in session 1 to monitor received traffic only.
Switch(config)# monitor session 1 source vlan 2 rx
This example shows how to set the mirror source to vlan2 in session 1 to monitor transmitted traffic only.
Switch(config)# monitor session 1 source vlan 2 tx
This example shows how to remove this setting.
Switch(config)#no monitor session 1 source vlan 2 both
This example shows how to delete vlan and vlan interface.
Switch(config)#no interface vlan2
Switch (config)# vlan database
Switch (config-vlan)# no vlan 2
Switch (config-vlan)# exit

**Related Commands**

- `monitor session destination`
- `show monitor`
- `vlan database`
- `vlan vlan`
- `interface vlan vlan`

### 3.6 **monitor session destination remote**

Use this command to set mirror remote destination vlan and interface.
To remove this setting, use the no form of this command.

**Command Syntax**

```
monitor session session destination remote vlan vlan interface interface
no monitor session session destination remote vlan
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>session</td>
<td>&lt;1-3&gt; mirror session number</td>
</tr>
<tr>
<td>vlan</td>
<td>&lt;2-4094&gt; Remote mirror destination VLAN id</td>
</tr>
<tr>
<td>interface</td>
<td>the out-going interface for mirrored packets</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

None
Usage

The destination vlan should be created in vlan database.
The destination interface can only be physical port.
To prevent another copy of packets flood out from the destination outgoing port, user can remove the port from default vlan by command "switchport trunk allowed vlan remove 1".

Examples

This example shows how to create the vlan:
Switch (config)# vlan database
Switch (config-vlan)# vlan 2
Switch (config-vlan)# exit
This example shows how to set the mirror remote destination vlan to 2 and outgoing port to eth-0-1 in session 1:
Switch(config)# monitor session 1 destination remote vlan 2 interface eth-0-1
This example shows how to remove this setting:
Switch(config)# no monitor session 1 destination remote vlan
This example shows how to delete the vlan:
Switch (config)# vlan database
Switch (config-vlan)# no vlan 2
Switch (config-vlan)# exit

Related Commands

monitor session session-id source interface
monitor session session-id source vlan
vlan database
vlan vlan

3.7  monitor mac escape

Use this command to set remote mirror Mac escape feature. When these escape entries are set, the packets with specified MAC-DA will not be mirrored to the remote destination vlan when using Rspan(unsupport ERSPAN).
To remove this setting, use the no form of this command.

Command Syntax

monitor mac escape MAC MASK
no monitor mac escape (MAC MASK | )

<table>
<thead>
<tr>
<th>MAC</th>
<th>mac address in HHHH. HHHH. HHHH format</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASK</td>
<td>mac address mask in HHHH. HHHH. HHHH format</td>
</tr>
</tbody>
</table>

Command Mode

Global Configuration
Default

None

Usage

Mac escape is used for remote mirror. It will not affect the result of local mirror.
If a Mac escape entry is set, the packet with this Mac destination can not be mirrored in remote mirror.
Command "no monitor mac escape <MAC> <MASK>" should delete the specified entry.
Command "no monitor mac escape" should delete all entries.

Examples

This example shows how to set the mirror mac escape
Switch(config)# monitor mac escape 00cc.1122.3344 fffffff0000
This example shows how to remove this setting
Switch(config)# no monitor mac escape 00cc.1122.3344 fffffff0000

Related Commands

monitor session session-id destination remote

3.8 show monitor

Use this command to show the information about monitor.

Command Syntax

show monitor (session session)

<table>
<thead>
<tr>
<th>session</th>
<th>&lt;1-3&gt; mirror session number</th>
</tr>
</thead>
</table>

Command Mode

Privileged EXEC

Default

None

Usage

If session id is not specified, any configured sessions should be shown.

Examples

This example shows how to display the information about monitor:
DUT1# show monitor

```
Session  1
---------
Status   : Valid
Type     : Local Session
Source Ports :
  Receive Only :
  Transmit Only :
  Both         : eth-0-2 eth-0-3
Source VLANs :
```
Receive Only : 
Transmit Only :
Both :
Destination Port : eth-0-1

Related Commands

- `monitor session session-id source interface`
- `monitor session session-id source vlan`
- `monitor session session-id destination interface`
- `monitor session session-id destination remote`

3.9  **show monitor mac escape**

Use this command to show mac escape settings for remote mirror.

**Command Syntax**

```
show monitor mac escape
```

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to display the information about monitor mac escape.

```
Switch# show monitor mac escape
```

```
---------------------------------------------------------------------
| monitor rspan mac escape database                                  |
---------------------------------------------------------------------
| count : 1                                                          |
---------------------------------------------------------------------
| Mac : 00:cc:11:22:33:44                                           |
| Mask : ff:ff:ff:ff:00:00                                          |
```

Related Commands

- `monitor mac escape MAC MASK`

3.10  **monitor destination forwarding enable**

Use this command to set mirror destination port forwarding enable.

To remove this setting, use the no form of this command.

**Command Syntax**

```
monitor destination forwarding enable
```
no monitor destination forwarding enable

Command Mode
Global Configuration

Default
Disabled

Usage
If any mirror destination is configured, this feature can't be changed.

Examples
This example shows how to set mirror destination forwarding enable.
Switch(config)# monitor destination forwarding enable

Related Commands
monitor session session-id destination
show monitor
4.1 temperature

To specify the system temperature monitor threshold.

Command Syntax

```
temperature low high critical
no temperature
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>Low alarm temperature degree Celsius &lt;0-50&gt;</td>
</tr>
<tr>
<td>high</td>
<td>High alarm temperature degree Celsius &lt;50-85&gt;</td>
</tr>
<tr>
<td>critical</td>
<td>Critical alarm temperature degree Celsius &lt;55-90&gt;</td>
</tr>
</tbody>
</table>

Command Mode

Global Configuration

Default

The default threshold is low temperature 5, high temperature 75, and critical temperature 90.

Usage

The unit for temperature is centigrade.
The critical temperature must higher than high temperature 5 Celsius degrees.
The high temperature must higher than low temperature 5 Celsius degrees.

Examples

This example shows how to specify the temperature thresholds:

```
Switch# configure terminal
Switch(config)# temperature 5 70 90
```

Related Commands

```
show environment
```

4.2 show environment

Use this command to show the hardware environment information.

Command Syntax

```
show environment (slot id /)
```
| id | The ID of stack member. |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to display hardware environment information.

```
Switch# show environment
Fan tray status:
Index   Status
 1       PRESENT

FanIndex Status SpeedRate Mode
1-1      OK   30%   Auto
1-2      OK   30%   Auto
1-3      OK   30%   Auto

Power status:
Index   Status Power Type Alert
1       PRESENT OK    AC    NO
2       ABSENT       -     -     -

Sensor status (Degree Centigrade):
Index Temperature Lower_alarm Upper_alarm Critical_limit
1       64          5       75       90
```

**Related Commands**

`temperature`

### 4.3 boot system

Use this command to specify the system image that the switch loads at startup.

**Command Syntax**

```
boot system (file-name | tftp: mgmt-if ip-address file-name)
```

<table>
<thead>
<tr>
<th>file-name</th>
<th>The file name that will be used to load at startup</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>The tftp server IP address</td>
</tr>
<tr>
<td>file-name</td>
<td>The file name that will be used to load at startup</td>
</tr>
<tr>
<td>tftp: mgmt-if</td>
<td>Use management port</td>
</tr>
</tbody>
</table>

**Command Mode**

Privileged EXEC
Default
None

Usage
None

Examples
This example shows how to boot system file_name command.
Switch# boot system tftp: mgmt-if 10.10.29.160 ulmage.r

Related Commands
None

4.4 **show transceiver**

Use this command to show the transceiver information.

Command Syntax
```
show transceiver (detail |)
```

Command Mode
Privileged EXEC

Default
None

Usage
None

Examples
This example shows how to display transceiver information.

Switch# show transceiver detail

<table>
<thead>
<tr>
<th>Port eth-1-2 transceiver info:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transceiver Type: 10G Base-SR</td>
</tr>
<tr>
<td>Transceiver Vendor Name : OEM</td>
</tr>
<tr>
<td>Transceiver PN : SFP-10GB-SR</td>
</tr>
<tr>
<td>Transceiver S/N : 201033PST1077C</td>
</tr>
<tr>
<td>Transceiver Output Wavelength: 850 nm</td>
</tr>
<tr>
<td>Supported Link Type and Length:</td>
</tr>
<tr>
<td>Link Length for 50/125um multi-mode fiber: 80 m</td>
</tr>
<tr>
<td>Link Length for 62.5/125um multi-mode fiber: 30 m</td>
</tr>
</tbody>
</table>

Transceiver is internally calibrated.
mA: milliamperes, dBm: decibels (milliwatts), NA or N/A: not applicable.
The threshold values are calibrated.

Temperature Threshold Threshold Threshold

<table>
<thead>
<tr>
<th>High Alarm</th>
<th>High Warn</th>
<th>Low Warn</th>
<th>Low Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Temperature</td>
<td>Threshold</td>
<td>Threshold</td>
<td>Threshold</td>
</tr>
<tr>
<td>Port</td>
<td>High Alarm</td>
<td>High Warn</td>
<td>Low Warn</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
<td>-----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>Voltage</td>
<td>Threshold</td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td>(Volts)</td>
<td>(Volts)</td>
<td>(Volts)</td>
</tr>
<tr>
<td>eth-1-2</td>
<td>3.32</td>
<td>3.80</td>
<td>3.70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>High Alarm</th>
<th>High Warn</th>
<th>Low Warn</th>
<th>Low Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Threshold</td>
<td>Threshold</td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td>(milliamperes)</td>
<td>(mA)</td>
<td>(mA)</td>
<td>(mA)</td>
</tr>
<tr>
<td>eth-1-2</td>
<td>6.41</td>
<td>20.00</td>
<td>18.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>High Alarm</th>
<th>High Warn</th>
<th>Low Warn</th>
<th>Low Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transmit Power</td>
<td>Threshold</td>
<td>Threshold</td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td>(dBm)</td>
<td>(dBm)</td>
<td>(dBm)</td>
<td>(dBm)</td>
</tr>
<tr>
<td>eth-1-2</td>
<td>-2.41</td>
<td>2.01</td>
<td>1.00</td>
<td>-6.99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>High Alarm</th>
<th>High Warn</th>
<th>Low Warn</th>
<th>Low Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Receive Power</td>
<td>Threshold</td>
<td>Threshold</td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td>(dBm)</td>
<td>(dBm)</td>
<td>(dBm)</td>
<td>(dBm)</td>
</tr>
</tbody>
</table>
| eth-1-2| -12        | -        | 1.00     | 0.00     | -19.00   | -20.00

**Related Commands**

None

**4.5 update bootrom**

Use this command to update bootrom image.

**Command Syntax**

`update bootrom (flash | udisk)`

<table>
<thead>
<tr>
<th>Source file direction</th>
<th>flash</th>
<th>udisk</th>
</tr>
</thead>
<tbody>
<tr>
<td>flash</td>
<td>Source file direction</td>
<td>udisk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source file direction</th>
<th>flash</th>
<th>udisk</th>
</tr>
</thead>
<tbody>
<tr>
<td>flash</td>
<td>Source file direction</td>
<td>udisk</td>
</tr>
</tbody>
</table>
4.6 **update epld**

Use this command to update epld.

**Command Syntax**

```
update epld (flash | udisk)
```

<table>
<thead>
<tr>
<th>Source file direction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flash</td>
<td>Source file direction</td>
</tr>
<tr>
<td>udisk</td>
<td>Source file direction</td>
</tr>
</tbody>
</table>

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This example shows how to update epld.

Switch(config)# update epld flash:/boot/ vme_v1.0

**Related Commands**

None
5.1 **version**

Use the version command to show the Bootrom version information.

**Command Syntax**

```
version
```

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to show the U-boot version.

```
bootrom:> version
```

```
Bootrom 3.0.0 (Development build) (Build time: Apr 13 2011 - 15:31:37)
```

**Related Commands**

None

5.2 **setenv**

Use this command to set Bootrom environment variables.

**Command Syntax**

```
setenv ( ipaddr | serverip IPaddress | bootcmd boot arguments )
```

<table>
<thead>
<tr>
<th>serverip IPaddress</th>
<th>Local device or tftp server IP address</th>
</tr>
</thead>
<tbody>
<tr>
<td>boot arguments</td>
<td>Boot form flash or tftp server</td>
</tr>
</tbody>
</table>

**Command Mode**

Bootrom CLI

**Default**

None
Usage

None

Examples

This example shows how to set Switch IP address as environment variables.
bootrom:> setenv ipaddr 10.10.29.48
This example shows how to set TFTP server IP address as environment variables.
bootrom:> setenv serverip 10.10.29.160
This example shows how to set boot command as environment variables.
bootrom:> setenv bootcmd bootflash
bootrom:> setenv bootcmd boot_flash OS-ma-v3.0.1.it.r.bin

Related Commands

saveenv
printenv

5.3 saveenv

Use the saveenv command to save the Bootrom environment variables to persistent storage.

Command Syntax

saveenv

Command Mode

Bootrom CLI

Usage

None

Examples

This example shows how to save the Bootrom environment variables.
bootrom:> saveenv

Related Commands

printenv

5.4 printenv

Use the printenv command to show the U-boot environment variables.

Command Syntax

printenv

Command Mode

Bootrom CLI
Default

None

Usage

None

Examples

This example shows how to show the Bootrom environment variables.

```
bootrom:~> printenv

stderr=serial
ipaddr=10.10.29.48
serverip=10.10.29.160
.
Environment size: 818/2044 bytes
```

Related Commands

setenv

5.5 reset

Use the reset command to perform RESET of the CPU.

Command Syntax

```
reset
```

Command Mode

Bootrom CLI

Default

None

Usage

None

Examples

This example shows how to RESET the CPU in Bootrom.

```
bootrom:~> reset
```

Related Commands

saveenv

5.6 ping

Use the ping command to send ICMP ECHO_REQUEST to network host.

Command Syntax

```
ping IPAddress
```

| IPAddress | remote host IP address |
### Command Mode

**Default**

None

**Usage**

None

**Examples**

This example shows how to use ping command in Bootrom mode.

```
bootrom:> ping 10.10.29.160
Interface 0 has 2 ports (GMII)
Using octeth0 device
octeth0: Up 100 Mbps Full duplex (port 0)
host 10.10.29.160 is alive
```

**Related Commands**

- `saveenv`

### 5.7 ls

Use the `ls` command to list files in a directory (default is `/`).

**Command Syntax**

`ls`

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to list files in a directory (default is `/`).

```
bootrom:> ls
Scanning JFFS2 FS: . done
drwxr-xr-x 0 Thu Jan 01 00:00:04 1970 log
drwxr-xr-x 0 Thu Jan 01 00:00:04 1970 boot
drwxr-xr-x 0 Thu Jan 01 00:00:04 1970 conf
-rw------- 144 Thu Jan 13 19:51:01 2000 dhcpsnooping
```

**Related Commands**

None

### 5.8 boot_tftp

Use the `boot_tftp` command to boot system through the specified system image from TFTP server.
**Command Syntax**

```plaintext
boot_tftp image name
```

<table>
<thead>
<tr>
<th>image name</th>
<th>Image name of tftp server</th>
</tr>
</thead>
</table>

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to boot system form TFTP server.

```
bootrom:> boot_tftp OS-ma-v3.0.1.it.r.bin
```

**Related Commands**

None

---

5.9 **boot_tftp_nopass**

Use the boot_tftp_nopass command to boot system through the specified system image from TFTP server with default configuration.

**Command Syntax**

```plaintext
boot_tftp_nopass image name
```

<table>
<thead>
<tr>
<th>image name</th>
<th>Image name of tftp server</th>
</tr>
</thead>
</table>

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to boot system form TFTP server.

```
bootrom:> boot_tftp_nopass OS-ma-v3.0.1.it.rbin
```

**Related Commands**

None
5.10 **boot_flash**

Use the `boot_flash` command to boot system through the specify image or default image in the flash.

**Command Syntax**

```
boot_flash image name
```

<table>
<thead>
<tr>
<th>image name</th>
<th>Image name in flash</th>
</tr>
</thead>
</table>

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to boot system through the specify image in the flash.

```
bootrom: > boot_flash
```

**Related Commands**

None

5.11 **boot_flash_nopass**

Use the `boot_flash_nopass` command to boot system through the specify image or default image in the flash with default configuration.

**Command Syntax**

```
boot_flash_nopass image name
```

<table>
<thead>
<tr>
<th>image name</th>
<th>Image name in flash</th>
</tr>
</thead>
</table>

**Command Mode**

Bootrom CLI

**Default**

None

**Usage**

None

**Examples**

This example shows how to boot system through the specify image in the flash with default configuration.

```
bootrom: > boot_flash_nopass /boot/OS-ma-v3.0.1.it.r.bin
```

```
Do you want to revert to the default config file? [Y|N|E]:Y
```
Related Commands
None

5.12  upgrade_uboot

Use the upgrade_uboot command to upgrade the U-boot image from TFTP server.

Command Syntax

\texttt{upgrade_uboot image name}

<table>
<thead>
<tr>
<th>image name</th>
<th>Image name form tftp server</th>
</tr>
</thead>
</table>

Command Mode
Bootrom CLI

Default
None

Usage
None

Examples

This example shows how to upgrade the Bootrom image from TFTP server.

\texttt{bootrom:> upgrade_uboot u-boot.bin}

Related Commands
None
6 Bootup Diagnostic Commands

6.1 diagnostic bootup level

Use this command to set bootup diagnostic level of next Switch reboot.

Command Syntax

```
diagnostic bootup level (minimal | complete)
none diagnostic bootup level
```

Command Mode

Global Configuration

Default

None

Usage

None

Examples

This example shows how to set bootup diagnostic level.
Switch# configure terminal
Switch(config)# diagnostic bootup level minimal

Related Commands

None

6.2 show diagnostic bootup level

Use this command to show bootup diagnostic level.

Command Syntax

```
show diagnostic bootup level
```

Command Mode

Privileged EXEC

Default

None
6.3 **show diagnostic bootup result**

Use this command to show bootup diagnostic result.

**Command Syntax**

```
show diagnostic bootup result (slot id |)
show diagnostic bootup result detail (slot id |)
```

| id | The ID of stack member. |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to show bootup diagnostic level.

```
Switch# show diagnostic bootup result detail
```

```
#########################################################
<table>
<thead>
<tr>
<th>Item Name</th>
<th>Attribute</th>
<th>Result</th>
<th>Time(usec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 EPLD TEST</td>
<td>C</td>
<td>Pass</td>
<td>57</td>
</tr>
<tr>
<td>2 EEPROM0 TEST</td>
<td>C</td>
<td>Pass</td>
<td>101262</td>
</tr>
<tr>
<td>3 PHY TEST</td>
<td>C</td>
<td>Pass</td>
<td>1161</td>
</tr>
<tr>
<td>4 FAN TEST</td>
<td>C</td>
<td>Pass</td>
<td>4668</td>
</tr>
<tr>
<td>5 SENSOR TEST</td>
<td>C</td>
<td>Pass</td>
<td>5472</td>
</tr>
<tr>
<td>6 PSU TEST</td>
<td>C</td>
<td>Pass</td>
<td>1370</td>
</tr>
<tr>
<td>7 L2 UCAST FUNC TEST</td>
<td>C</td>
<td>Pass</td>
<td>40126</td>
</tr>
</tbody>
</table>
```

**Related Commands**

None
7.1 poe max-budget

Use this command to set maximum consumption Watt of PSE.

**Command Syntax**

```
poe max-budget \textit{BUDGET}
no poe max-budget
```

<table>
<thead>
<tr>
<th>BUDGET</th>
<th>max consumption limitation value</th>
</tr>
</thead>
</table>

**Command Mode**

Global Configuration

**Default**

739200 milli - watts

**Usage**

The setting value accuracy is 100 milli-watts.

**Examples**

This example shows how to set the PSE max consumption.
Switch# configure terminal
Switch(config)# poe max-budget 15400

**Related Commands**

- `show poe pse`

7.2 poe legacy

Use this command to set PSE about the detection ability of legacy PD.

**Command Syntax**

```
poe legacy \textit{(enable | disable)}
no poe legacy
```

<table>
<thead>
<tr>
<th>enable</th>
<th>Enable the detection ability of legacy PD device</th>
</tr>
</thead>
<tbody>
<tr>
<td>disable</td>
<td>Disable the detection ability of legacy PD device</td>
</tr>
</tbody>
</table>


Command Mode
Global Configuration

Default
Disable the ability.

Usage
None

Examples
This example shows how to set the detection ability of legacy PD device.
Switch# configure terminal
Switch(config)# poe legacy enable

Related Commands
show poe pse

7.3 poe power-management
Use this command to set PSE power management mode.

Command Syntax
poe power-management (auto | manual)
no poe power-management

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>auto</td>
<td>Automatically PSE power management mode</td>
</tr>
<tr>
<td>manual</td>
<td>Manual PSE power management mode</td>
</tr>
</tbody>
</table>

Command Mode
Global Configuration

Default
Manual mode

Usage
None

Examples
This example shows how to set the PSE power management mode.
Switch# configure terminal
Switch(config)# poe power-management manual

Related Commands
show poe pse

7.4 poe power-reserved
Use this command to set reserved consumption from PSE max consumption.
Command Syntax

```
poe power-reserved RESERVE
no poe power-reserved
```

| RESERVE | Reserved percentage <0-100>
|---------|---------------------------|

Command Mode

Global Configuration

Default

20%

Usage

The real PSE max consumption is \((100 - \text{power-reserved}) / 100 \times \text{max-budget}\). The aim of power-reserved is to protect from some PDs consumption ascend suddenly resulting PSE overload, and system PoE software management has not detected the changed, then hardware power off the PDs as unexpected rule.

The enough power-reserve consumption can also make sure PSE can detect the consumption of the new connected PD, then system adjudges whether to power on the PD as PoE management rule.

We strongly recommend setting enough power-reserved consumption, rather than 0.

Examples

This example shows how to set the power-reserved consumption from system max consumption.

Switch# configure terminal
Switch(config)# poe power-reserved 30

Related Commands

```
show poe pse
```

7.5 poe power-threshold

Use this command to set PSE alarm threshold of real-time consumption.

Command Syntax

```
poe power-threshold THRESHOLD
no poe power-threshold
```

| THRESHOLD | Threshold percentage <0-100>
|-----------|---------------------------|

Command Mode

Global Configuration

Default

90%
Usage

When the real-time consumption of PSE is firstly over or under the alarm threshold value, system will tell user by information.

Examples

This example shows how to set the power-threshold value of PSE system consumption

Switch# configure terminal
Switch(config)# poe power-threshold 90

Related Commands

show poe pse

7.6 poe admin

Use this command to set PoE port administration ability.

Command Syntax

```
poe admin (enable | force-power | disable (time-range) NAME )
no poe admin
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>Enable the administration ability</td>
</tr>
<tr>
<td>force-power</td>
<td>Force to power on the PD</td>
</tr>
<tr>
<td>disable</td>
<td>Disable the administration ability</td>
</tr>
<tr>
<td>time-range</td>
<td>power off the PD through the time-range interval</td>
</tr>
<tr>
<td>NAME</td>
<td>Periodical or absolute mode time-range name</td>
</tr>
</tbody>
</table>

Command Mode

Interface Configuration

Default

Enable

Usage

⚠️ CAUTION ⚠️

There may be dangerous situation when the port administration ability is force-power and port connects none PD.

If system matches the start time of time-range interval, PSE will power off the PD. If system is over the end time of time-range interval, PSE will restore the previous poe admin ability.

If system matches the time-range completely, during the time-range interval system refuses the command of poe admin.

Examples

This example shows how to set the power-threshold value of PSE system consumption

Switch# configure terminal
Switch(config)# interface eth-0-1
Switch(config-if)# poe admin enable
Switch(config-if)# poe admin force-power
Warning: Is there a valid PD connected to this interface? Yes or No? (y/n):
Switch(config-if)# poe admin disable time-range poeTimeRange

Related Commands
\[show poe interface brief\]

7.7 poe budget
Use this command to set PoE port max consumption.

Command Syntax
\[poe budget BUDGET\]
\[no poe budget\]

<table>
<thead>
<tr>
<th>BUDGET</th>
<th>port max consumption limitation value</th>
</tr>
</thead>
</table>

Command Mode
Interface Configuration

Default
30000 milli-watts

Usage
The setting value accuracy is 100 milli-watts.

Examples
This example shows how to set PoE port max consumption.
Switch# configure terminal
Switch(config)# interface eth-0-1
Switch(config)# poe budget 30000

Related Commands
\[show poe interface brief\]

7.8 poe priority
Use this command to set PoE port priority.

Command Syntax
\[poe priority (low | high | critical)\]
\[no poe priority\]

<table>
<thead>
<tr>
<th>priority</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>The low priority</td>
</tr>
<tr>
<td>high</td>
<td>The high priority</td>
</tr>
<tr>
<td>critical</td>
<td>The highest priority</td>
</tr>
</tbody>
</table>
**Command Mode**

Interface Configuration

**Default**

Low priority

**Usage**

Port priority only takes effect in manual power-management mode. The higher priority port which consumption suddenly increased but within the port max budget can snatch system budget from other port, when PSE is over available budget but within guard reserved budget.

New connected PD with higher priority port which consumption causes PSE overload but the PD within the port max budget can snatch system budget from other port, when PSE is over available budget but within guard reserved budget.

**Examples**

This example shows how to set PoE port priority.

Switch# configure terminal
Switch(config)# interface eth-0-1
Switch(config-if)# poe priority critical

**Related Commands**

*show poe interface brief*

### 7.9 show poe pse

Use this command to show PSE detail information.

**Command Syntax**

`show poe pse`

<table>
<thead>
<tr>
<th>pse</th>
<th>Power supply equipment</th>
</tr>
</thead>
</table>

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to show PSE detail information.

Switch# show poe pse

<table>
<thead>
<tr>
<th>PSE Current Power</th>
<th>: 0.00 Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE Average Power</td>
<td>: 13.60 Watts</td>
</tr>
<tr>
<td>PSE Peak Power</td>
<td>: 54.41 Watts</td>
</tr>
</tbody>
</table>
The key words of display information is explained by below table.

<table>
<thead>
<tr>
<th>Key words</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE Current Power</td>
<td>PSE total current consumption</td>
</tr>
<tr>
<td>PSE Average Power</td>
<td>PSE history average consumption of certain period of time recently</td>
</tr>
<tr>
<td>PSE Peak Power</td>
<td>PSE history peak consumption of certain period of time recently</td>
</tr>
<tr>
<td>PSE Max Power</td>
<td>PSE pre-setting max consumption</td>
</tr>
<tr>
<td>PSE Remaining Power</td>
<td>PSE remaining power including PSE reserved power</td>
</tr>
<tr>
<td>PSE Utilization threshold</td>
<td>PSE pre-setting alarm threshold of current consumption percentage</td>
</tr>
<tr>
<td>PSE Reserve Guaranteed</td>
<td>PSE pre-setting reserved power percentage</td>
</tr>
<tr>
<td>PSE Current Voltage</td>
<td>PSE current voltage of supply power</td>
</tr>
<tr>
<td>PSE Average Voltage</td>
<td>PSE average voltage of supply power of certain period of time recently</td>
</tr>
<tr>
<td>PSE Peak Voltage</td>
<td>PSE peak voltage of supply power of certain period of time recently</td>
</tr>
<tr>
<td>PSE Legacy Detection</td>
<td>PSE detection ability of legacy PD</td>
</tr>
<tr>
<td>PSE Power Management Mode</td>
<td>PSE power management mode</td>
</tr>
</tbody>
</table>

Related Commands

show poe interface detail

7.10 show poe interface detail

Use this command to show PoE port detail information.

Command Syntax

show poe interface detail (IFNAME /)

<table>
<thead>
<tr>
<th>IFNAME</th>
<th>Interface name</th>
</tr>
</thead>
</table>

Command Mode

Privileged EXEC
This example shows how to show PoE port detail information.

Switch# show poe interface detail eth-0-1

<table>
<thead>
<tr>
<th>Key words</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Power Administrate</td>
<td>PoE port administration ability</td>
</tr>
<tr>
<td>Port Power Priority</td>
<td>PoE pre-setting port priority level</td>
</tr>
<tr>
<td>Port Operating Status</td>
<td>Port operating result status</td>
</tr>
<tr>
<td></td>
<td><strong>off</strong>: powered off as administration disable</td>
</tr>
<tr>
<td></td>
<td><strong>on</strong>: power on and supply power</td>
</tr>
<tr>
<td></td>
<td><strong>detection</strong>: PoE is detecting the PD</td>
</tr>
<tr>
<td></td>
<td><strong>start up error</strong>: errors occur during start up, such as invalid signature, class error, and start up over-load, short circuit, under-load and so no.</td>
</tr>
<tr>
<td></td>
<td><strong>power up error</strong>: errors occur during powering on, such as short circuit, under-load and so on</td>
</tr>
<tr>
<td></td>
<td><strong>force power ready</strong>: Port is waiting to be turned on in force power</td>
</tr>
<tr>
<td></td>
<td><strong>force power error</strong>: Port was turned on as force power and has error</td>
</tr>
<tr>
<td></td>
<td><strong>overload off</strong>: powered off as overload, must wait to restore by PoE system automatically</td>
</tr>
<tr>
<td></td>
<td><strong>overload</strong>: port overload, but system allow the burst of load.</td>
</tr>
<tr>
<td></td>
<td><strong>priority off</strong>: powered off as PoE priority rule, must wait to restore by PoE system automatically</td>
</tr>
<tr>
<td></td>
<td><strong>protection off</strong>: powered off as port status changing 25 times in one minute to protect PD and PSE.</td>
</tr>
<tr>
<td></td>
<td>-: unknown</td>
</tr>
<tr>
<td>Port IEEE Class</td>
<td>PD standard class level</td>
</tr>
<tr>
<td>Port Current Power</td>
<td>PD current consumption</td>
</tr>
<tr>
<td>Port Average Power</td>
<td>PD history average consumption of certain period of time recently</td>
</tr>
<tr>
<td>Port Peak Power</td>
<td>PD history peak consumption of certain period of time</td>
</tr>
<tr>
<td>Key words</td>
<td>description</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>recently</td>
<td></td>
</tr>
<tr>
<td>Port Max Power</td>
<td>PD pre-setting max consumption</td>
</tr>
</tbody>
</table>

**Related Commands**

`show poe interface detail`

**7.11 show poe interface brief**

Use this command to show PoE port brief information.

**Command Syntax**

`show poe interface brief (IFNAME | )`

<table>
<thead>
<tr>
<th>IFNAME</th>
<th>Interface name</th>
</tr>
</thead>
</table>

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to show PoE port brief information.

Switch# show poe interface brief

<table>
<thead>
<tr>
<th>Interface</th>
<th>Admin</th>
<th>Priority</th>
<th>Operating</th>
<th>Class</th>
<th>CurPower</th>
<th>MaxPower</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eth-0-1</td>
<td>enabled</td>
<td>critical detection</td>
<td>-</td>
<td>0.00</td>
<td>30.00</td>
<td></td>
</tr>
<tr>
<td>eth-0-2</td>
<td>enabled</td>
<td>critical detection</td>
<td>-</td>
<td>0.00</td>
<td>30.00</td>
<td></td>
</tr>
<tr>
<td>eth-0-3</td>
<td>enabled</td>
<td>critical detection</td>
<td>-</td>
<td>0.00</td>
<td>30.00</td>
<td></td>
</tr>
<tr>
<td>eth-0-4</td>
<td>enabled</td>
<td>critical detection</td>
<td>-</td>
<td>0.00</td>
<td>30.00</td>
<td></td>
</tr>
</tbody>
</table>

**Related Commands**

`show poe interface brief`

**7.12 show poe interface power**

Use this command to show PoE port power information.

**Command Syntax**

`show poe interface power (IFNAME | )`

<table>
<thead>
<tr>
<th>IFNAME</th>
<th>Interface name</th>
</tr>
</thead>
</table>

**Related Commands**

`show poe interface brief`
**Command Mode**
Privileged EXEC

**Default**
None

**Usage**
None

**Examples**
This example shows how to show PoE port power information.
Switch# show poe interface power eth-0-1

<table>
<thead>
<tr>
<th>Interface</th>
<th>CurPower</th>
<th>AverPower</th>
<th>PeakPower</th>
<th>MaxPower</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Watts</td>
<td>Watts</td>
<td>Watts</td>
<td>Watts</td>
</tr>
<tr>
<td>eth-0-1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>30.00</td>
</tr>
</tbody>
</table>

**Related Commands**
show poe interface brief
8 SmartConfig Commands

8.1 smart-config
To config smartconfig function, use the smart-config command in global configuration mode.

Command Syntax

```
smart-config ( initial-switch-deployment | hostname-prefix )
no smart-config ( initial-switch-deployment | hostname-prefix )
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>initial-switch-deployment</td>
<td>Enable initial switch automatically deployment</td>
</tr>
<tr>
<td>hostname-prefix</td>
<td>Enable hostname prefix feature</td>
</tr>
</tbody>
</table>

Command Mode
Global Configuration

Default
Initial-switch-deployment and hostname-prefix is enabled.

Usage
None

Examples
The following example shows how to enable smartconfig function:
```
Switch(config)# smart-config initial-switch-deployment
```
The following example shows how to disable smartconfig function:
```
Switch(config)# no smart-config initial-switch-deployment
```

Related Commands
- ip address dhcp
- show smart-config config

8.2 show smart-config config
To show configuration of smart-config, use the show smart-config configuration command in privileged EXEC mode.

Command Syntax
```
show smart-config config
```

Command Mode
Privileged EXEC
Default

None

Usage

None

Examples

The following example shows how to display configuration of smart-config:

Switch# show smart-config config

Smart-Config config:
  initial-switch-deployment: on
  hostname-prefix: on
  Send log message to console: on

Related Commands

ip address dhcp
smart-config