

Perle IDS Managed PoE Switches CLI Reference Guide

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About This Book

This guide provides the information you need to:

- configure the Perle series of IDS Switches using the Command Line Interface (CLI)

Intended Audience

This guide is for administrators who will be configuring the Perle series of IDS Switches hereafter known as the switch.

Some prerequisite knowledge is needed to understand the concepts and examples in this guide:

- If you are using an external authentication application(s), working knowledge of the authentication application(s).
- Knowledge of the transfer protocols the Perle series of IDS Switches uses.

Typeface Conventions

Most text is presented in the typeface used in this paragraph. Other typefaces are used to help you identify certain types of information. The other typefaces are

Typeface Example	Usage
system mtu jumbo	Commands are in bold blue text and keywords for those command use bold green text.
<i>name-of-tacacs-server</i>	Arguments in which you supply the values are in purple italics.
[nopassword | privilege 1 | 15 | secret]	Square brackets means optional elements, but not required to complete the command. Such as command username does not require nopassword, privilege or secret for completion. Vertical bars within this example separate alternative choices and can be viewed as an or between parameters.
snmp-server {contact contact-name}	Curly braces surrounding a group of parameter means that a choice or value must be entered.
<i>IDS User's Guide</i>	This typeface indicates a book or document title.
See About This Book for more information.	This indicates a cross-reference to another chapter or section that you can click on to jump to that section.

1 Using the Command-Line Interface

This book provides the command line interface (CLI) options available for the Perle IDS series of Managed Switches. This chapter describes how to use the command-line interface (CLI) to configure software features. Commands are grouped by Command modes.

Command Modes

Command Mode	Prompt	Exit Mode	Access Next Mode
User EXEC mode	PerleSwitch>	logout command	enable command
Privileged EXEC mode	PerleSwitch#	disable command	configure command
Global configuration mode	PerleSwitch(config)#	end or exit command	interface command
Interface configuration mode	PerleSwitch(config-if)# PerleSwitch(config-if-range)#	end command	interface command, interface type, interface number
Line configuration mode	PerleSwitch(config-line)#	end command	interface command, interface type, interface number

Each command is broken down into several categories:

- **Description**—Provides a brief explanation of how the command is used.
- **Syntax**—Shows the actual command line options. The options can be typed in any order on the command line. The syntax explanation will use the following command to break down the command syntax:

For example: `telnet 172.16.4.92`

This command will open a telnet session to the host with the IP address of 172.16.4.92. If you use a name rather than an IP address, you can use the `/ipv4` option to force the connection to use an IPv4 format for the network address.

For example: `ptp {version [1|2]}`

This command `ptp version` has an option of either 1 (use Global PTP version 1 or 2 (use Global PTP version 2)). You can specify either option but not both.

Braces ({}) group required choices and vertical bars (|) separate the alternative choices. Square brackets ([]) show the options that are available for the command. You can type a command with each option individually, or string options together in any order you want. Brace and vertical bars within square brackets {[]} means requires a choice within and optional element. The pipe (|) within a square bracket means a choice between the elements.

For example, valid values for (config)#ip {version ssh [1 | 2]}. Valid values are 1 for Protocol version 1 or 2 for Protocol version 2.

- **Options**—Provides an explanation of each of the options for a command and the default value if there is one. Some commands do not have any options, so this category is absent.
- **UP arrow**—show a history of the previous commands entered.

Command Shortcuts

When you type a command, you can specify the shortest unique version of that command or you can press the **TAB** key to complete the command. For example, the following command:

```
PerleSwitch(config)#service dhcp<cr>
```

can be typed as:

```
PerleSwitch(config)#se d <cr>
```

or, you can use the **TAB** key to complete the lines as you go along:

```
se<TAB>d<TAB><cr>
```

where the **TAB** key was pressed to complete the option as it was typed.

Command Options

When you are typing commands on the command line (while connected to the IDS Switch, you can view the options by typing a question mark (?), after any part of the command to see what options are available/valid. For example:

```
PerleSwitch(config)#interface?
```

```
FastEthernet  
GigabitEthernet  
Port-Channel  
Vlan  
range
```

Common Commands

default

Use the default command to set a command back to its defaults.

disable

Use the disable command to de-elevate from Privilege EXEC mode to User Exec mode.

do-exec

Run exec commands while in config mode.

no

Use the no command to negate a command.

enable

Use the enable command to elevate to Privilege EXEC mode from User Exec mode.

exit

The exit command in User EXEC mode logs you out of the IDS switch. In command mode it takes you to down one level of authority.

help

The help command gives you full help or partial help depending on your needs.

Usage Guidelines

Help may be requested at any point in a command by entering a question mark '?'. If nothing matches, the help list will be empty and you must backup until entering a '?' shows available options.

Two styles of help are provided:

1. Full help is available when you are ready to enter a command argument (e.g. show?.)
2. Partial help is provided when an abbreviated argument and you want to know what arguments match the input (e.g. 'show pr?'.)

login

login

Log into the IDS switch. Default user name is admin and password is perle1.

logout

Log out of the IDS switch.

```
PerleSwitch>? (User EXEC mode)
Exec commands:
  clear      Reset functions
  enable     Switch to privilege mode
  exit       exit from EXEC
  help       Description of the interactive help
  login      Login as a new user
  logout     Logout of current user
  ping       Send echo messages
  show       Display internal settings
  ssh        Open a secure shell client connection
  sysstat    Display information about terminal lines
  telnet     Open a telnet connection
  terminal   Set terminal characteristics
  traceroute Trace route to destination

PerleSwitch>clear ? (User EXEC mode)
  alert  clear alert log
  ip     IP

PerleSwitch#? (Privilege EXEC mode)

  archive  Manage archive files
  boot     Modify system boot parameters
  cd       Change current directory
  clear    Reset functions
  clock    Manage system clock
  configure Switch to (config)#
  copy     Copy from one file to another
  debug    Debugging functions (see also 'undebug')
  delete   Delete a file
  dir      List files on a file system
  disable  Leave privileged mode
  dot1x    IEEE 802.1X Exec commands
  erase    Erase a file system
  exit     Exit from the EXEC
  .....

PerleSwitch# boot ? (Privilege EXEC mode)
  system  System image file
PerleSwitch# boot system ?
  backup  Boot with a backup image?
PerleSwitch# boot system backup <cr>

PerleSwitch#configure <cr>
Configuring from terminal, memory, or network[terminal]? <cr>
PerleSwitch(config)# ((config)#)
PerleSwitch(config)#interface vlan 1<cr>
PerleSwitch(config-if)#(Config interface mode)
```

2 User Exec Mode

Once you have accessed the switch, you are automatically in User Exec mode. The following commands are valid in User EXEC mode.

clear alert

```
clear {alert interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [port-channel channel]}
```

Syntax	clear alert interface
Description	

```
{alert interface  
[fastethernet slot /  
port-number] |  
[gigabitethernet  
slot / port-number]  
| [port-channel  
channel]}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch>
---------------	--------------

Usage Guidelines

You can clear all the alert table messages by using the clear alert command, or you can clear only the alerts for a specified fastethernet, gigabitethernet or portchannel interface. See [Alerts](#) messages in this guide for information on Alerts. Repeats of the same alert would update the time stamp on the existing alert.

Examples

This example show how to clear all the alerts from the alert table.

```
PerleSwitch> clear alert<cr>
```

This example shows you how to clear the alert table for a specified interface.

```
PerleSwitch> clear alert interface gigabitethernet 1/1<cr>
```

Related Commands

[show alarm](#)

clear ip igmp snooping

clear {**ip igmp snooping group** *ip-address-group*}

Syntax	clear ip igmp snooping
Description	

{**ip igmp snooping**
group
ip-address-group}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

The clear ip igmp snooping command allows you to manually clear the igmp table.

Examples

This example show how to immediately clear the ip igmp snooping table.

PerleSwitch> clear ip igmp snooping <cr>

Related Commands

show ip igmp

ping

ping {*ip_address_host_name* [**data 1-32**] | [**repeat 1-2147483647**] | [**size 26-18024**]}

Syntax	ping
Description	

{*ip_address_host_name* [**data 1-32**]
| [**repeat**
1-2147483647] | [**size**
26-18024]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

Host name must be predefined in a host table.

Data hex pattern is from 1 to 32 hex characters.

Repeat count can be from 1-2147483647

Datagram size can be from 36-18024

Examples

This example shows you how to ping a host with an ip address of 172.16.113.44 repeating the ping request 10 times.

```
PerleSwitch> ping 172.16.113.44 repeat 10 <cr>
```

This example shows you how to ping a host with an ip address of 172.16.113.44 with hex data pattern of f1f1f1f1f1.

```
PerleSwitch> ping perlehost data f1f1f1f1f1<cr>
```

This example shows you how to ping a host with an ip address of 172.16.113.44 with a data packet size of 40 bytes.

```
PerleSwitch> ping perlehost size 40<cr>
```

Related Commands

debug

show alarm

```
show {{alarm description port }} | {profile [profile-name]} | {settings}
```

Syntax	show alarm
--------	-------------------

Description	
-------------	--

```
{{alarm  
description port }}
```

```
|
```

```
{profile  
alarm-profile-name  
} |
```

```
{profile  
profile-name} |
```

```
{settings}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch>
---------------	--------------

Usage Guidelines

The following port conditions are monitored by the alarm command.

- 1 - Link fault
- 2- Port not forwarding
- 3 - Port not operating

Examples

This example shows how to display all alarm profiles including the default alarm profile.

```
PerleSwitch>show alarm profile<cr>
```

```
1:
  Interfaces
  Alarms
  Syslog
  Notifies
  Relay Major
defaultPort:
  Interfaces  Gi1/1, Gi1/2, Gi1/3, Gi1/4, Gi1/5, Gi1/6
  Alarms      not-operating
  Syslog      not-operating
  Notifies    not-operating
  Relay Major
```

```
PerleSwitch>show alarm settings<cr>
```

```
Alarm relay mode: De-energized:
```

```
Power Supply:
  Alarm      Enabled
  Relay
  Notifies   Disabled
  Syslog     Enabled
```

Related Commands

[*alarm*](#)

[*\(alarm-profile\)*](#)

show alert

```
show {alert interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [port-channel channel]}
```

Syntax **show alert**

Description

```
{alert interface
 [fastethernet slot /
 port-number] |
 [gigabitethernet
 slot / port-number]
 | [port-channel
 channel]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

You can show all the alert table messages by using the show alert command, or you can show only the alerts for a specified fastethernet, gigabitethernet or portchannel interface.

Examples

To show alerts for a specified interface execute the following command.

```
PerleSwitch>show alert interface gigabitethernet 1/1
```

```
Interface: Gi1/1:
```

```
Error code: PORT_SECURE_VIOLATION
```

```
Timestamp: May 4 2016 14:29:53
```

```
Count: 14
```

```
Description: Access denied to one or more connecting devices on this port.
```

```
Recommendation: Maximum allowed devices on this port are already connected,
or an unauthorized device attempted to connect on this secure port. Disconnect
the device.
```

Related Commands

clear alert

show bandwidth-control

```
show bandwidth-control
```

Syntax	show bandwidth-control
Description	

```
bandwidth-control
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

The show bandwidth control command allows you to see polling interval, interface state, action, direction, type, upper and lower packets per second. This is the time in seconds that the switch will count the ingress frames of the type specified for each port.

Examples

This example shows the output of the bandwidth-control command.

PerleSwitch>show bandwidth-control <cr>

Bandwidth control polling interval: 5 seconds

Packets per second (pps)

```
-----
Interface State      Action Direction Type Upper Lower
Current
-----
-----
Gi1/1 normal shutdown egress all 10000 100 1
Gi1/1 normal shutdown ingress bc 100000 10000 1
```

Related Commands

[*bandwidth-control*](#)

show clock

show clock

Syntax **show clock**

Description

clock

Command Default None

Command Modes PerleSwitch>

Usage Guidelines**Command Options:**

1-31>days in the month. MONTH is the name of the month January, February, March, April, May, June, July, August, September, October, November, December. YEAR is 1970-2037.

Examples**PerleSwitch>show clock <cr>**Thu May 05 10:32:23 summer-test 2016

Related Commands*clock***show env****show {env all | power | temperature}**

Syntax **show env****Description**

{env all | power | temperature}	"temperature" is not available on all models.
--	---

Command Default None

Command Modes PerleSwitch>

Usage Guidelines

This command allows you to see your environment.

Examples**PerleSwitch> show env all <cr>**

POWER SUPPLY 1 is DC OK

POWER SUPPLY 2 is DC Not Present

Related Commands*power inline*

show errdisable

show errdisable

Syntax	show errdisable
Description	

errdisable

Command Default	None
Command Modes	PerleSwitch>

Usage Guidelines

This command allows you to see what is configured for your errdisable features.

Related Examples

Depending on your configuration for errdisable, the values in these outputs could be different for your switch.

PerleSwitch>show errdisable detect<cr>

ErrDisable Reason	Detection	Mode
link-flap	Disabled	port
bpduguard	Enabled	port
psecure-violation	Enabled	port/vlan
security-violation	Enabled	port
bandwidth-exceeded	Enabled	port

PerleSwitch>show errdisable recovery

ErrDisable Reason	Timer Status
link-flap	Disabled
bpduguard	Enabled
psecure-violation	Enabled
security-violation	Disabled
bandwidth-exceeded	Disabled

Timer interval: 300 seconds

Interfaces that will be enabled at the next timeout:

PerleSwitch>show errdisable flap-values<cr>

ErrDisable Reason	Flaps	Time(sec)
link-flap	5	10

Related Commands*errdisable***show facility-alarm****show** {*facility-alarm relay major* | *status*}

Syntax **show facility-alarm**
Description

**{*facility-alarm*
relay major |
status}**

Command Default None**Command Modes** PerleSwitch>

Usage Guidelines

Examples**PerleSwitch>show facility-alarm<cr>**

Source	Severity	Description	Relay	Time
PerleSwitch	MAJOR	1 Temperature above max primary thres	MAJ	May
17 2016 02:38:55				

Related Commands*alarm**(alarm-profile)***show ip igmp****show ip igmp** {*snooping* [*detail* | *groups count*] | [*dynamic count*] | [*user count*] | [*vlan vlan_interface_number* [*group_information*] | [*count*] | [*dynamic count*] | [*user count*]} | {*mrouter vlan* [*vlan_interface_number*] | [*querier detail*] | [*querier vlan vlan_interface_number*] | [*detail*]} | {*vlan vlan_interface_number detail*] | [*mrouter vlan vlan_interface_number*]}

Syntax **show ip igmp**
Description

```
{snooping [detail |
groups count] |
[dynamic count] |
[user count] |
[vlan
vlan_interface_nu
mber
[group_informatio
n] | [count] |
[dynamic count]
| [user count]}
```

```
{mrouter vlan
[vlan_interface_nu
mber] | [querier
detail] | [querier
vlan
vlan_interface_
number] | [detail]}
```

```
{{vlan
vlan_interface_nu
mber detail] |
[mrouter vlan
vlan_interface_
number]}}
```

Command Default	None
Command Modes	PerleSwitch>

Usage Guidelines

Shows all global details for IGMP snooping configuration and all VLANs.

Count shows total number of multicast groups.

Dynamic count shows VLAN, Group, Type, Version and Port list

VLAN interface number will depend on the hardware model.

Examples

This example shows snooping details for all configured vlans.

PerleSwitch>show ip igmp snooping detail<cr>

Global IGMP Snooping configuration:

```
-----
IGMP snooping          : Enabled
Report suppression     Enabled
TCN solicit query      : Disabled
TCN flood query count  : 3
Robustness variable    : 2
Last member query count : 2
Last member query interval : 1000
```

Vlan 0:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 1:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 2:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 3:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 4:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 5:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Vlan 1000:

```
-----
IGMP snooping          : Enabled
IGMPv2 immediate leave : Disabled
```

Related Commands*clear ip igmp snooping**ip igmp logging | snooping***show ip ssh**

```
show {ip ssh[detail | groups count] | [dynamic count] | [user count] |
[vlan vlan_interface_number | [group_information] | [count] | [dynamic
count] | [user count]}
```

Syntax	show ip ssh
Description	

```
{ip ssh [detail |
groups count] |
[dynamic count] |
[user count] |
[vlan
vlan_interface_nu
mber |
[group_informatio
n] | [count] |
[dynamic count]
| [user count]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

Shows information on ssh parameters.

Examples

This example shows the values for ssh.

PerleSwitch>show ip ssh

SSH version: 1.99

Authentication timeout: 120 seconds

Authentication retries: 3

SSH public key:

ssh-rsa

```
AAAAB3NzaC1yc2EAAAADAQABAAQCAQDXSoVYch1Elp1AO2z/Px17m3w
fuXBI/ZxTqvS7SQCJxWSLNZGphXN5VE9SGsp9D5wLAhIFrZKNc44T+O79A1
N3oCPhKnuxq24j444ybxOnF8Ttxttrib8fpfDH8pNstYIIX4QPvUUeTPaEc4QkJ+X
TI+hArI4PK1VYCKsijKn6sucP0nqNlcQsGN5C0ST/SwreR/U4azwmaA+24+k/v1N
yBFFXecWp5gFvx8/7vsJMousiOmbvtjxQyUZJKkkuudWvNxkrMs0QmcUsj7nz5
ODGwD2K55LVocKOzWqOQQN7R9w5LMF4Lyc7DIz5j81BUQpHpAPdIdyTj7J
UFlrnOF3NgLLmaVbqbUsrG3x5AzOQLW+AcpwPwnnt/BCIjaj1MAOH8NFCbB
AepKaY+BizlfJLtCDE0yZ3XO7c6kcv/qN07acC5edTCRyzDGqJ/1ronjtQYppPDO
5YaxQ4UfPbedC3OghJJvwSegq45bLuhYhIO+kLgPNe+jVKWXcckfjiePL2EYX0q
SdJQ+CWvy+qQSl2+0HkuzKnEnT+t9XKqqvIPIWtxIo7vxfhqBP+Y+I5CzHxqOP
4nbMvUnIDN3blakRAp7wiTSeU7MbGi/c8qdjgSnRpIwW0Vcu4CHf6dvP8+wjf4L
sJPpyzW33+UakZLJST/ratP1OrdWn1mWsKxi+kWCQ==
```

Related Commands

[telnet](#)

show line

show {**line console** *x-x*}

Syntax	show line
Description	

{**line console** *x-x*}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

Shows the status of all vtys and console line.

Shows the baud rate, parity, stop bits, and data bits for the console port.

Examples**PerleSwitch> show line console 0 <cr>**

Baud rate (TX/RX) is 9600/9600. parity none, 1 stop bit, 8 data bits

This example shows all lines.

PerleSwitch> show line <cr>

con0: Active

vty0: Active

vty1: Active

vty2: Active

vty3: Active

vty4: Inactive

vty5: Active

vty6: Inactive

vty7: Active

vty8: Active

vty9: Active

vty10: Inactive

vty11: Inactive

vty12: Inactive

vty13: Inactive

vty14: Inactive

vty15: Inactive

Related Commands*terminal***show lldp****show lldp** {[**interface fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] | [**neighbors**] | [**traffic summary**] | [**mrouter vlan vlan_interface_number**]}

Syntax	show lldp
Description	

```
{[interface  
fastethernet slot /  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [neighbors] |  
[traffic summary]  
| [mrouter vlan  
vlan_interface_nu  
mber]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

The show lldp command is used as a network management tool to. Displays global information, such as frequency of transmissions, the hold time for packets being sent, and the delay time before LLDP initializes on an interface.

Examples

This example shows the lldp traffic summary for

PerleSwitch> show lldp traffic summary

LLDP Global statistics:

 Summary of stats:

Frames Transmitted: 222000
 Frames Received: 3000020
 Frames Discarded: 0
 TLVs Unrecognized: 0
 MSAP Ageouts: 2
 MSAP Inserts: 1
 MSAP Deletes: 0

 This example shows interface gigabitethernet 1/1 lldp information

PerleSwitch>show lldp interface gigabitEthernet 1/1

GigabitEthernet1/1:

Tx: enabled
 Rx: enabled
 Maximum Neighbors: 10
 TLVs Advertised:
 port-description, system-name, system-description,
 system-capabilities, management-address
 port-vlan, vlan-name
 mac-phy-cfg, power-management, link-aggregate, max-frame-size

This example shows the lldp traffic.

PerleSwitch>show lldp traffic<cr>

 LLDP statistics:

 Interface: Gi1/1
 Frames Transmitted: 8
 Frames Received: 45
 Frames Discarded: 0
 TLVs Unrecognized: 62
 MSAP Ageouts: 0
 MSAP Inserts: 5
 MSAP Deletes: 0

Related Commands

lldp

show location

```
show location {civic-location [identifier identifier-string] | interface
[fastethernet slot / port-number] | [gigabitethernet slot / port-number] |
civic-location [static]} | {[elin-location identifier identifier-string interface
[fastethernet slot / port-number] | [gigabitethernet slot / port-number] |
[static]}
```

Syntax	show location
Description	

```
{civic-location
[identifier
identifier-string] |
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| civic-location
[static]} |
```

```
{[elin-location
identifier
identifier-string
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [static]}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch>
---------------	--------------

Usage Guidelines

Show location civic and elin information.

Examples**PerleSwitch>show location civic-location static<cr>**

Civic location information

Identifier : civic-tst
Country :-----
Identifier : civic1
Country :-----
Identifier : civictest
Country :-----
Identifier : testcivic
Country :
City : toronto
Additional location info : mr-peters
Building : maincampus

Related Commands*(config-civic)*

show mac address-table

```

show {mac address-table [address h.h.h] interface [fastethernet slot /
port-number] | [gigabitethernet slot / port-number] | [port-channel channel]}
notifications mac-move | [vlan vlan_interface_number]} | {[aging-time]} |
{[config-static address h.h.h] | [interface [gigabitethernet slot / port-number]
| [fastethernet slot / port-number] | [portchannel port-channel] | [vlan
vlan_interface_number]} | {[dynamic address h.h.h] interface [gigabitethernet
slot / port-number] | [fastethernet slot / port-number] | [portchannel
port-channel] | [vlan [vlan_interface_number]} | {[ interface [gigabitethernet
slot / port-number] | [fastethernet slot / port-number] | [portchannel
port-channel]} | {learning [vlan vlan_interface_number] | [fastethernet slot /
port-number] | [gigabitethernet slot / port-number] | [port-channel channel]} |
{[move update]} | {[multicast vlan vlan_interface_number]} | {[notification]}
| {[quick-disconnect interface [fastethernet slot / port-number] |
[gigabitethernet slot / port-number] | [port-channel channel]} | {[secure
address h.h.h interface [fastethernet slot / port-number] | [gigabitethernet slot /
port-number] | [port-channel channel] vlan vlan_interface_number]} | {[static
address h.h.h interface [fastethernet slot / port-number] | [gigabitethernet slot /
port-number] | [port-channel channel] vlan vlan_interface_number]} | {[vlan
vlan_interface_number]}

```

Syntax	show mac address table
Description	
<pre> {mac address-table [address <i>h.h.h</i>] | interface [fastethernet <i>slot / port-number</i>] | [gigabitethernet <i>slot / port-number</i>] | [port-channel channel]} notifications mac-move | [vlan vlan_interface_ number]} | </pre>	
<pre> {{aging-time}} | </pre>	
<pre> {{config-static address <i>h.h.h</i>] | interface [gigabitethernet <i>slot / port-number</i>] | [fastethernet <i>slot / port-number</i>] | [portchannel port-channel] | [vlan vlan_interface_ number]} | </pre>	
<pre> {{dynamic address <i>h.h.h</i>] interface [gigabitethernet <i>slot / port-number</i>] | [fastethernet <i>slot / port-number</i>] | [portchannel port-channel] | [vlan vlan_interface_ number]} | </pre>	

```
[interface  
gigabitethernet  
slot/port-number]  
| [fastethernet  
slot/port-number]  
| [portchannel  
port-channel]}}
```

```
{learning [vlan  
vlan_interface_nu  
mber] |  
[fastethernet slot/  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel]}}
```

```
{{move update}}
```

```
{{notification}}
```

```
{{quick-disconnect  
interface  
[fastethernet slot/  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel]}}
```

```
{{secure address  
h.h.h interface  
[fastethernet slot/  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel] | [vlan  
vlan_interface_nu  
mber]}}
```

```
{[static address  
h.h.h interface  
[fastethernet slot /  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel] vlan  
vlan_interface_nu  
mber]} |
```

```
{[vlan  
vlan_interface_  
number]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Usage Guidelines

Shows the mac address table.

Examples

PerleSwitch>show mac address-table move update <cr>

Default/Current settings: Rcv Off/Off, Xmt Off/Off
 Rcv packet count : 0
 Rcv last src-mac-address : 0000:0000:0000
 Rcv last switch-ID : 0000:0000:0000
 Xmt packet count : 0

PerleSwitch>show mac address-table interface gigabitEthernet 1/1<cr>

Mac Address Table

```
-----
Vlan  Mac Address  Type  Ports
----  -
1  0100.5e00.0182  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
1  0100.5e00.0183  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
1  0100.5e00.0184  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
Total Mac Addresses for this criterion: 3
```

PerleSwitch>show mac address-table learning vlan 1<cr>

```
Interface  Learning Status
-----  -
Vlan 0001  Enabled
```

PerleSwitch>show mac address-table address 0100.5e00.0181<cr>

Mac Address Table

```
-----
Vlan  Mac Address  Type  Ports
----  -
1  0100.5e00.0181  STATIC  CPU
Total Mac Addresses for this criterion: 1
```

Related Commands

clear mac

show network-policy

show {network-policy profile 1-4294967295}

Syntax **show network-policy**
Description

```
{network-policy
profile
1-4294967295}
```

```
Command Default      None
```

```
Command Modes        PerleSwitch>
```

```
Hardware model        All models
```

Usage Guidelines

Shows configured network policies.

Examples

This example shows network policy profiles.

```
PerleSwitch> show network-policy profile<cr>
```

```
Network Policy Profile 1
  voice vlan 50 cos 2 dscp 50
  voice-signaling vlan dot1p
Interface:
  Gi1/2
Network Policy Profile 2
  voice vlan dot1p
  voice-signaling vlan untagged
Interface:
  none
Network Policy Profile 3
  voice vlan dot1p cos 1
Interface:
  Gi1/1
```

Related Commands

```
network-policy
(config-if)#network-policy
(config-if)switchport
```

show ntp

```
show {ntp associations | status}
```

```
Syntax      show ntp
Description
```

```
{associations |
status}
```

```
Command Default      None
```

Command Modes PerleSwitch>

Hardware model All models

Usage Guidelines

Shows ntp associations and status.

Examples

PerleSwitch>show ntp associations>

```

remote      refid      st t when poll reach  delay  offset jitter
=====
=====
172.16.55.77 .INIT.     16 u - 1024  0  0.000  0.000  0.000
172.16.113.55 .INIT.     16 s - 32   0  0.000  0.000  0.000

```

PerleSwitch>show ntp status<cr>

```

Clock is not synchronized, stratum 16, no reference clock
Precision is 2**-18 s
Reference time is 00000000.00000000 (Thu, Feb 7 2036 2:28:16.000)
Clock offset is 0.000000 msec, root delay is 0.000 msec
Root dispersion is 1265.970 msec
System poll interval is 8 s

```

Related Commands

(config-network-policy)

show ssh

{ssh}

Syntax **show ssh**

Description

{ssh}

Command Default None

Command Modes PerleSwitch>

Hardware model All models

Usage Guidelines

Show users connected via ssh.

Examples

This example show which users are connected.

```
PerleSwitch>show ssh<cr>
```

Line	User	Host	Idle	Location
1 vty 0	admin	idle	00:28:26	172.16.113.31
2 vty 1	admin	idle	00:00:03	172.16.113.31

Related Commands

ip ssh

clear line

show system

```
show system {mtu}
```

Syntax	show system
Description	

{mtu}

Command Default	None
-----------------	------

Command Modes	PerleSwitch>
---------------	--------------

Hardware model	All modelsAll models
----------------	----------------------

Usage Guidelines

Shows the system's mtu (max transmission unit) for gigabitethernet ports.

Examples

This example shows the setting on the switch for mtu.

```
PerleSwitch>show system mtu<cr>
```

```
System mtu: jumbo
```

Related Commands

system

show terminal

```
show terminal
```

Syntax	show terminal
Description	

Command Default	None
-----------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows the terminal parameters of length, width, history enabled, history size and logging monitor.

Examples

This examples displays the parameter for terminal.

PerleSwitch>show terminal<cr>

Terminal length = 24

Terminal width = 79

Terminal history is enabled

Terminal history size = 11

Terminal logging monitor is OFF

Related Commands

console 0-0

show users

show {users [all]}

Syntax	show users
---------------	-------------------

Description	
--------------------	--

{users [all]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The show user command shows the active connected users to vty sessions. The all option shows all vty's from 0 -15.

Examples

This examples displays all vty sessions regardless of whether there is an active user connected.

PerleSwitch>show users all<cr>

Line	User	Host	Idle	Location
1 vty 0	admin	idle	00:33:59	172.16.113.31
2 vty 1	admin	idle	00:05:36	172.16.113.31
3 vty 2				
4 vty 3				
5 vty 4				
6 vty 5				
7 vty 6				
8 vty 7				
9 vty 8				
10 vty 9				
11 vty 10				
12 vty 11				
13 vty 12				
14 vty 13				
15 vty 14				
16 vty 15				

Related Commands

Interface line mode

console 0-0

vtty 0-15

show version

show {version [backup] | [current] | [flash:] | [sdf flash:]}

Syntax	show version
Description	

**{version [backup]
| [current] |
[flash:] |
[sdf flash:]}**

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows information about versions of software running on the switch.

Examples

PerleSwitch>show version backup

Name: Managed Industrial Switch
Version: 0.4.B412
Date created: Wed Apr 13 15:43:52 EDT 2016
Source: http://172.16.4.181/public/lyn.img
Downloaded: Sun Dec 31 20:04:54 testzone 2000
Size: 37847292 bytes

PerleSwitch>show version current

Name: Managed Industrial Switch
Version: 0.4.B425
Date created: Tue Apr 26 09:26:59 summer-test 2016
Source: http://172.16.4.181/public/fit-vierullo.img
Downloaded: Tue Apr 26 09:33:28 summer-test 2016
Size: 37899984 bytes

PerleSwitch>show version flash:fit-dkong.img

Name: Managed Industrial Switch
Version: 0.4.B425
Date created: Wed May 04 20:09:36 summer-test 2016
Size: 37900544 bytes

Related Commands

[*show running-config*](#)

show vlan

show {vlan}

Syntax	show vlan
Description	

{vlan}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show vlans.

Examples

This example shows all vlans.

PerleSwitch>show vlan

VLAN Name	Status	Port Members(*=non-native vlan)
1 default	active	Gi1/1, Gi1/2, Gi1/3, Gi1/4, Gi1/5
2 office-vlan2	active	
3 VLAN0003	active	
4 VLAN0004	active	
5 VLAN0005	active	
10 VLAN0010	act/lshut	
11 VLAN0011	act/lshut	
12 VLAN0012	act/lshut	
13 VLAN0013	act/lshut	
14 VLAN0014	act/lshut	
15 VLAN0015	act/lshut	
16 VLAN0016	act/lshut	
17 VLAN0017	act/lshut	
18 VLAN0018	act/lshut	
19 VLAN0019	act/lshut	
20 VLAN0020	act/lshut	
1000 VLAN1000	active	

Related Commands

Vlan config mode

ssh

ssh **{[-c 3des | aes-128-cbc | aes192-cbc | aes256-cbc]}** | **{[-h hmac-md5-128 | hmac-md5-96 | hmac-sha1-160 | hmac-sha1-96]}** | **{[-l login-name]}** | **{[-p 1-65535]}** | **{-v [1 | 2]}** | **{a.b.c.d or hostname}**

Syntax	ssh
Description	

{[-c 3des | aes-128-cbc | aes192-cbc | aes256-cbc]} |

```
{[-h
hmac-md5-128 |
hmac-md5-96 |
hmac-sha1-160 |
hmac-sha1-96]} |
```

```
{[-l login-name]}
|
```

```
[-p 1-65535]} |
```

```
{-v [1 | 2]} |
```

```
{a.b.c.d or
hostname}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

SSH to a remote host.

Examples

This example will ssh to remote host 172.16.4.91.

```
PerleSwitch>ssh 172.16.4.91<cr>
```

Related Commands

show ssh

telnet

systat

```
systat [all]
```

Syntax	systat
Description	

```
[all]
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows system statuses.

all - includes inactive ports

Examples

This example shows the system status for all active ports.

PerleSwitch#systat<cr>

Line	User	Host	Idle	Location
1 vty	admin	idle	07:00:20	172.16.23.121
1 vty	lyn	idle	01:00:20	172.16.23.121

Related Commands**telnet**

telnet {*ip_address_host_name* [/ipv4] | [/ipv6] | [*port-number*]}

Syntax	telnet
Description	

{*ip_address_host_name* [/ipv4] | [/ipv6] | [*port-number*]}

Command Default	/ipv4
------------------------	-------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Specify either the ip address of the remote host or the host name. The host name must be specified in the host table.

/ipv4 - forces the use of ipv4 protocol.

/ipv6 - forces the use of ipv6 protocol.

port-number -connect to remote port number. values are 1-65535

Telnet to a remote host. You can force either IPv4 or IPv6 protocol. You can specify the port number to connect to on the remote host (this port must not be blocked by a firewall and able to accept the connection request). The remote host must have telnet enabled.

Examples

This example connects with telnet to show how to show all the alerts from the alert table.

```
PerleSwitch>telnet 172.16.4.90 /ipv4<cr>
```

This example connects with telnet to a remote host by host name with port 20 specified as the port to connect to.

```
PerleSwitch>telnet perlehost -p 20
```

Related Commands

- show ssh*
- ssh*

terminal

```
terminal {history size 0-256} | {length 0-512} | {width 0-512}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	terminal
Description	

{**history size**
0-256} |

{**length** 0-512} |

{**width** 0-512}

Command Default	None
Command Modes	PerleSwitch>
Hardware model	All models

Usage Guideline

Command Options:

- history** - enables and sets the terminal screen history buffer size.
- length** - sets the length of the terminal screen
- width** - sets the width of the terminal screen

Examples

This command will set the history buffer size to 50 for the current terminal session. This is not a permanent config parameter and it will not be saved to running config.

```
PerleSwitch>terminal history size 50<cr>
```

Related Commands*show terminal***traceroute****traceroute** {*ipv4_address/host_name*}

Syntax **traceroute****Description***{ipv4_address/host_name}*

Command Default None

Command Modes PerleSwitch>

Hardware model All models

Usage Guidelines

Specify a IPv4 address or a resolvable hostname.

Traces the route from the switch to the destination address.

Examples

This example will trace the route from the switch to a host with ipv4 address of 172.16.4.90.

PerleSwitch> traceroute 172.16.4.90 <cr>

traceroute to 172.16.4.90 (172.16.4.90), 30 hops max, 38 byte packets

1 172.16.4.90 (172.16.4.90) 0.967 ms 0.554 ms 0.440 ms

This example will trace the route from the switch to a host with a hostname of LAB1.

PerleSwitch> traceroute LAB1 <cr>

Related Commands*ping**debug*

3 Privileged EXEC mode

This chapter contains the CLI commands for Privileged EXEC mode.

archive

```
archive {[config] | [download-sw [force-reload] /reload] [/no-version-check] |
[upload]
[flash:perle-image-name.img] |
[ftp://username[:password]@location/]directory[/perle-image-name.img] |
[http://username:password]@[hostname | host-ip]/directory/
perle-image-name.img |
[https://username:password]@[hostname | host-ip]/directory/
perle-image-name.img |
[scp://username[:password]@location]@location/directory[/perle-image-name.
img] |
[ftp://username[:password]@location/]directory/perle-image-name.img}
[sftp://location/]directory[/perle-image-name.img flash:image-file} |

[tftp://location/]directory[/perle-image-name.img flash:image-file} |
{ftp://username[:password]@location/]directory/perle-image-name.img} |
{http://username:password]@[hostname | host-ip [directory]
perle-image-name.img} |
{host-ip [directory] /perle-image-name.img} |
{scp://username@location/]directory/perle-image-name.img} |
{sftp://username[:password]@location/]directory/perle-image-name.img} |
{tftp://location/]directory/perle-image-name.img} |
flash:perle-image-name.img}} |
{ftp://username[:password]@location/]directory/perle-image-name.img} |
{http://username:password]@[hostname | host-ip [directory]
perle-image-name.img} |
host-ip [directory] /perle-image-name.img}
{tftp://location/]directory/perle-image-name.img} | {upload-sw
flash:image-file} |
{ftp://username[:password]@location/]directory/perle-image-name.img} |
{http://username:password]@[hostname | host-ip [directory]
perle-image-name.img}
{tftp://location/]directory/perle-image-name.img}
```

Syntax Description

archive

{config}

(alarm-profile)

```

{{download-sw} |
[/force-reload] | [/reload] |
[/no-version-check] |
flash:perle-image
-name.img}} |
{ftp:[//username[:password]
@location]/directory]/perle-i
mage-name.img} |
{http:[//username:password
]@[hostname | host-ip
directory]
/perle-image-name.img}
tftp:[//location]/directory]/p
erle-image-name.img} |

```

```

{{upload} flash:perle-image
-name.img}} |
{ftp:[//username[:password]
@location]/directory]/perle-i
mage-name.img} |
{http:[//username:password
]@[hostname | host-ip
directory]
/perle-image-name.img}
{tftp:[//location]/directory]/
perle-image-name.img}

```

Command Default

None

Command Modes

PerleSwitch#

Usage Guidelines

config - archive the running configuration. This configuration will be saved to a predefined location as specified in the command.

/force-reload - unconditionally forces a system reload after successfully downloading the software image.

/reload - reloads the system (if no unsaved configuration changes have been made) after a successful upgrade.

/no-version-check - download the software without verifying its version compatibility with the image that is running.

Where a username or password is required it can be specified in the router configuration using the "ip scp|ftp|sftp|http" command (IP (for transfer protocol configuration)) to configure the username and password to use instead of specifying it on the archive command

- The syntax for the local flash file system for downloads and uploads:

flash:image-file

The syntax for FTP:

ftp://[username[:password]@location]/directory/perle-image-name.img

- The syntax for an HTTP server:

http://[[username:password]@][hostname | host-ip [directory] /perle-image-name.img

- The syntax for an HTTPS server:

https://[[username:password]@][hostname | host-ip [directory] perle-image-name.img

- The syntax for an SCP server:

scp://[username@location]/directory/perle-image-name.img

- The syntax for an SFTP server:

sftp://[username[:password]@location]/directory/perle-image-name.img

- The syntax for an TFTP server:

tftp://[location]/directory/perle-image-name.img

Examples

This example shows you how to download software from a server with an IP address of 172.16.4.92 using SCP.

```
PerleSwitch#archive config<cr>
```

```
PerleSwitch#show archive <cr>
```

The maximum archive configurations allowed is 10.

There are currently 1 archive configurations saved.

The next archive file will be named flash:-<timestamp>-1

Archive # Name

```
1    flash:-Jan-04-18-33-43-0 <- Most Recent
2
3
4
5
6
7
8
9
10
```

```
PerleSwitch#archive download-sw
```

```
scp://root:perle10@172.16.4.92/tftpboot/fit-perle.img
```

This example shows you how to upload software from a server with an IP address of 172.16.4.92 using tftp.

```
PerleSwitch#archive upload-sw tftp://172.16.4.92/new-image-perle.img
```

Related Commands

(alarm-profile)

show archive

boot

```
boot {system backup}
```

Syntax	boot
---------------	-------------

Description	
--------------------	--

```
{system backup}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

This command will cause the stored backup image to become the current image. A backup image will no longer exist until you download a new image to the switch. You need to reload the switch to run with the new current image.

Examples

This example shows you how to boot the backup image file.

```
PerleSwitch#boot system backup<cr>
```

```
PerleSwitch#reload<cr>
```

Related Commands

show version

reload

cd

```
cd {flash: | nvram:}
```

Syntax	cd
---------------	-----------

Description	
--------------------	--

```
{flash: | nvram:}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

The cd (change directory) command is used to change directories within the flash, nvram or sd flash file systems.

Examples

This example shows you how to make a directory under the flash file system then change directory to that new directory.

```
PerleSwitch#mkdir flash:testdir <cr>
```

```
Create directory name [testdir]? <cr>
```

```
PerleSwitch# cd flash:/testdir <cr>
```

Related Commands

dir
copy
dir
delete
pwd
rename
rmdir
mkdir

clear aaa

clear {aaa local user fail-attempts all | username *username*} | {lockout all | username *username*}

Syntax	clear aaa
Description	

{aaa local user
fail-attempts all |
username
username}

{lockout all |
username
username}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

This command allows you to reset locked out users.

Examples

This example will reset user Marie that is currently locked out from the switch.

PerleSwitch#clear aaa local user lockout username Marie<cr>

Related Commands

aaa authentication

clear alert

clear {alert interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [port-channel channel]}

Syntax	clear alert
Description	
alert interface [fastethernet slot / port-number] | [gigabitethernet slot/port-number] | [port-channel channel]	
Command Default	None
Command Modes	PerleSwitch#
Usage Guidelines	
Clear all alerts or alerts from the specified interface.	
Examples	
This example show you how to clear alerts from gigabitethernet 1.	
PerleSwitch#clear alert gigbitether 1/1<cr>	
Related Commands	
<i>show alert</i>	

clear arp-cache

clear {arp-cache a.b.c.d | interface vlan 1-4094}

Syntax	clear arp-cache
Description	
{arp-cache a.b.c.d | interface vlan 1-4094	
Command Default	None
Command Modes	PerleSwitch#

Usage Guidelines

Specify the vlan interface number to delete the arp entry within the arp table for this dynamic entry.

Clearing the arp table will mark the dynamic arp entries in the table as incomplete. To the switch this is the same as deleted. During this time a new arp request is sent, if it is answered the arp entry will be refresh, else the arp entry will be deleted from the table.

Examples

This example clears the IP dynamic arp entry for van1.

PerleSwitch#clear arp-cache interface van1<cr>

172.16.113.31 11addr 00:13:20:92:29:82 ref 1 used 85181/3/97 probes 4 reached

*** Round 1, deleting one entry ***

*** Flush is complete after 1 round ***

Related Commands

arp

show arp

clear counters

clear {**counters** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] | [**port-channel channel**]}

Syntax	clear counters
---------------	-----------------------

Description	
--------------------	--

{**counters**
[**fastethernet slot / port-number**] |
[**gigabitethernet slot / port-number**]
| [**port-channel channel**]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clear all dynamic entries in the arp cache on this interface.

Examples

This example show how to clear counters on g1/1.

PerleSwitch#clear counters gigabitethernet 1/1<cr>

Clear "show interface" counters on this interface[confirm]

Related Commands*show arp***clear errdisable****clear** {errdisable interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [port-channel channel] vlan 1-4094}

Syntax **clear errdisable**
Description

{counters
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [port-channel
channel]}

Command Default None

Command Modes PerleSwitch#

Usage Guidelines

Clear error disable from vlans on this interface.

Examples

This example clears all vlans errors disables on interface gigabitethernet 1/1.

PerleSwitch#clear errdisable interface g1/1<cr>

Related Commands*errdisable***clear gmrp****clear** {gmrp counters interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number]}

Syntax **clear gmrp counters**
Description

```
{gmrp counters
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /
port-number]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears GMRP counters on the specified interface.

Examples

This example clears all GMRP counters on gigabitethernet 1/1.

```
PerleSwitch#clear gmrp counters interface g1/1<cr>
```

Related Commands

[show gmrp](#)

clear gvrp

```
clear {gvrp counters interface [fastethernet slot /
port-number] |
[gigabitethernet slot /
port-number]}
```

Syntax	clear gvrp
---------------	-------------------

Description	
--------------------	--

```
{gvrp counters
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /
port-number]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears GVRP counters from the specified interface.

Examples

This example clears GVRP counters from interface gigabitethernet 1/1.

```
PerleSwitch#clear gvrp counters interface gigabitethernet 1/1<cr>
```

Related Commands

show gvrp

clear ip igmp

```
clear {ip igmp group a.b.c.d}
```

Syntax	clear ip igmp
Description	

```
{ip igmp group  
a.b.c.d}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears ip IGMP snooping group.

Examples

This example clears snooping IGMP all groups. associated with ipv4 address 172.16.55.99.

```
PerleSwitch#clear ip igmp snooping group 172.16.55.99<cr>
```

Related Commands

ip igmp logging | snooping

clear ipv6

```
clear {ipv6 mld | neighbors}
```

Syntax	clear ipv6
Description	

```
{ipv6 mld |  
neighbors}{0-16 |  
console 0-0 | vty  
0-15}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears mld and neighbors IPv6 ND entry cache.

Examples

This example clears the IPv6 ND entry cache.

```
PerleSwitch#clear ipv6 neighbors<cr>
```

Related Commands

[ipv6](#)

clear line

```
clear {line 0-16 | console 0-0 | vty 0-15}
```

Syntax	clear line
---------------	-------------------

Description	
--------------------	--

```
{0-16 | console  
0-0 | vty 0-15}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

The vty session will be disconnected.

Examples

This example clears line 8.

```
PerleSwitch#clear line 8<cr>
```

```
[confirm]
```

```
[OK]
```

```
PerleSwitch# 4d18h: %PINIT-6: Cleared VTY7 session (message on console port)
```

Related Commands

[Interface line mode](#)

[console 0-0](#)

[vty 0-15](#)

clear lldp

```
clear {lldp counters | tables}
```

Syntax	clear lldp
Description	
	{lldp counters | table}
Command Default	None
Command Modes	PerleSwitch#
Usage Guidelines	
LLDP must be enabled.	
Examples	
This example will clear all lldp tables.	
PerleSwitch#clear lldp tables<cr>	
Related Commands	
<i>Interface line mode</i>	

clear logging

clear {logging}

Syntax	clear logging
Description	
	{logging}
Command Default	None
Command Modes	PerleSwitch#
Usage Guidelines	
Clears the logging buffer on the switch.	
Examples	
This example clears the logging buffer on the switch.	
PerleSwitch#clear logging <cr>	
Clear logging buffer[confirm]<cr>	
Related Commands	
<i>logging</i>	
<i>(config-if)#logging</i>	

clear mac

```
clear {mac address-table dynamic [address h.h.h] | [interface fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [vlan vlan_interface_number]} | {notification mac-move}
```

Syntax	clear mac
Description	

```
{mac
address-table
dynamic [address
h.h.h] | [interface
fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [vlan
vlan_interface_nu
mber]} |
```

```
{notification
mac-move}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears mac address table.

Examples

This example clears the dynamic entries from vlan 3 mac address table.

```
PerleSwitch#clear mac address-table dynamic vlan 3<cr>
```

Related Commands

show mac address-table

clear port-security

```
clear {port-security all | configured | dyanamic | sticky address h.h.h |
interface [fastethernet slot / port-number] | [gigabitethernet slot /
port-number]} |
```

Syntax	port-security
Description	

```
{port-security all |
configured |
dynamic | sticky
address h.h.h |
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /
port-number]}
```

Command Default None

Command Modes PerleSwitch#

Usage Guidelines

Command Options:

all - all secure mac addresses

configured - configured secure mac addresses

dynamic - secure mac address auto-learned by hardware

sticky - secure mac address either auto-learned or configured.

Examples

This example clears all auto-learned and configured mac addresses from the mac address table for all interfaces and addresses

```
PerleSwitch#clear port-security sticky<cr>
```

Related Commands

[mac address-table](#)

clear radius statistics

```
clear {radius statistics}
```

Syntax **clear radius statistics**

Description

```
{radius statistics}
```

Command Default None

Command Modes PerleSwitch#

Usage Guidelines

Clears the statistic counters for RADIUS.

Examples

This example clears all statistics for RADIUS.

```
PerleSwitch#clear radius statistics<cr>
```

Related Commands

aaa group

PerleSwitch(config-sg-radius)#

clear scada modbus

clear server statistics {<cr> | ip address}

Syntax	clear scada modbus tcp server statistics
---------------	---

Description	
--------------------	--

<cr>	Clear all Modbus info and statistics.
------	---------------------------------------

ip address	Clear statistics for connection from the specified ip address.
------------	--

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Clear connection specific or all Modbus statistics.

Examples

Clear the Modbus statistics for session originating from 172.18.2.44.

```
PerleSwitch#clear scada modbus tcp server statistics 172.18.2.44<cr>
```

Related Commands

scada modbus

show scada modbus

clear spanning-tree

clear {spanning-tree counters | detected protocols}

Syntax	clear spanning tree
---------------	----------------------------

Description	
--------------------	--

```
{spanning-tree
counters | detected
protocols}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears spanning tree statistics.

Restarts the protocol migration process.

Examples

This example will clear the spanning-tree statistics on vlan 2.

```
PerleSwitch#clear spanning-tree counters interface vlan 2<cr>
```

Related Commands

spanning-tree

show spanning-tree

clear tacacs+ statistics

```
clear {tacacs+ statistics}
```

Syntax	clear tacacs+ statistics
---------------	---------------------------------

Description

```
tacacs+ statistics
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

Clears tacacs+ statistics.

Examples

This example clears the statistics for TACACS+.

```
PerleSwitch#clear tacacs+ statistics<cr>
```

Related Commands

aaa group

PerleSwitch(config-sg-tacacs+)

clock

```
clock {set hh:mm:ss 1-31 month 2001-2037}
```

Syntax	clock
Description	
set hh:mm:ss 1-31 month 2001-2037	1-31 days in the month. MONTH is the name of the month January, February, March, April, May, June, July, August, September, October, November, December. YEAR is 2001-2037.
Command Default	None
Command Modes	PerleSwitch#
Usage Guidelines	
Sets internal clock.	
Examples	
This example shows you how to set the date and time	
PerleSwitch#clock PerleSwitch#clock set 10:32:10 5 may 2016<cr>	
Related Commands	
<i>show clock</i>	

configure

```
configure {confirm} | {memory} | {network ftp:hostname or ip address |
http:hostname or ip address | https:hostname or ip address | scp: hostname or
ip address} | sftp:hostname or ip address | tftp:hostname or ip address} |
{replace flash: | ftp: | http: | https: | scp: | sftp: | tftp:} | {revert now
| timer 1-120 | idle 1-120} | {terminal lock timer 1-120 | idle 1-120 |
revert timer 1-120 | idle 1-120}
```

Syntax	configure
Description	
{confirm} |	
{memory} |	

```

{network
ftp:hostname or ip
address |
http:hostname or ip
address |
https:hostname or
ip address |
scp:hostname or ip
address} |
sftp:<hostname or
ip address |
tftp:hostname or ip
address} |

```

```

{replace flash: |
ftp: | http: |
https: | scp: |
sftp: | tftp:}

```

```

{revert now |
timer 1-120 | idle
1-120}

```

```

{terminal lock
timer 1-120 | idle
1-120 | revert
timer 1-120 | idle
1-120}}

```

Command Default	None
Command Modes	PerleSwitch#

Usage Guidelines

Command Options:

confirm - confirm the replacement of running-config with a new config file

memory - configure from startup file

network - configure from a network host

replace - replace the running-config with the file specified. The running-config needs to be copied to the startup-config in order for the changes to become permanent

revert now - parameters for reverting this config

terminal lock - configure from the terminal

Examples

This example show you how to configure the switch using your terminal connection.

PerleSwitch#configure<cr>

Configuring from terminal, memory, or network [terminal]? <cr>

PerleSwitch(config)#

Related Commands

show terminal

terminal

copy

copy {flash:filename | ftp:filename | http: filename | https:filename | nvram: filename | {running-config filename | scp: filename | sftp: filename | startup-config filename | tftp:filename}}

Syntax **copy**

Description

{flash:filename |
ftp:filename | http:
filename |
https:filename |
nvram: filename |
{running-config
filename | scp:
filename | sftp:
filename |
startup-config
filename |
tftp:filename}

Command Default None

Command Modes PerleSwitch#

Usage Guidelines

Copy a file from one location to another.

Examples

This example shows how to copy a file from the flash: directory to a tftp server with an ipv4 address of 172.16.4.90.

```
PerleSwitch#copy flash:running-config-save tftp:<cr>
```

```
Address or name of remote host[ ]?172.16.4.90<cr>
```

```
Destination filename [ ]?backup-running-config<cr>
```

```
4922 bytes copied in 0.013 seconds
```

Related Commands

dir

delete

mkdir

pwd

rename

rmdir

cd

format

debug

```
debug {alarmmgr | alertmgr | all | bandwidth-control | clpd | enslmgr |
dmgrd | dot1x-authenticator | dot1x-supplicant | dhcp-client |
dhcp-relay-agent | dsa | garp | gmrp | gvrp | ifmgr | igmp | init | ip |
kernel | lldp | logging | mld | ring | power-inline | profinet | profinet-dcp |
pslmv-driver | ptp | snmp | spanning-tree | trapmgr | vty}
```

Syntax **debug**

Description

```
{alarmmgr |
alertmgr | all |
bandwidth-control
| clpd |
dot1x-authenticato
r |
dot1x-supplicant |
enslmgr | dmgrd |
dhcp-client |
dhepr-relay-agent |
dsa | garp |
gmrp | gvrp |
ifmgr | igmp |
init | ip | kernel
| lldp | logging |
mld | ring |
power-inline |
profinet |
profinet-dcp |
pslmv-driver | ptp
| snmp |
spanning-tree |
trapmgr | vty}
```

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

You can set debug on for a certain feature or function. Setting debug on for all features will seriously impact system performance.

Examples

This example shows you how to set debug on for alertmgr.

```
PerleSwitch# debug alertmgr <cr>
```

This example shows you how to set debug on for dhcp server.

```
PerleSwitch#debug ip dhcp server <cr>
```

Related Commands

undebug

delete

```
delete {flash: | nvram: | sdfsflash:}
```

Syntax `delete`**Description**

{**flash:** | **nvram:** |
sdfsflash:}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Deletes a file from flash or nvram.

Examples

This example deletes file backup-config-yesterday from flash.

```
PerleSwitch#delete flash:backup-config-yesterday<cr>
```

Related Commands

cd

dir

copy

dirrename

rmdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

dir

dir { **flash:** | **nvrnram:** | **sdfnlash:** }

Syntax	dir
Description	

{**flash:** | **nvrnram:** | **sdfnlash:**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show the contents of a directory on flash or nvrnram.

Examples

This example shows the contents of a directory called test.

PerleSwitch#dir test<cr>

Directory of flash:/test

```
130318 -rw- 4892 Jan 7 2016 21:21 -05:00 running-config-saved
```

```
3330048 KBytes total (3153920 KBytes free)
```

Related Commands

cd

copy

dirrename

rmdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

dot1x

dot1x { **initialize interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] } | { **re-authenticate interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] } | { **test eapol-capable interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] }

Syntax	dot1x
Description	

```
{initialize
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /port-number]}
```

```
{re-authenticate
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /port-number]}
```

```
{test eapol-capable
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot /
port-number]}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

These are IEEE 802.1X exec commands.

This command can do the following:

- force a single or all interfaces into unauthorized state
 - force re-authentication on a single or all interfaces
 - test 8092.1x capabilities
-

Examples

This example will force all interfaces into an unauthorized state.

```
PerleSwitch#dot1x initialize<cr>
```

Related Commands

[*dot1x*](#)
[*\(config-dot1x-creden\)*](#)

format

format {**sdf**flash:}

Syntax **format**

Description

{**sdf**flash:}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Use the format command to erase all directories and files from the sd flash card.

Examples

This example shows the erasing of the sd flash card.

PerleSwitch>format sdfflash:<cr>

Related Commands

cd

copy

dirrename

rmdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

mkdir

mkdir {**flash:** | **sdf**flash:}

Syntax **mkdir**

Description

{**flash:** | **sdf**flash:}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

The make directory (mkdir) command is part of the file management system commands.

Examples

This example shows you how to make a directory under the file system flash:

```
PerleSwitch#mkdir flash:testing<cr>
```

```
PerleSwitch#dir
```

Directory of flash:

```
130307  drwx   4096 Jan  2 2001 19:58 -05:00 testdir
130306  -rw-   1508 Jan  2 2001 17:46 -05:00 test-config
130308  drwx   4096 Jan  3 2001 18:49 -05:00 testing
```

Related Commands

cd

copy

dirrename

rmdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

more

more {[/ascii | /binary] | [flash:] | [nvram:] | [running-config] | [sdflash:] | [startup-config]}

Syntax	more
Description	

```
{[ /ascii | /binary]
| [flash:] |
[nvram:] |
[running-config] |
[startup-config]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The more command show you a file contents. You can specify whether to show the contents in ascii or binary format.

Examples

This example shows you how see the contents of the running config in binary format.

```
PerleSwitch#more /binary mkdir flash:testing<cr>
```

```
PerleSwitch#dir
```

Directory of flash:

```
130307 drwx 4096 Jan 2 2001 19:58 -05:00 testdir
130306 -rw- 1508 Jan 2 2001 17:46 -05:00 test-config
130308 drwx 4096 Jan 3 2001 18:49 -05:00 testing
```

Related Commands

cd

copy

dirrename

rmdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

ping

ping {*ip_address_host_name* [**data**<hex digits>] | [**repeat number-of-times to-ping**] | [**size datagram-size**]}

Syntax	ping
Description	

{*ip_address_host_name* [**data**<hex digits>] | [**repeat number-of-times to-ping**] | [**size datagram-size**]}

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Command Options:

Host name must be predefined in a host table.
 Data hex pattern is from 1 to 32 hex characters.
 Repeat count can be from 1-2147483647
 Datagram size can be from 36-18024

Examples

This example shows you how to ping a host with an ip address of 172.16.113.44 repeating the ping request 10 times.

```
PerleSwitch> ping 172.16.113.44 repeat 10 <cr>
```

This example show you how to ping a host with an ip address of 172.16.113.44 with hex data pattern of f1f1f1f1.

```
PerleSwitch> ping perlehost data f1f1f1f1<cr>
```

This example shows you how to ping a host with an ip address of 172.16.113.44 with a data packet size of 40 bytes.

```
PerleSwitch> ping perlehost size 40<cr>
```

Related Commands

debug

traceroute

test

pwd

pwd

Syntax	pwd
Description	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Shows your current file system.	
Examples	
This command will show you what file system you are in.	
PerleSwitch#cd nvram:<cr>	
PerleSwitch#pwd<cr>	
nvram:	
Related Commands	
<i>cd</i>	
<i>copy</i>	
<i>dirrename</i>	
<i>rmdir</i>	
<i>mkdir</i>	

release

release {dhcp vlan 1-4094}

Syntax	release
Description	
{dhcp vlan 1-4094}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Release the ipv4 address from the specified vlan. The ipv4 address will be added back to the DHCP pool.	

Examples

This example will release the ipv4 address from vlan 2.

```
PerleSwitch#release dhcp vlan 2<cr>
```

Related Commands

renew

(config-if)#ip

reload

```
reload {[at hh:mm] | [cancel] | [in mmm | hh:mm]}
```

Syntax	reload
---------------	---------------

Description	
--------------------	--

{[at hh:mm] |
[cancel] | [in
mmm | hh:mm]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

at - specify the time in hours and minutes when to reload the firmware on the switch.

cancel - cancel any pending reload commands.

in - specify in minutes 1-999 or hours minutes when to reload the firmware on the switch.

Examples

Reloads the firmware on the switch in 10 hours and 20 mins.

```
PerleSwitch# reload 10:20 <cr>
```

Cancels the previous reload command.

```
PerleSwitch# reload cancel <cr>
```

Related Commands

copy

show version

boot

Note: Before reloading the switch copy running config to startup config to save any changes that you want to save permanently.

rename

rename {flash: *destination-filename* | nvram: *destination-filename* | sdfsflash: *destination-filename*}

Syntax	rename
Description	
<p>{flash: <i>destination-filename</i> | nvram: <i>destination-filename</i> | sdfsflash: <i>destination-filename</i>}</p>	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
<p>Usage Guidelines Rename a file on flash, nvram or sdfsflash.</p>	
<p>Examples This example renames a file on flash from testdir to newdir. PerleSwitch#rename flash:testdir flash:backup<cr> Destination file name[backup]?</p>	
<p>Related Commands <i>cd</i> <i>copy</i> <i>dir</i> <i>renamermdir</i> <i>mkdir</i></p>	
<p>Note: The SD card must be inserted for this command to show in the command list.</p>	

renew

renew {dhcp vlan *1-4094*}

Syntax	renew
Description	
{dhcp vlan 1-4094}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Renew the ipv4 address for specified vlan. An ipv4 address will be allocated from the DHCP pool.	
Examples	
This example will renew the DHCP ipv4 address for vlan 2.	
PerleSwitch#renew dhcp vlan 2<cr>	
Related Commands	
<i>release</i>	
<i>(config-if)#ip</i>	
<i>(config-if)#ip</i>	

rmdir

rmdir {flash: directory-name | sdfsflash: destination-filename}

Syntax	rmdir
Description	
{flash: directory-name} | sdfsflash: destination- filename}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Remove a directory on flash or sdfsflash.	

Examples

This example will remove a directory on flash.

```
PerleSwitch#rmdir flash:test<cr>
```

```
Remove directory name[test]?<cr>
```

Related Commands

cd

copy

dir

renamermdir

mkdir

Note: The SD card must be inserted for this command to show in the command list.

setup**setup**

Syntax **setup**

Description

{flash:
*directory-name***}**

Command Default

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Enter setup mode to enable you to set basic features for the switch such as IP address, hostname and users etc:

Examples

Configure basic operating parameters for the switch? [yes/no]: yes

You can abort this process at any time by pressing CTRL-C.

Configuring global parameters:

Enter host name [PerleSwitch]: NewSwitchName

The enable secret is used to elevate users to the privileged EXEC and configuration modes.

Enter enable secret [<Use current secret>]:

Configure SNMP Network Management? [yes]: no

Users are already configured for managing the switch.

Add additional user? [no]: no

The following interface will be used for management: Vlan1

Configure IP on this interface? [yes]: no

The following configuration script was created:

```
hostname NewSwitchName
enable secret 5 $1$pQ5Q$dwHsD8ivlklwNzKS5cxhL.
no snmp-server
!
interface vlan 1
shutdown
no ip address
!
```

[0] Exit to the command prompt without saving this config.

[1] Restart setup without saving this config.

[2] Save this configuration and exit.

Enter your selection [2]: 2

Applying script to running configuration...

Configuration applied successfully.

Saving startup configuration...

4210 bytes copied

Configuration saved successfully.

[

Related Commands

show aaa

show aaa {local user lockout}

Syntax	show aaa
Description	

{local user
lockout}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

This command will show you the current locked out users on the switch.

Examples

This example will show you the current locked out users on the switch.

PerleSwitch#show aaa local user lockout<cr>

Locked-out users: Lyn

Related Commands

show alarm

show {alarm description port | profile *profile-name* | settings}

Syntax	show alarm
Description	

{alarm description
port | profile
profile-name |
settings}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The following parameters will be displayed by the show alarm profile command.

- 1 - Link fault
- 2- Port not forwarding
- 3 - Port not operating

Examples

This example shows how to display all alarm profiles including the default alarm profile.

PerleSwitch#show alarm profile<cr>

```
defaultPort:
  Interfaces   Gi1/2, Gi1/3, Gi1/4, Gi1/5
  Alarms       not-operating
  Syslog       not-operating
  Notifies     not-operating
  Relay Major
testalr:
  Interfaces   Gi1/1
  Alarms       link-fault not-forwarding not-operating
  Syslog
  Notifies     link-fault not-forwarding not-operating
  Relay Major link-fault not-forwarding not-operating
```

PerleSwitch#show alarm settings<cr>

Alarm relay mode: De-energized:

```
Power Supply:
  Alarm        Enabled
  Relay
  Notifies     Disabled
  Syslog       Enabled
SD-Card:
  Alarm        Disabled
  Relay
  Notifies     Disabled
  Syslog       Disabled
Temperature-Primary:
  Alarm        Enabled
  High threshold 95C
  Low threshold -20C
  Relay        MAJ
  Notifies     Enabled
  Syslog       Enabled
Temperature-Secondary:
  Alarm        Disabled
  High threshold None
  Low threshold None
  Relay
  Notifies     Disabled
  Syslog       Disabled
```

Related Commands

alarm
(alarm-profile)

show alert

show {**alert interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**] | [**port-channel channel**]}

Syntax	show alert interface
Description	

{**alert interface**
[**fastethernet slot / port-number**] |
[**gigabitethernet slot / port-number**]
| [**port-channel channel**]}

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

You can show all the alert table messages by using the show alert command, or you can show only the alerts for a specified fastEthernet, gigabitethernet or portchannel interface.

Examples

To show alerts for a specified interface execute the following command.

PerleSwitch#show alert interface gigabitethernet 1/1<cr>

Interface: Gi1/1:

Error code: PORT_SECURE_VIOLATION

Timestamp: May 4 2016 14:29:53

Count: 14

Description: Access denied to one or more connecting devices on this port.

Recommendation: Maximum allowed devices on this port are already connected, or an unauthorized device attempted to connect on this secure port. Disconnect the device.

Related Commands

clear alert

show archive

show {archive config rollback timer}

Syntax	show archive
Description	

{archive config
rollback timer}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows archived configuration files.

Examples

This example will show the contents of the archive.

PerleSwitch#show archive<cr>

The maximum archive configurations allowed is 14.

There are currently 9 archive configurations saved.

The next archive file will be named sftp:-<timestamp>-9

Archive # Name

```

1 flash:-May-12-14-14-16-0
2 flash:-May-12-14-17-50-1
3 flash:-May-12-14-19-00-2
4 flash:-May-12-14-19-14-3
5 flash:-May-12-14-20-55-4
6 flash:-May-12-14-24-31-5
7 flash:-May-12-15-05-37-6
8 flash:-May-17-03-37-55-7
9 flash:-May-17-03-38-10-8 <- Most Recent
10
11
12
13
14
```

Related Commands

(config-archive)

show arp

show {**arp a.b.c.d** | **vlan**}

Syntax	show arp
---------------	-----------------

Description	
--------------------	--

{**arp a.b.c.d** | **vlan**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Use this command to show entries in the arp table.

Enter an ipv4 address to display the entry for this ip address in the arp table.

Enter a vlan interface channel to display the entry for this ip address in the arp table

Examples

This example show you how to view the arp table.

PerleSwitch#show arp<cr>

```
?(172.16.113.31) at 00:13:20:92:29:82 [ether] on VI 1
```

```
PerleName (172.16.113.77) at 00:13:20:92:29:82 [ether] PERM on VI 1
```

In this example the first entry shows that the hostname is not known (?) and the entry is not a static or permanent entry. The second entry in the table shows that host 172.16.113.77 has been added manually as a permanent entry in the arp table and the hostname is PerleName.

Related Commands

clear arp-cache

arp

show bandwidth-control

show {**bandwidth-control**}

Syntax	show bandwidth-control
---------------	-------------------------------

Description	
--------------------	--

{**bandwidth-control**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Usage Guidelines

The show bandwidth control command allows you to see polling interval, interface state, action, direction, type, upper and lower packets per second. This is the time in seconds that the switch will count the ingress frames of the type specified for each port.

Examples

This example shows the output of the bandwidth-control command.

PerleSwitch#show bandwidth-control <cr>

Bandwidth control polling interval: 5 seconds

Packets per second (pps)

```
-----
Interface State      Action Direction Type Upper Lower
Current
-----
-----
Gi1/1 normal shutdown egress all 10000 100 1
Gi1/1 normal shutdown ingress bc 100000 10000 1
```

Related Commands

(config-if)#bandwidth-control

show clock

show {clock}

Syntax	show clock
Description	

{clock}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show clock.

Examples

PerleSwitch#show clock<cr>

Thu May 05 10:32:23 summer-test 2016

Related Commands*clock***show crypto****show** {crypto pki client trustpoint | server trustpoints {*trustpoint-name* | status}}

Syntax **show crypto**
Description

**{crypto pki client
trustpoint |
server trustpoints
{*trustpoint-name* |
status}**

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Show encryption operations.

Examples

This example show the status of the switch's trustpoint.

PerleSwitch#show crypto pki server trustpoint status<cr>

Server Trustpoint: http180

=====

Certificate:

Data:

Version: 1 (0x0)

Serial Number:

c2:13:a5:c4:21:92:9f:76

Signature Algorithm: sha1WithRSAEncryption

Issuer: C=CA, ST=Ontario, L=Markham, O=Perle Systems Limited, OU=Engineering,
CN=dev2k9

Validity

Not Before: Mar 14 15:51:04 2016 GMT

Not After : Dec 9 15:51:04 2018 GMT

Subject: C=CA, ST=Ontario, L=Markham, O=Perle Systems Limited, OU=Engineering,
CN=dev2k9

Subject Public Key Info:

Public Key Algorithm: rsaEncryption

Public-Key: (1024 bit)

Modulus:

00:c6:38:88:0f:6e:55:34:41:c2:ae:c8:9f:a3:8c:
5e:ac:02:58:55:f8:65:8c:9b:3e:79:ae:3d:c8:b4:
aa:66:57:73:56:c7:f4:a7:d9:de:92:b5:fe:38:1b:
03:99:16:64:9a:ed:26:00:3e:c1:93:1f:b5:cc:fb:
28:f9:16:50:0f:53:7a:65:37:d0:93:02:da:c9:05:
e3:c6:54:32:57:6f:75:a1:fc:19:a2:b7:db:44:78:
a4:3a:91:19:89:da:db:75:8f:b5:0a:62:23:4c:a7:
d8:1d:b7:a0:14:c2:f4:7a:f1:31:e9:92:b5:25:77:
00:54:be:87:a2:97:a4:ac:53

Exponent: 65537 (0x10001)

Signature Algorithm: sha1WithRSAEncryption

98:38:28:71:ff:3e:e8:dd:6d:70:14:24:10:bf:fd:20:45:ae:
b2:77:b4:9b:10:28:a4:af:11:f3:27:07:26:86:55:d4:c3:c4:
d9:f3:76:2c:e0:60:6c:cf:06:6c:8c:51:c5:7d:ad:dc:11:9b:
b8:41:a7:6f:65:37:11:30:51:2d:91:22:e7:2c:71:83:f6:6f:
3a:68:51:a1:05:0b:44:25:a7:0c:6b:ac:34:1b:e8:a4:59:5d:
62:44:c9:08:77:9c:26:44:cf:3e:4e:c0:af:a0:62:3a:69:ce:
ec:74:29:ad:cc:d7:b9:f4:10:89:c6:44:8e:27:85:6f:9b:89:
51:e8

-----BEGIN CERTIFICATE-----

MIICZzCCAdACCQDCE6XEIZKfdjANBqkqhkiG9w0BAQUFADB4MQswCQYDVQQGEwJD
QTEQMA4GA1UECBMHT250YXJpbzEQMA4GA.....

Related Commands

crypto

show debugging

show {debugging }

Syntax **show debugging**

Description

{debugging }

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows which functions or commands have debug enabled.

Examples

This example shows the output of the debug command.

PerleSwitch#show debugging<cr>

BWCONTROL debugging is on

DSA_DRIVER is on

Related Commands

debug

ping

undebug

show dhcp lease

show {dhcp lease}

Syntax **show dhcp lease**

Description

{dhcp lease}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows all dhcp leases with configured options.

Examples

This example will show all the dhcp leases.

```
PerleSwitch#show dhcp lease<cr>
```

```
interface Vlan1
  dhcp-assigned-address 172.17.121.182
  option subnet mask 255.255.0.0
  option dhcp-lease time 86400 seconds
  option dhcp-server-identifier 172.17.3.13
  renew Mon Jan 01 08:44:00 EST 2001
  rebind Mon Jan 01 19:02:16 EST 2001
  expire Mon Jan 01 22:02:16 EST 2001
```

Related Commands

[*ip dhcp service*](#)

show dot1x

```
show {dot1x [all] details | statistics}} | {credential credential-profile} |
{interface fastethernet slot / port-number | gigabitethernet slot / port-number
[details] | [statistics]} | {radius statistics [interface fastethernet slot /
port-number | gigabitethernet slot / port-number]}
```

Syntax	show dot1x
--------	------------

Description	
-------------	--

```
{dot1x | [all]}
[details] |
[statistics]}
```

```
{interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
[details] |
[statistics]}
```

```
{interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
[details] |
[statistics]}
```

```
{radius statistics
 [interface
 fastethernet slot /
 port-number |
 gigabitethernet
 slot /
 port-number]}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows 802.1x details.

Examples

This example shows dot1x information for gigabitethernet interface 1/1.

```
PerleSwitch#show dot1x interface gigabitethernet 1/1<cr>
```

```
Dot1x Infor fpr GigbitEthernet 1/1
```

```
PAE          = AUTHENTICATOR
```

```
QuietPeriod  = 60
```

```
SuppTimeout  =30
```

```
ReAuthMax    =2
```

```
MaxReq       =2
```

```
TxPeriod     =2
```

Related Commands

dot1x

show eap

show {eap profiles | registrations}

Syntax	show eap
---------------	-----------------

Description	
--------------------	--

{eap profiles | registrations}	
-----------------------------------	--

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows eap profiles and registrations.

Examples

This example shows the profiles for eap

PerleSwitch#show profile eap<cr>

EAP Profile: test-eap

=====

PKI-Trustpoint: None

Allowed Phase 1 methods:

MD5

EAP Profile: eaptst

=====

PKI-Trustpoint: None

Allowed Phase 1 methods:

PerleSwitch#show eap registrations<cr>

Registered EAP Methods:

=====

Method	Type	Name
4	Auth and Peer	MD5
6	Auth and Peer	GTC
13	Auth and Peer	TLS
21	Auth and Peer	TTLS
25	Auth and Peer	PEAP
26	Auth and Peer	MSCHAPV2

PEAP:

Phase 2 Methods

GTC

MD5

MSCHAPV2

TTLS:

Phase 2 Methods

CHAP

PAP

MSCHAP

MSCHAPV2

EAP-MD5

EAP-GTC

EAP-MSCHAPV2

Related Commands

eap

(config-eap-profile)

show eee

```
show {eee capabilities gigabitethernet slot / port-number | status}
```

Syntax `show eee`

Description

```
{eee capabilities
[gigabitethernet
slot | status]}
```

Command Default no power efficient ethernet auto

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows whether EEE is enabled on the interface.

Examples

This example displays EEE on interface g1/1.

```
PerleSwitch#show eee capabilities interface g1/1<cr>
```

```
GigabitEthernet 1/1
```

```
EEE: yes
```

Related Commands

[\(config-if\)#power](#)

show env

```
show {env | all | power | temperature [status]}
```

Syntax `show env`

Description

```
{env | all | power
| temperature
[status]}
```

"temperature" is not available on all models.

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows environment status.

Examples

PerleSwitch#show env all<cr>

SYSTEM TEMPERATURE is OK
System Temperature Value: 25 Degree Celsius
POWER SUPPLY 1 is DC OK
POWER SUPPLY 2 is DC Not Present

Related Commands

power inline

show errdisable

show {errdisable detect | flap-values | recovery}

Syntax	show errdisable
Description	

**errdisable detect |
flap-values |
recoveryclock}**

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows error disable information.

Examples

This example shows all information for errdisable.

PerleSwitch#show errdisable detect<cr>

ErrDisable Reason	Detection	Mode
link-flap	Disabled	port
bpduguard	Enabled	port
security-violation	Enabled	port
bandwidth-exceeded	Enabled	port
psecure-violation	Enabled	port/vlan

PerleSwitch#show errdisable flap-values<cr>

ErrDisable Reason	Flaps	Time (sec)
link-flap	5	10

NewSwitchName#show errdisable re
NewSwitchName#show errdisable recovery

ErrDisable Reason	Timer Status
link-flap	Enabled
bpduguard	Enabled
security-violation	Enabled
bandwidth-exceeded	Enabled
psecure-violation	Enabled

Timer interval: 30 seconds

Interfaces that will be enabled at the next timeout:

PerleSwitch#show errdisable recovery<cr>

ErrDisable Reason	Timer Status
link-flap	Enabled
bpduguard	Enabled
security-violation	Enabled
bandwidth-exceeded	Enabled
psecure-violation	Enabled

Timer interval: 30 seconds

Interfaces that will be enabled at the next timeout:

Related Commands

errdisable

show etherchannel

```
show {etherchannel [x-x] | [detail] | [port] | [port-channel] | [protocol] |
[summary]}
```

Syntax	show etherchannel
Description	

```
{etherchannel [
x-x] | [detail] |
[port] |
[port-channel] |
[protocol] |
[summary]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows EtherChannel information.

Examples

This example shows the summary for etherchannel.

PerleSwitch#show etherchannel summary

```
Flags: D - down      P - bundled in port-channel
       I - stand-alone s - suspended
       H - Hot-standby (LACP only)
       R - Layer3     S - Layer2
       U - in use     f - failed to allocate aggregator
```

```
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
```

```
Number of channel-groups in use: 1
```

```
Number of aggregators:      1
```

```
Group Port-channel Protocol Ports
```

```
-----+-----+-----+-----
1   Po1(SU)   LACP
```

Related Commands*(config-if)#switchport***show facility-alarm****show {facility-alarm relay major | status}**

Syntax **show facility-alarm**
Description

**{facility-alarm
relay major |**

status}

Command Default None**Command Modes** PerleSwitch#**Hardware model** All models

Usage Guidelines

Shows the facility alarms.

Examples**PerleSwitch>show facility-alarm<cr>**

Source	Severity	Description	Relay	Time
PerleSwitch	MAJOR	1 Temperature above max primary thres	MAJ	May
17 2016 02:38:55				

Related Commands*alarm**(alarm-profile)***show garp****show {garp timers}**

Syntax **show garp**
Description

{garp timers}

Command Default None**Command Modes** PerleSwitch#

Usage Guidelines

Shows the settings for GARP timers.

Examples

PerleSwitch#show garp timers,cr>

```
Timer   Timer Value (milliseconds)
Join     200
Leave     600
LeaveAll 10000
```

Related Commands

garp

show gmrp

show {**gmrp interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**]} | {**statistics interface** [**fastethernet slot / port-number**] | [**gigabitethernet slot / port-number**]}

Syntax	show gmrp
---------------	------------------

Description	
--------------------	--

{**gmrp interface**
[**fastethernet slot / port-number**] |
[**gigabitethernet slot / port-number**]}

{**statistics interface**
[**fastethernet slot / port-number**] |
gigabitethernet slot / port-number}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show interface and statistics.

Examples

This example shows GMRP statistics.

PerleSwitch# show gmrp statistics<cr>

```

Leave All Received:      0
Join Empty Received:    0
Join In Received:      0
Leave Empty Received:    0
LeaveIn Received:       0
Empty Received:        0
Leave All Transmitted:   0
Join Empty Transmitted: 0
Join In Transmitted:   0
Leave In Transmitted:    0
Leave Empty Transmitted: 0
Empty Transmitted:     0

```

Related Commands

gmrp

show gvrp

```

show {gvrp interface [fastethernet slot / port-number] | [gigabitethernet slot / port-number]} | {statistics [fastethernet slot / port-number] | [gigabitethernet slot / port-number]}

```

Syntax	show gvrp
Description	

```

{gvrp interface
[fastethernet slot / port-number] |
[gigabitethernet slot / port-number]} |

```

```

{statistics
[fastethernet slot / port-number] |
[gigabitethernet slot / port-number]}

```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show interface and statistics.

Examples

This example shows interface gigabitethernet 1/1 with gvrp enabled.

```
PerleSwitch#show gvrp interface g1/1<cr>
```

Interface	GVRP Status	Dynamic Vlan Creation
G1 1/1	Enabled	Enabled

Related Commands

[gvrp](#)

show hosts

show {**hosts**}

Syntax	show hosts
Description	

{**hosts**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Show a list of hosts listed in the host table.

Examples

This example shows the host table.

```
PerleSwitch#show hosts<cr>
```

Default domain name is perledomain

DNS lookup is enabled

Name Servers are not configured

Host table:

```
PerleName      172.16.113.77
```

```
RADIUS_SERVER 172.16.55.88
```

```
TACACS_SERVER 172.16.55.99
```

Related Commands
*hostname***show interfaces**

```
show {interfaces fastethernet slot/port-number | fastethernet slot/port-number
| gigabitethernet slot/port-number | port-channel channel | vlan 1-4094} |
[accounting] | [counters] | [description] | [etherchannel] | [flowcontrol] |
[mtu] | [stats] | [status] | [summary] | [switchport]}
```

Syntax **show interfaces**
Description

```
{interfaces
fastethernet slot /
port-number |
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel
channel | vlan
1-4094} |
```

```
[accounting] |
```

```
[counters] |
```

```
[description] |
```

```
[etherchannel] |
```

```
[flowcontrol] |
```

```
[mtu] |
```

```
[stats] |
```

```
[status] |
```

```
[summary] |
```

```
[switchport]}
```

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows configuration and status for specified interface or all interfaces.

Examples

This example shows you the output from the show interfaces description command.

PerleSwitch#show interfaces description<cr>

```
Interface  Status   Protocol Description
VI1        up       up
VI1000     up       down
Gi1/1      up       up
Gi1/2      up       down
Gi1/3      up       down
Gi1/4      up       down
Gi1/5      up       down
Po1        down    down    portchannel1
```

This example shows the summary for all interfaces.

PerleSwitch#show interface summary<cr>

*: interface is up

IQD: pkts dropped from input queue

OQD: pkts dropped from output queue

RXBS: rx rate (bits/sec) RXPS: rx rate (pkts/sec)

TXBS: tx rate (bits/sec) TXPS: tx rate (pkts/sec)

Interface	IQD	OQD	RXBS	RXPS	TXBS	TXPS
* Vlan1	0	0	14704.00	10.00	5840.00	5.00
Vlan2	0	0	0.00	0.00	0.00	0.00
Vlan1000	0	0	0.00	0.00	0.00	0.00
* GigabitEthernet1/1	3747	0	16240.00	13.00	6104.00	5.00
GigabitEthernet1/2	0	0	0.00	0.00	0.00	0.00
GigabitEthernet1/3	0	0	0.00	0.00	0.00	0.00
GigabitEthernet1/4	0	0	0.00	0.00	0.00	0.00
GigabitEthernet1/5	0	0	0.00	0.00	0.00	0.00
Port-channel1	0	0	nan	nan	nan	nan

Related Commands

See [Interface configuration](#) to configure switchports.

See [Interface Port Channels](#) to configure port channels.

See [Vlan config mode](#) to configure vlans.

See [Interface line mode](#) to configure console and vtys.

show ip access-list

```
show {ip access-list [1-99] | [1300-1999] | [access-list-name]}
```

Syntax	show ip access-lists
Description	

```
{ip access-list 1-99
| 1300-1999 |
access-list-name}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch#
---------------	--------------

Hardware model	All models
----------------	------------

Usage Guidelines

Shows configured access lists on the switch.

Examples

This example show all access lists on the switch.

```
PerleSwitch#show ip access-lists 50<cr>
```

```
Standard IP access list 50
```

```
10 deny any log
```

Related Commands

[ip access-list](#)

show ip arp

```
show {ip arp a.b.c.d | vlan 1-4094}
```

Syntax	show ip
Description	

```
{ip arp a.b.c.d |
vlan 1-4094}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch#
---------------	--------------

Hardware model	All models
----------------	------------

Usage Guidelines

Shows arp entries by ip address or vlan.

Examples

This example will show the arp entry for vlan 1.

```
PerleSwitch#show arp vlan 1<cr>
```

```
PerleName (172.16.113.77) at 00:13:20:92:29:82 ether,PERM on V11
```

Related Commands

arp

show ip default-gateway

```
show ip {default-gateway}
```

Syntax	show ip default-gateway
Description	

default-gateway

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows the default gateway configured on the switch.

Examples

This example shows the default gateway for this switch.

```
PerleSwitch#show ip default-gateway<cr>
```

```
172.16.88.99
```

Related Commands

ip default-gateway

show ip dhcp

```
show {ip dhcp}
```

Syntax	show ip dhcp
Description	

{ip dhcp}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows configured options for DHCP.

Examples

This example will show you the DHCP pool.

PerleSwitch#show ip shcp pool<cr>

Pool ip-pool :

```
Total addresses      : 1
Leased addresses     : 1
Excluded addresses   : 1
IP Address           : 172.16.44.33
```

Pool pool-1 :

Pool dhcp-pool :

```
Total addresses      : 254
Leased addresses     : 0
Excluded addresses   : 0
IP Address Range     : 172.17.55.1 - 172.17.55.254
```

Related Commands*ip dhcp***show ip igmp**

```
show ip {igmp snooping detail | groups [count | dynamic count | user count
| [vlan vlan_interface_number | mrouter vlan 1-4094 | querier detail | vlan
1-4094] | vlan 1-4094 detail}
```

Syntax	show ip igmp snooping
---------------	------------------------------

Description	
--------------------	--

```
{igmp snooping
detail | groups
[count | dynamic
count | user
count | [vlan
vlan_interface_
number | mrouter
vlan 1-4094 |
querier detail |
vlan 1-4094] |
vlan 1-4094 detail}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines**Command Options:**

Shows all global details for IGMP snooping configuration and all VLANS.

Count shows total number of multicast groups.

Dynamic count shows VLAN, Group, Type, Version and Port list
VLAN interface number.

Examples

This example shows snooping details for all configured vlans.

PerleSwitch>show ip igmp snooping detail<cr>

Global IGMP Snooping configuration:

```
-----  
IGMP snooping           : Enabled  
Report suppression      : Enabled  
TCN solicit query       : Disabled  
TCN flood query count   : 3  
Robustness variable     : 2  
Last member query count : 2  
Last member query interval : 1000
```

Vlan 0:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 1:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 2:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 3:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 4:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 5:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Vlan 1000:

```
-----  
IGMP snooping           : Enabled  
IGMPv2 immediate leave  : Disabled
```

Related Commands*clear ip igmp***show ip service****address-conflict-detection status**

Syntax	address-conflict-detection status
Description	

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows whether the feature is enabled or disabled.

If enabled, it will indicate if an IP conflict exists and if it does, will provide information about the conflict.

Examples**PerleSwitch#show ip service address-conflict-detection status**

IP address conflict detection is enabled.
No conflict detected.

PerleSwitch#show ip service address-conflict-detection status

IP address conflict detection is enabled.
IP address conflict detected!

VLAN: 1
IP address: 172.18.22.1
MAC address: D485.6417.7926
Port: GigabitEthernet 1/5
Time: April 27, 2018 14:24:21

Related Commands

ip service
show facility-alarm

show ip ssh

show {**ip ssh**}

Syntax	show ip ssh
Description	
{ip ssh}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Shows information on ssh parameters.	
Examples	
This example shows the values for ssh.	
PerleSwitch>show ip ssh	
SSH version: 1.99	
Authentication timeout: 120 seconds	
Authentication retries: 3	
SSH public key:	
ssh-rsa	
AAAAB3NzaC1yc2EAAAADAQABAAQCAQDXSoVYch1Elp1AO2z/Px17m3w	
fuXBI/ZxTqvS7SQCJxWSLNZGphXN5VE9SGsp9D5wLAhIFrZKNc44T+O79A1	
N3oCPhKnuxq24j444ybxOnF8Ttxttrib8fpfDH8pNstYIIX4QPvUUeTPaEc4QkJ+X	
TI+hArI4PK1VYCKsijKn6sucP0nqNlcQsGN5C0ST/SwreR/U4azwmaA+24+k/v1N	
yBFFXecWp5gFvx8/7vsJMousiOmbvtjxQyUZJKkkuudWvNxrMs0QmcUsj7nz5	
ODGwD2K55LVocKOzWqOQQN7R9w5LMF4Lyc7DIz5j81BUQpHpAPdIdyTj7J	
UFlrnOF3NgLLmaVbqbUstrG3x5AzOQLW+AcpwPwnnt/BCIjaj1MAOH8NFCbB	
AepKaY+BizlfJLtCDE0yZ3XO7c6kcv/qN07acC5edTCRyzDGqJ/1ronjtQYppPDO	
5YaxQ4UfPbedC3OghJJvwSegq45bLuhYhIO+kLgPNe+jVKWXeckfjiePL2EYX0q	
SdJQ+CWvy+qQS12+0HkuzKnEnT+t9XKqqvIPIWtxIo7vxfhqBP+Y+I5CzHxqOP	
4nbMvUnIDN3blakRAp7wiTSeU7MbGi/c8qdjgSnRpIwW0Vcu4CHf6dvP8+wjf4L	
sJPpyzW33+UakZLJST/ratP1OrdWn1mWskXi+kWCQ==	
Related Commands	
<i>telnet</i>	

Usage Guidelines

Shows information on ssh parameters.

Examples

This example shows the values for ssh.

PerleSwitch>show ip ssh

SSH version: 1.99

Authentication timeout: 120 seconds

Authentication retries: 3

SSH public key:

ssh-rsa

```
AAAAB3NzaC1yc2EAAAADAQABAAQCAQDXSoVYch1Elp1AO2z/Px17m3w
fuXBI/ZxTqvS7SQCJxWSLNZGphXN5VE9SGsp9D5wLAhIFrZKNc44T+O79A1
N3oCPhKnuxq24j444ybxOnF8Ttxttrib8fpfDH8pNstYIIX4QPvUUeTPaEc4QkJ+X
TI+hArI4PK1VYCKsijKn6sucP0nqNlcQsGN5C0ST/SwreR/U4azwmaA+24+k/v1N
yBFFXecWp5gFvx8/7vsJMousiOmbvtjxQyUZJKkkuudWvNxrMs0QmcUsj7nz5
ODGwD2K55LVocKOzWqOQQN7R9w5LMF4Lyc7DIz5j81BUQpHpAPdIdyTj7J
UFlrnOF3NgLLmaVbqbUstrG3x5AzOQLW+AcpwPwnnt/BCIjaj1MAOH8NFCbB
AepKaY+BizlfJLtCDE0yZ3XO7c6kcv/qN07acC5edTCRyzDGqJ/1ronjtQYppPDO
5YaxQ4UfPbedC3OghJJvwSegq45bLuhYhIO+kLgPNe+jVKWXeckfjiePL2EYX0q
SdJQ+CWvy+qQS12+0HkuzKnEnT+t9XKqqvIPIWtxIo7vxfhqBP+Y+I5CzHxqOP
4nbMvUnIDN3blakRAp7wiTSeU7MbGi/c8qdjgSnRpIwW0Vcu4CHf6dvP8+wjf4L
sJPpyzW33+UakZLJST/ratP1OrdWn1mWskXi+kWCQ==
```

Related Commands

telnet

show ipv6

show ipv6 {**interface** [**vlan** *vlan_interface_number*]} | {**mld snooping address** [**count**] | [**detail**] | [**mrouter vlan** *1-4094* **querier detail**] | [**vlan** *1-4094*]} | {**neighbors** **vlan** *1-4094* | *hostname/x:x:x::x*}

Syntax	show ipv6
Description	
	<pre>{interface [vlan vlan_interface_number]} | {mld snooping address [count] | [detail] | [mrouter vlan 1-4094 querier detail] | [vlan 1-4094]} | {[neighbors vlan 1-4094 | hostname/x:x:x::x]} </pre>
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	Shows details for IPv6.

Examples

This example shows the details for IPv6 mld snooping.

PerleSwitch#show ipv6 mld snooping detail<cr>

Global MLD Snooping configuration:

```
-----
MLD snooping          : Disabled
Listener message suppression : Disabled
TCN solicit query     : Disabled
TCN flood query count  : 2
Robustness variable   : 2
Last listener query count : 2
Last listener query interval : 1000
```

Vlan 1:

```
-----
MLD snooping          : Enabled
MLD immediate leave   : Disabled
Topology change       : No
```

Vlan 2:

```
-----
MLD snooping          : Enabled
MLD immediate leave   : Disabled
Topology change       : No
```

Vlan 5:

```
-----
MLD snooping          : Enabled
MLD immediate leave   : Disabled
Topology change       : No
```

Related Commands

[ipv6](#)

show lacp

show {[lacp 1-2](#) | [counters](#) | [internal](#) | [neighbor](#) | [sys-id](#)}

Syntax	show lacp
Description	

```
{lacp 1-2 |
counters | internal
| neighbor |
sys-id}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Command Options:

- 1-2** - port channel interfaces
- counters** - traffic information
- internal** - internal information
- neighbor** - neighbor information
- sys-id** - LACP system id

Examples

This example shows LACP neighbors.

PerleSwitch#show lacp neighbor<cr>

Flags: S - Device is requesting Slow LACPDUs
 F - Device is requesting Fast LACPDUs
 A - Device is in Active mode P - Device is in Passive mode

Channel-Group 1 neighbors

Partner's information:

Port	LACP port	Priority	Dev ID	Admin key	Oper Key	Port Number	Port State
------	-----------	----------	--------	-----------	----------	-------------	------------

Related Commands

lacp

show line

show line 0-0

Syntax	show line
Description	

line 0-0

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows configuration for line.

Examples

PerleSwitch> show line console 0 <cr>

Baud rate (TX/RX) is 9600/9600. parity none, 1 stop bit, 8 data bits

This example shows you how to clear the alert table for a specified interface.

PerleSwitch# show line <cr>

con0: Active

vty0: Active

vty1: Active

vty2: Active

vty3: Active

vty4: Inactive

vty5: Active

vty6: Inactive

vty7: Active

vty8: Active

vty9: Active

vty10: Inactive

vty11: Inactive

vty12: Inactive

vty13: Inactive

vty14: Inactive

vty15: Inactive

Related Commands

terminal

show lldp

show lldp {[**interface fastethernet slot / port-number**] | [**gigabitethernet slot/ port-number**] | [**neighbors**] | [**traffic summary**] | [**mrouter vlan vlan_interface_number**]}

Syntax **show lldp****Description**

```
{[interface  
fastethernet slot /  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [neighbors] |  
[traffic summary]  
|| [mrouter vlan  
vlan_interface_nu  
mber]}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

The show lldp command is used as a network management tool to. Displays global information, such as frequency of transmissions, the hold time for packets being sent, and the delay time before LLDP initializes on an interface..

Examples

This example shows the lldp traffic summary for

PerleSwitch# show lldp traffic summary<cr>

LLDP Global statistics:

Summary of stats:

Frames Transmitted: 222000
Frames Received: 3000020
Frames Discarded: 0
TLVs Unrecognized: 0
MSAP Ageouts: 2
MSAP Inserts: 1
MSAP Deletes: 0

This example shows interface gigabitEthernet 1/1 lldp information

show lldp interface gigabitEthernet 1/1<cr>

GigabitEthernet1/1:

Tx: enabled
Rx: enabled
Maximum Neighbors: 10
TLVs Advertised:
port-description, system-name, system-description,
system-capabilities, management-address
port-vlan, vlan-name
mac-phy-cfg, power-management, link-aggregate, max-frame-size

This example shows all lldp traffic.

PerleSwitch>show lldp traffic<cr>

LLDP statistics:

Interface: Gi1/1
Frames Transmitted: 8
Frames Received: 45
Frames Discarded: 0
TLVs Unrecognized: 62
MSAP Ageouts: 0
MSAP Inserts: 5
MSAP Deletes: 0

Related Commands

show location

```
show location {civic-location [identifier identifier-string] | interface
[fastethernet slot / port-number] | [gigabitethernet slot / port-number] ||
civic-location [static]} | {[elin-location identifier identifier-string interface
[fastethernet slot / port-number] | [gigabitethernet slot / port-number] |
[static]}
```

Syntax	show location
Description	

```
{civic-location
[identifier
identifier-string] |
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| civic-location
[static]} |
```

```
{[elin-location
identifier
identifier-string
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [static]}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Show location civic and elin information.

Examples**PerleSwitch>show location civic-location static<cr>**

Civic location information

Identifier : civic-tst
Country :-----
Identifier : civic1
Country :-----
Identifier : civictest
Country :-----
Identifier : testcivic
Country :
City : toronto
Additional location info : mr-peters
Building : maincampus

Related Commands*location***show logging****show {logging}**

Syntax	show logging
Description	

{logging}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows logging messages.

Examples

This example show some logging messages you may see on the switch.

PerleSwitch#show logging<cr>

Syslog logging: enabled (7391 messages processed, 0 messages rate-limited, 6854 overruns)

Console logging: level debugging, 284 messges logged

Monitor logging: level debugging, 0 messges logged

Logging to:

Buffer logging: level debugging, 284 messges logged

File logging: file flash:/new/,
max size 4096, min size 2048,
level notifications, 24 messges logged

Trap logging: level informational

Logging to 172.16.55.88 (udp port 514, link up),
284 messges lines logged

Logging to 172.16.55.88 (tcp port 601, link down),
284 messges lines logged
0 messges lines failed

Log Buffer (4096 bytes):

00:01:06: %ALARMGR-5: ENVMON_PWR_OK: POWER SUPPLY 1 is OK

00:01:06: %ALARMGR-3: ENVMON_PWR_FAIL: POWER SUPPLY 2 is Not Present

00:01:07: %ALARMGR-5: ENVMON_TEMPERATURE_OK: Internal temperature sensor
has reached normal operating conditions

00:01:08: %PINIT-6: Cannot perform Boot Host DHCP process. All Vlans are
manually configured for addresses.

00:01:10: %PINIT-3: Error Couldn't connect to server Connection refused on
vlan1000

00:01:10: %NTPD-3: Unable to listen for broadcasts, no broadcast interfaces
available

00:01:17: %PINIT-6: IP Address of Vlan 1 assigned by Configuration
(172.16.113.77/16)

00:01:17: %PINIT-6: IP Address of Vlan 1000 assigned by Configuration
(169.254.0.1/29)

00:08:35: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface
GigabitEthernet1/3, changed state to up

00:08:35: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface Vlan1, changed
state to up

Related Commands

clear logging

logging

show mab interface

```
show mab interface {interface [all] | [fastethernet slot / port-number] |
[gigabitethernet slot / port-number] | radius statistics [interface fastethernet
slot / port-number] | [gigabitethernet slot / port-number]}
```

Syntax	show mab interface
Description	

```
{interface [all] |
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| radius statistics
[interface
fastethernet slot /
port-number] |
[gigabitethernet
slot /
port-number]}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch#
---------------	--------------

Hardware model	All models
----------------	------------

Usage Guidelines

Show MAB (Mac Authentication Bypass) for the interfaces or RADIUS.

Examples

This example shows the MAB for interface g1/1.

```
PerleSwitch#show mab interface g1/1<cr>
```

Related Commands

show mac address-table

```
show {mac address-table [address h.h.h] interface [fastethernet slot /
port-number] | [gigabitethernet slot / port-number] | [port-channel channel]}
notifications mac-move | [vlan vlan_interface_number]} | {[aging-time]} |
{[config-static address h.h.h] | [interface [gigabitethernet slot / port-number]
| [fastethernet slot / port-number] | [portchannel port-channel] | [vlan
vlan_interface_number]} | {[dynamic address h.h.h] interface [gigabitethernet
slot / port-number] | [fastethernet slot / port-number] | [portchannel
```

```

port-channel] | [vlan vlan_interface_number] | {[ interface [gigabitethernet
slot / port-number] | [fastethernet slot / port-number] | [portchannel
port-channel]} | {learning [vlan vlan_interface_number] | [fastethernet slot /
port-number] | [gigabitethernet slot / port-number] | [port-channel channel]} |
{[move update]} | {[multicast vlan vlan_interface_number] | {[notification]}
| {[quick-disconnect interface [fastethernet slot / port-number] |
[gigabitethernet slot / port-number] | [port-channel channel]} | {[secure
address h.h.h interface [fastethernet slot / port-number] | [gigabitethernet slot /
port-number] | [port-channel channel] vlan vlan_interface_number]} | {[static
address h.h.h interface [fastethernet slot / port-number] | [gigabitethernet slot /
port-number] | [port-channel channel] vlan vlan_interface_number]} | {[vlan
vlan_interface_number]}

```

Syntax **show mac address table**

Description

```

{mac
address-table
[address h.h.h]
interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [port-channel
channel]}
notifications
mac-move | [vlan
vlan_interface_nu
mber]} |

```

```

{[aging-time]} |

```

```

{[config-static
address h.h.h] |
[interface
[gigabitethernet
slot / port-number]
| [fastethernet
slot / port-number]
| [portchannel
port-channel] |
[vlan
vlan_interface_nu
mber]} |

```

```
{[dynamic address  
h.h.h] interface  
[gigabitethernet  
slot/port-number]  
| [fastethernet  
slot/port-number]  
| [portchannel  
port-channel] |  
[vlan  
vlan_interface_nu  
mber]] |
```

```
[interface  
gigabitethernet  
slot/port-number]  
| [fastethernet  
slot/port-number]  
| [portchannel  
port-channel]] |
```

```
{learning [vlan  
vlan_interface_nu  
mber] |  
[fastethernet slot/  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel]] |
```

```
{[move update]] |
```

```
{[notification]] |
```

```
{[quick-disconnect  
interface  
[fastethernet slot/  
port-number] |  
[gigabitethernet  
slot/port-number]  
| [port-channel  
channel]] |
```

```

{{secure address
h.h.h interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot/port-number]
| [port-channel
channel] | [vlan
vlan_interface_
number]} |

```

```

{{static address
h.h.h interface
[fastethernet slot /
port-number] |
[gigabitethernet
slot/port-number]
| [port-channel
channel] vlan
vlan_interface_
number}} |

```

```

{{vlan
vlan_interface_nu
mber}}

```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows the mac address table.

Examples

PerleSwitch#show mac address-table move update <cr>

Default/Current settings: Rcv Off/Off, Xmt Off/Off
 Rcv packet count : 0
 Rcv last src-mac-address : 0000:0000:0000
 Rcv last switch-ID : 0000:0000:0000
 Xmt packet count : 0

PerleSwitch#show mac address-table interface gigabitEthernet 1/1<cr>

Mac Address Table

```
-----
Vlan  Mac Address      Type    Ports
----  -
  1  0100.5e00.0182  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
  1  0100.5e00.0183  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
  1  0100.5e00.0184  STATIC  Gi1/1 Gi1/2 Gi1/3 Gi1/4 Gi1/5
Total Mac Addresses for this criterion: 3
```

PerleSwitch#show mac address-table learning vlan 1<cr>

```
Interface  Learning Status
-----  -
Vlan 0001  Enabled
```

PerleSwitch#show mac address-table address 0100.5e00.0181<cr>

Mac Address Table

```
-----
Vlan  Mac Address      Type    Ports
----  -
  1  0100.5e00.0181  STATIC  CPU
Total Mac Addresses for this criterion: 1
```

Related Commands

clear mac

show mls

show {mls qos [interface fastethernet slot / port-number] | [gigabitethernet slot / port-number]} | {maps}

Syntax **show mls**
Description

```
{mls qos [interface  
fastethernet slot /  
port-number] |  
[gigabitethernet  
slot /  
port-number]} |
```

```
{maps}
```

Command Default

None

Command Modes

PerleSwitch#

Hardware model

All models

Usage Guidelines

Command Options:

qos interface - displays configured values for the interfaces.

maps - displays QoS mapping information

Examples

This example show mls configuration for all interfaces.

PerleSwitch#show mls interface<cr>

GigabitEthernet1/1
trust state: CoS
trust mode: CoS
trust enabled flag: ena
CoS override: dis
default CoS: 0

GigabitEthernet1/2
trust state: DSCP
trust mode: DSCP
trust enabled flag: ena
CoS override: ena
default CoS: 0

GigabitEthernet1/3
trust state: CoS
trust mode: CoS
trust enabled flag: ena
CoS override: dis
default CoS: 7

GigabitEthernet1/4
trust state: CoS
trust mode: CoS
trust enabled flag: ena
CoS override: dis
default CoS: 7

GigabitEthernet1/5
trust state: CoS
trust mode: CoS
trust enabled flag: ena
CoS override: dis
default CoS: 0

Related Commands

fair-queue

mls

show monitor

show monitor

Syntax	show monitor
Description	

monitor

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows source and destination of ports that are being mirrored.

Examples

This example shows the ports that are being mirrored.

PerleSwitch#show monitor<cr>

Session 1

Destination

Source

Port :Gi1/1

Related Commands

[monitor](#)

show mrp

show mrp {ports | ring}

Syntax **show mrp**

Description

mrp {ports | ring}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows Port name and state of the ring.

Examples

This example shows the status for RING-ID: 1

PerleSwitch#show mrp ports<cr>

Portname Status

n/a n/a

n/a n/a

This example shows information for MRP ring 1

PerleSwitch#show mrp ring<cr>

MRP ring 1

Profile : 200 ms

Mode : Manager

Priority : 32768

VLAN ID : 1

Domain Name : ids-name

Domain ID : ffffffff-ffff-ffff-ffff-ffffffffffff

Topology Change Request Interval : 10ms

Topology Change Repeat Count : 3

Short Test Frame Interval : 10ms

Default Test Frame Interval : 20ms

Test Monitoring Interval Count : 3

Test Monitoring Extended Interval Count : N/A

Related Commands

show network-policy

show {**network-policy profile** *1-4294967295*}

Syntax	show network-policy
Description	

{**network-policy profile**
1-4294967295}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows configured network policies.

Examples

This example shows network policy profiles.

PerleSwitch> show network-policy profile<cr>

```
Network Policy Profile 1
  voice vlan 50 cos 2 dscp 50
  voice-signaling vlan dot1p
Interface:
  Gi1/2
Network Policy Profile 2
  voice vlan dot1p
  voice-signaling vlan untagged
Interface:
  none
Network Policy Profile 3
  voice vlan dot1p cos 1
Interface:
  Gi1/1
```

Related Commands

show ntp

show {ntp associations | status}

Syntax	show ntp
Description	

{associations | status}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows ntp associations and status.

Examples

PerleSwitch#show ntp associations<cr>

```

  remote      refid      st t when poll reach  delay  offset jitter
=====
=====
172.16.55.77 .INIT.      16 u - 1024  0  0.000  0.000  0.000
172.16.113.55 .INIT.      16 s -  32  0  0.000  0.000  0.000

```

PerleSwitch#show ntp status

Clock is not synchronized, stratum 16, no reference clock

Precision is 2**-18 s

Reference time is 00000000.00000000 (Thu, Feb 7 2036 2:28:16.000)

Clock offset is 0.000000 msec, root delay is 0.000 msec

Root dispersion is 1265.970 msec

System poll interval is 8 s

Related Commands

[*\(config-network-policy\)*](#)

show p-ring

show {p-ring}

Syntax	show p-ring
Description	

{p-ring}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Show status for p-ring.	
Examples	
This example shows the status of the p-ring.	
PerleSwitch#show p-ring<cr>	
Mode = Manager	
Ring Port 1 Gi1/1	
Ring Port 2 Gi1/2	
Current Ring State = Open	
Ring Port 1 State = Forwarding	
Ring Port 2 State = Blocked	
Related Commands	

show power inline

show power inline {**gigabitethernet** | **consumption** | **dynamic-priority** | **police** | **cr**}

Syntax	show power inline
Description	
<i>cr</i>	General global PoE status with a brief summary for all ports.
consumption { <i>gigabitethernet</i> | <i>cr</i> }	Display the configured consumption for a specific port or all ports.
dynamic-priority	Display the current operating state of each port as well as the configured priority for each port.
police { <i>gigabitethernet</i> | <i>cr</i> }	Display the configured state, operating state, configured police action, operating police state, cutoff power and operational power of a specific port or all ports.
gigabitethernet interface { <i>detail</i> }	Display PoE information for a specific port. If the key word "detail" is added, additional PoE information about the port is displayed.
Command Default	None
Command Modes	PerleSwitch#

Hardware model	All PoE models
-----------------------	----------------

Usage Guidelines

Show various status information for PoE.

Examples

This example shows the output of the generic show command for PoE.

PerleSwitch#show power inline<cr>

Input Voltage: 47.5V

Available:240.0(w) Used: 68.3(w) Remaining: 171.7(w)

Interface	Admin	Oper	Power (Watts)	Device	Class	Max
Gi1/1	static	on	15.4	Cisco IP Phone CP	2	15.4
Gi1/2	auto	off	0.0	n/a	n/a	15.4
Gi1/3	auto	off	0.0	n/a	n/a	15.4
Gi1/4	static	off	15.4	n/a	n/a	15.4
Gi1/5	static	off	15.4	n/a	n/a	15.4
Gi1/6	auto	on	6.7	Cisco IP Phone CP	2	15.4
Gi1/7	static	off	15.4	n/a	n/a	15.4
Gi1/8	never	off	0.0	n/a	n/a	15.4

This example show the output of the detailed port specific command.

PerleSwitch#show power inline gigabitethernet 1/1 detail<cr>

Interface: Gi1/1

Inline Power Mode: auto

Operational status: on

Device Detected: yes

Device Type: Cisco IP Phone CP-7961G,V, SIP41.8-5-2SR1S

IEEE Class: 2

Discovery mechanism used/configured: LLDP

Police: errdisable

Power Allocated

Admin Value: Not Configured

Power available to the device: 6.7W

Actual consumption

Measured at the port: 3.9W

Over Current Counter: 0

Short Current Counter: 0

Invalid Signature Counter: 0

Power Denied Counter: 0

Power Negotiation Used: LLDP-MED

LLDP Power Negotiation --Sent to PD-- --Rcvd from PD--

Power Type: PSE PD

Power Source: Primary unknown

Power Priority: low unknown

Requested Power(W): - 6.3W

Allocated Power(W): 6.7W -

Related Commands

power inline

show port-security

show port-security {*gigabitethernet slot / port-number*] | *fastethernet slot / port-number* | *port-channel channel address vlan interface_number* | *vlan interface_number*}

Syntax	show port-security
Description	

{*gigabitethernet slot / port-number*] | *fastethernet slot / port-number* | *port-channel channel address vlan interface_number* | *vlan interface_number*}

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines Shows all port security status or status by interface.

Examples

This example shows port security status on the switch.

PerleSwitch#show port-security<cr>

```

-----
Secure Port  MaxSecureAddr  CurrentAddr  SecurityViolation  Security Action
          1                0              0                0                shutdown
Total Addresses in System   : 0
Max Addresses limit in System : 8192

```

Related Commands

show processes

show {processes}

Syntax `show processes`

Description

{processes}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Show processes running on the switch.

Examples

This command shows the processes running on the switch.

PerleSwitch#show processes<cr>

```

PID USER   VSZ STAT COMMAND
  1 root   1708 S   init [5]
  2 root     0 SW  [kthreadd]
  3 root     0 SW  [ksoftirqd/0]
  5 root     0 SW< [kworker/0:0H]
  6 root     0 SW  [kworker/u:0]
  7 root     0 SW< [kworker/u:0H]
  8 root     0 SW  [watchdog/0]
  9 root     0 SW< [khelper]
 10 root     0 SW  [kdevtmpfs]
 11 root     0 SW< [netns]
 12 root     0 SW  [kworker/u:1]
210 root     0 SW  [bdi-default]
211 root     0 SW< [kintegrityd]
213 root     0 SW< [kblockd]
296 root     0 SW  [khubd]
308 root     0 SW  [irq/86-44e0b000]
328 root     0 SW  [irq/87-4802a000]
426 root     0 SW< [MC]
427 root     0 SW< [rpciod]
436 root     0 SW  [khungtaskd]
441 root     0 SW  [kswapd0]

```

Related Commands

show profinet

show profinet {sessions | status | alarms | mrp ring}

Syntax	show profinet
Description	
sessions	Information on active Profinet sessions
status	Information on the general status of Profinet
alarms	Information on global and port specific alarms
mrp ring	Information on Profinet MRP. IDS supports one mrp ring.
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

This command provides information on the Profinet feature. It includes general protocol status information, Profinet session specific information, Profinet alarm information as well as information on MRP ring when being managed via the Profinet protocol.

Examples

To display the Profinet alarm information.

```
PerleSwitch#show profinet alarms<cr>
```

Monitoring of Profinet Switch Alarms

RPS alarm: Off

Primary Temperature Alarm: Off

Secondary Temperature Alarm: Off

Major Relay Alarm: On

SDCard Alarm: On

Monitoring of Profinet Port Alarms

Port	Link Fault	Not Forwarding	Not Operating
Gi1/1	Off	On	Off
Gi1/2	Off	Off	Off
Gi1/3	Off	Off	Off
Gi1/4	Off	Off	Off
Gi1/5	Off	Off	Off
Gi1/6	On	Off	Off
Gi1/7	Off	Off	Off
Gi1/8	Off	Off	Off
Gi1/9	Off	Off	Off

Related Commands

profinet

show ptp

```
show {ptp clock} | {foreign-master-record} | {parent} | {port} |
{fastethernet slot / port-number | gigabitethernet slot / port-number
time-properties}
```

Syntax	show ptp
Description	

{ptp clock} |

{foreign-master-re
cord} |

{parent} |

{port} |

```
{fastethernet slot /
port-number |
gigabitethernet
slot/port-number
time-properties}
```

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows options for PTP.

Examples

This example shows the ptp clock for PTPv2.

```
PerleSwitch#show ptp clock<cr>
```

```
PTP Version 2: Mode: boundary peer-to-peer
```

```
=====
```

Default Data Set

```
-----
twoStepFlag      :1
slaveOnly        :0
numberPorts      :5
priority1        :128
clockClass       :248
clockAccuracy    :0xfe
offsetScaledLogVariance:0xffff
priority2        :128
clockIdentity    :68c90b.ffe.c158d8
domainNumber     :0
```

Current Data Set

```
-----
stepsRemoved    :0
offsetFromMaster:0.0
meanPathDelay   :0.0
```

Related Commands

[\(config-ptp-v1\)](#)

[\(config-ptp-v2\)](#)

show radius

```
show {radius statistics details}
```

Syntax	show radius
Description	
	{radius statistics details}
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Show RADIUS statistics and details.	
Examples	
This example shows the statistics for your TACACS server.	
PerleSwitch#show radius statistics<cr>	
All:	
	Auth. Acct.
Requests :	10 10
Responses:	5 5
Access Rejects:	0 0
Related Commands	
<i>clear radius statistics</i>	
<i>show radius</i>	

show reload

show {reload}

Syntax	show reload
Description	
	{reload}
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models
Usage Guidelines	
Shows you whether there are any reloads scheduled.	

Examples

This command shows you the scheduled reloads for the switch.

PerleSwitch#show reload<cr>

Reload scheduled for 22:30 summer-test Wed June 01 2016 (in 4 hours and 20 minutes) on console.

Related Commands

reload

clock

show running-config

show {*running-config* [*all*]}

Syntax	show running-config
---------------	----------------------------

Description	
--------------------	--

{<i>running-config</i> <i>[all]</i>}	
---	--

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows the current configuration running on the switch. To make this configuration permanent you must copy this configuration to the startup configuration.

Examples

This example show running-config.

PerleSwitch#show running config<cr>

Building running-config . . .

!

!

version 0.4.B530

!

!"sdm prefer ..." must appear before any other configuration commands.

sdm prefer dual-ipv4-and-ipv6 default

!

!

service timestamps log uptime

!

hostname test

enable secret 5 \$1\$vJYr\$FaK8jDwVKeqI99OI3oGUe0

!

boot host dhcp

!

logging file flash:lynlog

no logging console

!

username test

username testlockout secret 5 \$1\$z7ba\$hMff8c0yPbhG3e5F6IMSQ.

username test2 secret 5 \$1\$xn3M\$UmeG0oh8ZrCQCAhD0zBAR0

.....more

Related Commands

[show startup-config](#)

show scada modbus

tcp server {<cr> | **connections**}

Syntax	modbus tcp server
Description	

<cr>

Display generic Modbus info and statistics.

connections

Display information on all Modbus connections.

Command Default

None

Command Modes

PerleSwitch#

Hardware model

All models

Usage Guidelines

Displays information on the Modbus Server feature.

Examples

A sample output of the Modbus server information command.

PerleSwitch#showscada modbus tcp server<cr>

The Modbus TCP server is enabled:

Listening on TCP port 502, 1 maximum simultaneous connection.

Client connection totals:

Current connections: 0

Total accepted connections: 0

Connection errors: 0

Closed connections: 0

Message totals:

Received commands: 0

Sent responses: 0

Sent exceptions: 0

A sample output of the Modbus server connection command.

PerleSwitch#show scada modbus tcp server connections<cr>

The Modbus TCP server is enabled:

Listening on TCP port 502, 1 maximum simultaneous connection.

There are 0 client connections to the Modbus TCP server.

Related Commands

scada modbus

clear scada modbus

show sdm

show {sdm prefer}

Syntax	show sdm
Description	

{sdm prefer}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Displays whether the switch is running IPv4 or IPv6 or both protocols on this switch.

Examples

This example shows the current template for sdm.

PerleSwitch#show sdm prefer<cr>

The current template is 'dual-ipv4-and-ipv6 default' template

Related Command

sdm

show snmp

show {**snmp** [**community**] | [**contact**] | [**context**] | [**engineid**] | [**group**] | [**host**] | [**location**] | [**user**] | [**view**]}

Syntax	show snmp
---------------	------------------

Description

{**snmp**
[**community**] |
[**contact**] |
[**context**] |
[**engineid**] |
[**group**] | [**host**] |
[**location**] | [**user**]
| [**view**]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows configured options for SNMP.

Examples

This example show the configured options for SNMP.

PerleSwitch#show snmp<cr>

Contact: Office

Location:warehouse

SNMP agent enabled.

Related Commands

show spanning-tree

show {**spanning-tree** [**active**] | [**bridge**] | [**detail**] | **fastethernet** *slot / port-number* | **gigabitethernet** *slot / port-number* | **mst** *mst-instance-list configuration* | **detail** | **interface** | **root** | **vlan** *vlan_interface_number/range*}

Syntax	show spanning-tree
Description	

```
{spanning-tree
[active] |
[bridge] | [detail]
| fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| mst
mst-instance-list
configuration |
detail | interface |
root | vlan
vlan_interface_number/range}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch#
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows spanning tree details.

Examples

This example shows active spanning trees.

PerleSwitch#show spanning-tree ctive<cr>

VLAN 1

Spanning tree enabled protocol rstp

Root ID Priority 32768

Address 80C1.6ED6.6C90

Cost 2000000

Port 1 (GigabitEthernet1/3)

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 32768

Address 68C9.0BC1.58D8

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Aging Time 200000 sec

Interface Role Sts Cost Prio.Nbr Type

Gi1/1 Root forw 2000000 128.1 auto

Related Commands

[*spanning-tree*](#)

show ssh

{ssh}

Syntax **show ssh****Description**

{ssh}

Command Default None

Command Modes PerleSwitch>

Hardware model All models

Usage Guidelines

Show users connected via ssh.

Examples

This example show which users are connected.

PerleSwitch>show ssh<cr>

Line	User	Host	Idle	Location
1 vty 0	admin	idle	00:28:26	172.16.113.31
2 vty 1	admin	idle	00:00:03	172.16.113.31

Related Commands

ip ssh
clear line

show startup-config

show {**startup-config**}

Syntax **show startup-config**

Description

{**startup-config**}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

This will be the configuration that the switch uses when it boots up.

Examples

This example show startup config.

```
PerleSwitch#show startup config<cr>
```

```

!
!
version 0.4.B530
!
! "sdm prefer ..." must appear before any other configuration commands.
sdm prefer dual-ipv4-and-ipv6 default
!
!
service timestamps log uptime
!
hostname test
enable secret 5 $1$vJYr$FaK8jDwVKeqI99OI3oGUe0
!
boot host dhcp
!
logging file flash:lynlog
no logging console
!
username test
username testlockout secret 5 $1$z7ba$hMff8c0yPbhG3e5F6IMSQ.
username test2 secret 5 $1$xn3M$UmeG0oh8ZrCQCAhD0zBAR0
username lyn
username nopassword
username perle1 privilege 15 secret 5 $1$VMP9$k9RU81B0T25lgZQcaho3w1
.....more

```

Related Commands**show storm-control**

```
show {storm-control}
```

Syntax	show storm-control
Description	
{storm-control}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows storm control on all interfaces.

Examples

This example shows storm control on all interfaces.

PerleSwitch#show storm-control<cr>

Interface	Port State	Ingress Limit	Egress Limit
Gi1/1	Forwarding	Disabled	50 %
Gi1/2	Blocking	Disabled	Disabled
Gi1/3	Forwarding	Disabled	Disabled
Gi1/4	Blocking	Disabled	Disabled
Gi1/5	Forwarding	Disabled	Disabled

Related Commands

(config-if)#storm-control

show sysinfo

show {sysinfo}

Syntax	show sysinfo
Description	
{sysinfo}	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows system information.

Examples

This example shows you the output from the sysinfo command.

PerleSwitch#show sysinfo<cr>

```

----- show sysinfo -----

Last Alarm ..... No Alarm

System Description..... Perle Managed Switch
System Name..... test
System Location.....
System Contact.....

System Up Time..... 1 hour 28 minutes 29 seconds
System Date and Time (local time zone)..... 2016-06-01 17:50:58
System IP Address..... 172.16.113.77
Boot Software Release..... V1.01B
Boot Software Build Date..... Nov 24 2015 - 11:58:07

Software Feature Set .....All models
Running Software Release..... 0.4.B530
Running Software Build Date..... Wed Jun 01 15:20:59
summer-test 2016

Current Software Release..... 0.4.B530
Current Software Build Date..... Wed Jun 01 15:20:59
summer-test 2016

Backup Software Release..... 0.4.B530
Backup Software Build Date..... Tue May 31 12:58:21
summer-test 2016

Hardware Revision..... 1.00
Model Name..... IDS-305G-CMD2
Part Number..... 07012950
Serial Number..... 123412341234
Base MAC Address..... 68:c9:0b:c1:58:d8

Startup-Configuration state..... Not in Sync with
Running-configuration

Power Supply P1, State..... Good
Power Supply P2, State..... Absent
more .....
```

Related Commands*show processes***show system****show system** {mtu}

Syntax **show system****Description****{mtu}**

Command Default None

Command Modes PerleSystem>

Hardware model All models

Usage Guidelines

Examples

This example shows the setting on the switch for mtu.

PerleSwitch>show system mtu<cr>

System mtu: jumbo

Related Commands*system***show tacacs+****show** {tacacs+ statistics details}

Syntax **show tacacs+****Description****{statistics details}**

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows statistics for your TACACS server.

Examples

This example shows the statistics for your TACACS server.

PerleSwitch#show tacacs+ statistics<cr>

All:

	Auth.	Acct.
Requests :	10	10
Responses:	5	5
Access Rejects:	0	0

Related Commands

clear tacacs+ statistics

show tacacs+

aaa group

show task-status

show {task-status}

Syntax **show task-status****Description**

{task-status}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Shows internal tasks for the switch.

Examples

This example show the internal tasks for the switch.

PerleSwitch#show task-status<cr>

```
[H[JMem: 149832K used, 361196K free, 0K shrd, 10784K buff, 41692K cached
CPU: 0% usr 9% sys 0% nic 90% idle 0% io 0% irq 0% sirq
Load average: 0.10 0.15 0.14 1/145 2331
[7m PID PPID USER  STAT  VSZ %VSZ CPU %CPU COMMAND[0m
 3   2 root  SW   0 0% 0 9% [ksoftirqd/0]
1802 1343 apache_w S N 224m 45% 0 0% /usr/apache/bin/httpd -X
1359 1343 root   S N 72232 14% 0 0% clpd
2151 1343 root   S N 71376 14% 0 0% rsyslogd -n -x -Q
1343 1 root   S N 56692 11% 0 0% /usr/bin/perleinit
1788 1343 root   S N 44608 9% 0 0% rsyslogd0 -n -x -Q
-i/var/run/rsys
1807 1343 root   S N 42816 8% 0 0% ifmgr 0
1796 1343 root   S N 42812 8% 0 0% alarmmgr 0
1799 1343 root   S N 34840 7% 0 0% snmpd -f udp:161 udp6:161
1360 1343 root   S N 29616 6% 0 0% config_db
1826 1343 root   S N 26368 5% 0 0% portctl 0 nopasswd 4
1795 1343 root   R N 26284 5% 0 0% trapmgr 0
1801 1343 root   S N 26224 5% 0 0% p_ring_mgr 0
1797 1343 root   S N 26224 5% 0 0% alertmgr 0
1760 1343 root   S N 25832 5% 0 0% dhcpd -q -4 -f -cf
/etc/dhcpd.conf
1805 1343 root   S N 9868 2% 0 0% dmgrd
--More--
```

Related Commands

show tech-support

show {tech-support}

Syntax	show tech-support
Description	

{tech-support}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

This would be the file you need to send to technical support if you need help.

Examples

This example show you how to gather information for technical support.

PerleSwitch#show tech-support<cr>

----- show clock -----

Wed Jun 01 17:50:57 summer-test 2016

----- show sysinfo -----

Last Alarm No Alarm

System Description..... Perle Managed Switch

System Name..... test

System Location.....

System Contact.....

System Up Time..... 1 hour 28 minutes 29 seconds

System Date and Time (local time zone)..... 2016-06-01 17:50:58

System IP Address..... 172.16.113.77

Boot Software Release..... V1.01B

Boot Software Build Date..... Nov 24 2015 - 11:58:07

Software Feature SetAll models

Running Software Release..... 0.4.B530

Running Software Build Date..... Wed Jun 01 15:20:59
summer-test 2016

Current Software Release..... 0.4.B530

Current Software Build Date..... Wed Jun 01 15:20:59
summer-test 2016

Backup Software Release..... 0.4.B530

Backup Software Build Date..... Tue May 31 12:58:21
summer-test 2016

Hardware Revision..... 1.00

Model Name..... IDS-305G-CMD2

Part Number..... 07012950

Serial Number..... 123412341234

Base MAC Address..... 68:c9:0b:c1:58:d8

Startup-Configuration state..... Not in Sync with
Running-configuration

Power Supply P1, State..... Good

Power Supply P2, State..... Absent

more

Related Commands

debug
show processes
show task-status
systat
ping
traceroute
test

show terminal**show terminal**

Syntax	show terminal
Description	

terminal

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Shows the terminal parameters of length, width, history enabled, history size and logging monitor.

Examples

This examples displays the parameter for terminal.

PerleSwitch>show terminal<cr>

Terminal length = 24
Terminal width = 79
Terminal history is enabled
Terminal history size = 11
Terminal logging monitor is OFF

Related Commands

console 0-0

show users

show {users [all]}

Syntax	show users
Description	

{users [all]}

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The show user command shows the active connected users to vty sessions. The all option shows all vty's from 0 -15.

Examples

This examples displays all vty sessions regardless of whether there is an active user connected.

PerleSwitch>show users all<cr>

Line	User	Host	Idle	Location
1 vty 0	admin	idle	00:33:59	172.16.113.31
2 vty 1	admin	idle	00:05:36	172.16.113.31
3 vty 2				
4 vty 3				
5 vty 4				
6 vty 5				
7 vty 6				
8 vty 7				
9 vty 8				
10 vty 9				
11 vty 10				
12 vty 11				
13 vty 12				
14 vty 13				
15 vty 14				
16 vty 15				

Related Commands

Interface line mode

console 0-0

vtty 0-15

show version

show {**version** [**backup**] | [**current**] | [**flash:**] | [**sdf**flash:]}

Syntax	show version
Description	

```
{version [backup]
| [current] |
[flash:] |
[sdf]flash:}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch>
----------------------	--------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Shows information about versions of software running on the switch.

Examples

PerleSwitch#show version backup

```
Name:      Managed Industrial Switch
Version:   0.4.B412
Date created: Wed Apr 13 15:43:52 EDT 2016
Source:    http://172.16.4.181/public/lyn.img
Downloaded: Sun Dec 31 20:04:54 testzone 2000
Size:      37847292 bytes
```

PerleSwitch#show version current

```
Name:      Managed Industrial Switch
Version:   0.4.B425
Date created: Tue Apr 26 09:26:59 summer-test 2016
Source:    http://172.16.4.181/public/fit-vierullo.img
Downloaded: Tue Apr 26 09:33:28 summer-test 2016
Size:      37899984 bytes
```

PerleSwitch#show version flash:fit-dkong.img

```
Name:      Managed Industrial Switch
Version:   0.4.B425
Date created: Wed May 04 20:09:36 summer-test 2016
Size:      37900544 bytes
```

Related Commands

show running-config

show vlan

show vlan

Syntax	show vlan
Description	

vlan

Command Default	None
Command Modes	PerleSwitch>
Hardware model	All models

Usage Guidelines

Examples

This example shows all vlans.

PerleSwitch>show vlan

VLAN Name	Status	Port Members(*=non-native vlan)
-----	-----	-----
1 default	active	Gi1/1, Gi1/2, Gi1/3, Gi1/4, Gi1/5
2 office-vlan2	active	
3 VLAN0003	active	
4 VLAN0004	active	
5 VLAN0005	active	
10 VLAN0010	act/lshut	
11 VLAN0011	act/lshut	
12 VLAN0012	act/lshut	
13 VLAN0013	act/lshut	
14 VLAN0014	act/lshut	
15 VLAN0015	act/lshut	
16 VLAN0016	act/lshut	
17 VLAN0017	act/lshut	
18 VLAN0018	act/lshut	
19 VLAN0019	act/lshut	
20 VLAN0020	act/lshut	
1000 VLAN1000	active	

Related Commands

Vlan config mode

ssh

ssh `{[-c 3des | aes-128-cbc | aes192-cbc | aes256-cbc]}` | `{[-h hmac-md5-128 | hmac-md5-96 | hmac-sha1-160 | hmac-sha1-96]}` | `{[-l login-name]}` | `{[-p 1-65535]}` | `{-v [1 | 2]}` | `{a.b.c.d or hostname}`

Syntax	ssh
Description	

`{[-c 3des | aes-128-cbc | aes192-cbc | aes256-cbc]}` |

`{[-h hmac-md5-128 | hmac-md5-96 | hmac-sha1-160 | hmac-sha1-96]}`

`{[-l login-name]}` |

`{[-p 1-65535]}` |

`{-v [1 | 2]}`

`{a.b.c.d or hostname}`

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

SSH to a remote host.

Examples

This example will ssh to remote host 172.16.4.91.

```
PerleSwitch(config)#ssh 172.16.4.91<cr>
```

Related Commands

[*telnet*](#)

systat

systat `all`

Syntax	systat			
Description				
	[all]			
Command Default	None			
Command Modes	PerleSwitch#			
Hardware model	All models			
Usage Guidelines				
Shows system statuses.				
all - includes inactive ports				
Examples				
This example shows the system status for all active ports.				
PerleSwitch#systat<cr>				
Line	User	Host	Idle	Location
1 vty	admin	idle	07:00:20	172.16.23.121
1 vty	lyn	idle	01:00:20	172.16.23.121
Related Commands				

telnet

telnet {*a.b.c.d or hostname* [/ipv4 | /ipv6 | 1-65535]}

Syntax	telnet
Description	
	[/ipv4 | /ipv6 | 1-65535]}
Command Default	ipv4
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Telnet to remote host.

IPv4 - IPv6 address or hostname.

/ipv4 - forces the connection to use the ipv4 protocol.

/ipv6 - forces the connection to use the ipv6 protocol.

1-65535 - the TCP port you want to connection to on the remote host.

Examples

This example Telnets to a remote host with an ipv4 address of 172.16.5.77.

```
PerleSwitch# telnet 172.16.5.77<cr>
```

Related Commands

[ssh](#)

terminal

terminal {**history size** *history-buffer-size*} | {**length 0-512**} | {**width 0-512**}

Use the no form of this command to negate a command or set its defaults.

Syntax	terminal
Description	
{ history size <i>history-buffer-size</i> }	
{ length 0-512 }	
{ width 0-512 }	
Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

history - enables and sets the terminal screen history buffer size.

length - sets the length of the terminal screen

width - sets the width of the terminal screen

Examples

This command will set the history buffer size to 50 for the current terminal session. This is not a permanent config parameter and it will not be saved to running config.

PerleSwitch#terminal history size 50<cr>

Related Commands**test**

test {*cable-diagnostic interface gigabitethernet slot / port-number*}

Syntax **test**

Description

{*cable-diagnostic
interface
gigabitethernet
slot / port-number*}

Command Default None

Command Modes PerleSwitch#

Hardware model All models

Usage Guidelines

Use this command to test gigabitethernet interfaces.

Examples

This example show you how to test cable gigabitethernet 1/1.

PerleSwitch#test interface g 1/1<cr>

Starting VCT test on Gi1/1
VCT test on Gi1/1 in progress....
VCT test on Gi1/1 completed

Pair 0
Result short
Amplitude of Reflection 208 mVolts
Approximate Distance to short 0 meters
Polarity Negative

Pair 1
Result short
Amplitude of Reflection 152 mVolts
Approximate Distance to short 3 meters
Polarity Negative

Pair 2
Result open
Amplitude of Reflection 856 mVolts
Approximate Distance to open 0 meters
Polarity Positive

Pair 3
Result open
Amplitude of Reflection 864 mVolts
Approximate Distance to open 1 meters
Polarity Positive

Related Commands

ping

debug

traceroute

traceroute

traceroute *{ip_address_host_name}*

Use the no form of this command to disable test.

Syntax	traceroute
Description	

{ip_address_host_name}

Command Default	None
Command Modes	PerleSwitch#
Hardware model	All models

Usage Guidelines

Traces the route from the switch to the destination address. Specify an ipv4 address or a resolvable host name.

Examples

This example will trace the route from the switch to a host with ipv4 address of 172.16.4.90.

```
PerleSwitch> traceroute 172.16.4.90 <cr>
```

This example will trace the route from the switch to a host with a hostname of LAB1.

```
PerleSwitch> traceroute LAB1 <cr>
```

Related Commands

ping

undebug

undebug {alarmmgr | alertmgr | all | bandwidth-control | clpd | cnslmgr | dmgrd | dot1x-authenticator | dot1x-supPLICANT | dhcp-client | dhcp-relay-agent | dsa | garp | gmrp | gvrp | ifmgr | igmp | init | ip | kernel | lldp | logging | mld | ring | power-inline | profinet | profinet-dcp | pslmv-driver | ptp | snmp | spanning-tree | trapmgr | vty}

Syntax	undebug
Description	

```

{alarmmgr |
alertmgr | all |
bandwidth-control
| clpd |
dot1x-authenticato
r |
dot1x-supplicant |
enslmgr | dmgrd |
dhcp-client |
dhepr-relay-agent |
dsa | garp |
gmrp | gvrp |
ifmgr | igmp |
init | ip | kernel
| lldp | logging |
mld | ring |
power-inline |
profinet |
profinet-dcp |
pslmv-driver | ptp
| snmp |
spanning-tree |
trapmgr | vty}

```

Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Turns off debug for the specified feature or select all to disable all debug features.

Examples

This example shows you how to set debug on for alertmgr.

```
PerleSwitch# debug alertmgr <cr>
```

This example shows you how to set debug on for dhcp server.

```
PerleSwitch#debug ip dhcp server <cr>
```

Related Commands

show debugging

debug

4 Global Configuration Mode

This chapter defines all the CLI commands in Global Configuration Mode.

aaa accounting

```
aaa {accounting dot1x default start-stop group group-name | radius | tacacs+}  
| {accounting exec named accounting list | default none | start-stop |  
broadcast | group | radius | tacacs+ | stop-only broadcast | group |  
radius | tacacs+} | {accounting system default none | start-stop default none  
| broadcast | group | radius | tacacs+}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	aaa accounting
Description	
	<pre>aaa {accounting dot1x default start-stop group <i>group-name</i> | radius | tacacs+} | {accounting exec <i>named accounting list</i> | default none | start-stop | broadcast | group | radius | tacacs+ | stop-only broadcast | group | radius | tacacs+} | {accounting system default none | start-stop default none | broadcast | group | radius | tacacs+}</pre>
Command Default	aaa accounting is disabled.
Command Modes	PerleSwitch(config)#

Usage Guidelines

Use this command to assign servers to receive the start-stop accounting messages. Sends a start accounting message at the beginning of a process and a stop accounting message at the end of the process.

account dot1x -to enable the 802.1x authentication sessions use this command. Specify the group to be used for accounting services.

accounting exec - configures the aaa accounting configuration parameters for SSH and Telnet access.

accounting system- set this command to perform accounting for all system-level events not associated with users such as reloads.

Accounting methods:

- a predefined group
- RADIUS servers (all defined RADIUS servers)
- TACACS+ (all defined TACACS+ servers)

Accounting list is maximum of 31 characters.

Examples

This example configures aaa accounting to use all previous defined RADIUS servers to receive stop and start accounting messages.

PerleSwitch(config)#aaa accounting dot1x default start-stop group radius<cr>

Related Commands

aaa authorization

aaa authentication

aaa group

PerleSwitch(config-sg-radius)#

PerleSwitch(config-sg-tacacs+)

aaa local

aaa group

Note: This command requires access to a RADIUS server. The RADIUS server must be configured to accept and log start/stop messages from the AAA client.

aaa authentication

aaa {**authentication attempts login 1-25**} | {**dot1x default group group-name | radius**} | {**login group-name | default | local | none | [radius] | tacacs+**} | {**console**} | {**vtty**}

Use the no form of this command to negate a command or set its defaults.

Syntax	aaa authentication
Description	

```
{authentication
attempts login
1-25}
```

```
{dot1x default
group group-name
| radius}
```

```
{login
group-name |
default | local |
none | [radius] |
tacacs+}
```

```
{console} |
```

```
{vty}
```

Command Default	aaa authentication attempts login 3 no aaa local authentication attempts max-fail
------------------------	--

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

authentication attempts -specify the number of times that a user can attempt to login before some action is taken.

Console, Telnet, SSH:

- When retry limit is reached, the session is restarted and the signals are dropped on the port
- Default is 3

dot1x - use the default group name or specify RADIUS for authentication.

Examples

This example sets login attempts to 10 tries.

```
PerleSwitch(config)#aaa authentication attempts login 10<cr>
```

Related Commands

aaa accounting

aaa authorization

aaa authorization

```
aaa {authorization console | exec default group group-name | if-authenticated
| local | none | radius | tacacs+} | {console} | {vty}
```

Use the no form of this command to negate a command or set its defaults.

Syntax **aaa**
Description

{**authorization**
exec console | **exec**
default group
group-name |
radius | **tacacs+** |
if-authenticated |
local | **none**] |
radius | **tacacs+**}

{**console**} |

{**vty**}

Command Default

Command Modes PerleSwitch(config)#

Hardware model All models

Usage Guidelines

This value is based on the configured setting *PerleSwitch(config-sg-radius)#* and *PerleSwitch(config-sg-tacacs+)*. Privileged users cannot be locked out.

This feature applies to the following modes.

- Console
 - Telnet
 - SSH
 - Web
-

Examples

This example allows the user to start a CLI session (command shell).

PerleSwitch(config)#aaa authorization exec default group tacacs+<cr>

Related Commands

aaa accounting

aaa authentication

aaa authorization

aaa group

PerleSwitch(config-sg-radius)#

PerleSwitch(config-sg-tacacs+)

aaa group

aaa {**group server radius** *radius-name* | **tacacs+** *tacacs-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	aaa group server
Description	

```
{group server
radius
radius-name |
tacacs+
tacacs-name}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The server group lists the IP addresses of the selected server hosts.

Related Commands

This example defines the aaa server group with a group name.

```
PerleSwitch(config)# aaa group server radius rad1<cr>
```

```
PerleSwitch(config-sg-radius)#server name rad1<cr>
```

```
PerleSwitch(config-sg-radius)#
```

```
server
```

Use the no form of this command to negate a command or set its defaults.

Syntax	server
Description	

Command Default	No default.
------------------------	-------------

Command Modes	PerleSwitch(config-sg-radius)#
----------------------	--------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Sets the RADIUS server name and associates it with the group. The no version will remove the server from the group.

Examples

This example adds the RADIUS server name to rad1 to the radius server group.

```
PerleSwitch(config-sg-radius)#server name rad1<cr>
```

Related Commands

aaa group

PerleSwitch(config-sg-tacacs+)

{server}

Use the no form of this command to negate a command or set its defaults.

Syntax	server
Description	

Command Default	No default.
------------------------	-------------

Command Modes	PerleSwitch(config-sg-tacacs)#
----------------------	--------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Sets the TACACS+ server name and associates it with the group. The no version will remove the server from the group.

Examples

This example adds the TACACS+ server tac1 to the TACACS+ server group.

```
PerleSwitch(config-sg-tacacs)#server name tac1<cr>
```

Related Commands

aaa group

aaa local

aaa {local authentication attempts max-fail 1-65535}

Use the no form of this command to negate a command or set its defaults.

Syntax	aaa
Description	

```
{local
authentication
attempts max-fail
1-65535}
```

Command Default no authentication attempts max-fail

Command Modes PerleSwitch(config)#

Hardware model All models

Usage Guidelines

This is a global parameter and when enabled means that strong passwords are required on the switch.

Strong password protection rules are as follows:

- at least 8 characters long
- meet at least three out of four of these requirements
 - upper case letter
 - lower case letter
 - numeric character
 - special character
- cannot repeat the same character more than 3 times consecutively
- cannot be the same as the username

If strong password is not enabled, then passwords can be up to 25 in length

up to 25 characters in length

can be blank

All passwords are stored in our internal database using a “secret” and a md5 algorithm.

Examples

This example set local authentication attempts to 3. After 3 failed attempts the user will be locked out by the switch.

```
PerleSwitch(config)#local authentication attempts max-fail 3<cr>
```

Related Commands

clear aaa

aaa password

```
aaa {password restriction}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	aaa
Description	
{password restriction}	
Command Default	None
Command Modes	PerleSwitch(config)#

Usage Guidelines

This is a global parameter and when enabled means that strong passwords are required on the switch.

Strong password protection rules are as follows:

at least 8 characters long

meet at least three out of four of these requirements

- upper case letter
- lower case letter
- numeric character
- special character

cannot repeat the same character more than 3 times consecutively

cannot be the same as the username

If strong password is not enabled, then passwords can be up to 25 in length

up to 25 characters in length

can be blank

All passwords are stored in our internal database using a “secret” and a md5 algorithm.

Examples

This example will set restrict password checking on the switch.

```
PerleSwitch(config)#aaa password restriction<cr>
```

Related Commands

aaa local

aaa authentication

aaa authorization

username

clear aaa

show aaa

show users

alarm

```
alarm {facility power-supply rps disable | notifies | [relay major] | syslog}
{temperature primary high -150 - 300 | low -200 -250 | notifies | relay major
| syslog | secondary high -150 - 300 | low -200 -250 | notifies | relay major |
syslog} | {profile alarm-profile-name} | {relay-mode energized}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	alarm
Description	
{facility	
power-supply rps	
disable | notifies |	
[relay major] |	
syslog}	
{temperature	
primary high -150	
- 300 | low -200	
-250 | notifies |	
relay major] |	
syslog | secondary	
high -150 - 300 |	
low -200 -250 |	
notifies | relay	
major | syslog}	
{profile	
<i>alarm-profile-name</i>	
}	
{relay-mode	
energized}	

Command Default

no alarm facility power-supply disabled
no alarm facility power-supply notifies
alarm facility power-supply syslog
no alarm facility power-supply relay major
no alarm facility sd-card enable
no alarm facility sd-card notifies
no alarm facility sd-card syslog
no alarm facility sd-card relay major
alarm facility temperature primary notifies
alarm facility temperature primary syslog
alarm facility temperature primary relay major
alarm facility temperature primary high 95
alarm facility temperature primary low -20
no alarm facility temperature secondary notifies
no alarm facility temperature secondary syslog
no alarm facility temperature secondary relay major
no alarm facility temperature secondary high 300
no alarm facility temperature secondary low -200
no alarm relay-mode de-energized

Command Modes PerleSwitch(config)#

Hardware model All models

Usage Guidelines

This command defines what state the relay will be placed in when an alarm condition exists. In default mode, the relay is set to not energized (normally closed) condition. When the switch is in running mode and determines that no alarm condition exists, the relay will energized the switch (thereby "opening the contact"). When the relay is engaged the ALR LED will be blinking red.

Examples

This example will set the relay-mode to energized.

```
PerleSwitch(config)#alarm relay-mode energized<cr>
```

Related Command

show alarm

The default alarm profile (defaultPort) cannot be deleted.

archive

(alarm-profile)

```
{alarm [link-fault] | [not-forwarding] | [not-operating]} | {notifies
[link-fault] | [not-forwarding] | [not-operating]} | {relay-major [link-fault]
| [not-forwarding] | [not-operating]} | {syslog [link-fault] |
[not-forwarding] | [not-operating]}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	alarm
Description	
	<pre>{alarm [link-fault] | [not-forwarding] | [not-operating]} |</pre>
	<pre>{notifies [link-fault] | [not-forwarding] | [not-operating]} |</pre>
	<pre>{relay-major [link-fault] | [not-forwarding] | [not-operating]} |</pre>
	<pre>{syslog [link-fault] | [not-forwarding] | [not-operating]}</pre>
Command Default	alarm profile default port alarm not-operating syslog not operating notifies not operating
Command Modes	PerleSwitch(alarm-profile)#
Hardware model	All models

Usage Guidelines

The alarm profile command is used to create a profile to monitor for certain port conditions (link-status, not-forwarding and not operating) on an interface and perform actions should these conditions occur. If snmp is enabled a snmp trap message will be sent to the snmp server receiving traps and/or a syslog message will be set to the pre-defined syslog server or the relay-major (relay) will be energized or de-energized depending on the initial state (ie toggled) of the relay.

Examples

This example shows how to monitor the port for a link-status condition and sent a syslog message to the syslog server.

```
PerleSwitch(alarm-profile)#syslog link-fault<cr>
```

Related Commands

show alarm

logging

(config-archive)

```
{maximum 1-14} | {path flash: | ftp: | http: | https: | scp: | sftp: |  
tftp:} | {time-period 0-525600} | {write memory}
```

Use the no form of this command to negate a command or set its defaults.

Syntax (config-archive)#

Description

```
{maximum 1-14} |
```

```
{path flash: | ftp:  
| http: | https: |  
scp: | sftp: |  
tftp:} |
```

```
{time-period  
0-525600} |
```

```
{write memory}
```

Command Default

no path
maximum 10
no time-period
no write-memory

Command Modes

PerleSwitch(config-archive)#

Hardware model

All models

Usage Guidelines

Path must exist. Default path is the same as the no form of the command.
 Number of archives copies of the configurations to be keep in the archive list.
 Archive list can contain between 1-14 configurations if saved on sdflash or nvram.
 This is the full path to where the archive configuration files will be kept.

```
flash:perle-image-name.img |
ftp://[username[:password]@location]/directory/perle-image-name.img
http://[[username:password]@][hostname | host-ip [directory]
/perle-image-name.img |
https://[[username:password]@][hostname | host-ip [directory]
/perle-image-name.img |
scp://username@location/directory/perle-image-name.img |
sftp://[username[:password]@location]/directory/perle-image-name.img |
tftp://[location]/directory/perle-image-name.img |
```

Time period is the time in minutes to automatically save the running configuration to a archive file.

Write memory enables the saving of the configuration to an archive file every time you copy running-config to start-up config

Examples

This example shows you how to set up a archive path to be used with the write-memory command.

```
PerleSwitch(config-archive)#path flash:<cr>
PerleSwitch(config-archive)#exit<cr>
PerleSwitch(config)#exit
PerleSwitch#copy running-config startup-config
Destination filename[startup-config]?<cr>
```

```
5643 bytes copied
Copy in progress...
5643 bytes copied
```

If no file name is supplied by you, then your running config will be named with the current date and time. See below.

PerleSwitch#dir flash:

Directory of flash:

```
130322 -rw- 5643 May 12 2016 14:17 -04:00 -May-12-14-17-50-1
130321 -rw- 5643 May 12 2016 14:14 -04:00 -May-12-14-14-16-0
```

Related Commands

show archive
archive
dir

arp

arp {*a.b.c.d h.h.h vlan vlan_interface_number*} | {*timeout 1-34560*}

Use the no form of this command to negate a command or set its defaults.

Syntax	arp
Description	

{*a.b.c.d h.h.h vlan
vlan_interface_nu
mber*} |

{*timeout 1-34560*}

Command Default	timeout 240 minutes
------------------------	---------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

By adding known permanent static ip addresses to the arp table, this frees up the arp table from constantly managing these static entries. Static entries remain in the arp table forever and are never timed out.

Enter the ip address, followed by the 48 bit hardware address then the vlan interface channel to add this entry as a permanent static entry to the arp table.

The timeout value in minutes that a dynamic arp entry in the table will remain, if the arp entry is not used in that time specified by the timeout, it will be deleted from the arp table.

Examples

This example shows how to add a static ip address to the arp table.

```
PerleSwitch(config)#arp 172.16.113.77 0013.2092.2982 vlan 1<cr>
```

This example shows how to delete a static ip address from the arp table.

```
PerleSwitch (config)# no arp 172.16.113.77<cr>
```

Related Commands

bandwidth-control

bandwidth-control {*polling-interval seconds 1-120*}

Use the no form of this command to negate a command or set its defaults.

Syntax	bandwidth-control
Description	
	{polling-interval seconds 1-120}
Command Default	1 second
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
This global setting will apply to ingress frames of the type you specified in for the bandwidth control parameters. Specify a value in seconds that is appropriate for your network. Polling interval is the time in seconds that the switch will count the ingress frames of the type specified for each port.	
Examples	
This example set the bandwidth control polling interval to 50 seconds. PerleSwitch(config)# bandwidth-control polling-interval 50 <cr>	
Related Commands	
<i>show bandwidth-control</i>	

banner

banner **{[delimiter-character-banner-text-delimiter-character] | [login] | [motd] | [prompt-timeout]}**

Use the no form of this command to negate a command or set its defaults.

Syntax	banner
Description	
	{[delimiter-character-banner-text-delimiter-character] | [login] | [motd] | [prompt-timeout]}
Command Default	no banner login no banner motd no banner prompt-timeout

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

delimiter character - indicates the start and end of the message and is not a character that you use in the message. Do not use " or % as a delimiting character. White space characters will not work.

banner text -the text is alphanumeric, case sensitive, and can contain special characters. It cannot contain the delimiter character you have chosen. The text has a maximum length of 80 characters and a maximum of 40 lines.

The banner has special macros that can be inserted into the banner. They are \$(hostname) which is the hostname you configured on the switch and \$(domain) which is the domain name you configured on the switch.

login - set login banner

motd - set message of the day (motd)

prompt-timeout -login authentication timeout

Examples

This example sets the domain name to be used in the banner, then set a banner of Good morning and Welcome to your domain. Domain will be replaced with the domain name of MYTEST-DOMAIN.

```
PerleSwitch(config)# ip domain-name MYTEST-DOMAIN<cr>
```

```
PerleSwitch(config)#banner hGood morning and Welcome to your h
$(domain)<cr>
```

Related Commands

boot

```
boot {host dhcp | retry timeout 60-65535}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	boot
Description	

```
{host dhcp | retry
timeout 60-65535}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

host dhcp - if no startup config exist the switch will try to retrieve a startup config file from a tftp server defined by the DHCP server. When this boot process is run, one of the van interfaces cannot have DHCP enable to run. When this process is run the switch will ask for DHCP options (12-Host Name), (66-TFTP Server Name), (67-Boot file name) and (125-image helper filename). If the switch receive s retry timeout in seconds - retries for configuration download.

Examples

This example show to boot a startup config from a dhcp server.

```
PerleSwitch(config)#boot host dhcp<cr>
```

Related Commands**clock**

clock {**summer-time** *name-of-timezone* **date** *1-31* *month-to-start* *hh:mm* *time-to-start* *1-31* *month-to-end* *1-31* *date-to-end* *time-to-stop* *hh:mm* *1-1440-in-minutes* | **recurring** *1-4* *week* *first* *week-of-the-month* *last* *week-of-the-month*} | {**timezone** *name-of-time-zone* *-23* - *23* *-hours-offset-from-utc* *0-59* *-minutes-offset-from-utc*}

Use the no form of this command to negate a command or set its defaults.

Syntax	clock
Description	

```
{summer-time
name-of-timezone
date 1-31
month-to-start
hh:mm
time-to-start 1-31
month-to-end 1-31
date-to-end
time-to-stop
hh:mm
1-1440-in-minutes
| recurring 1-4
week first
week-of-the-month
last
week-of-the-month
}
```

```
{timezone
name-of-time-zone
-23 - 23
-hours-offset-from-utc 0-59
-minutes-offset-from-utc}
```

Command Default

```
clock timezone EST 5
clock summer-time EDT recurring 2 Sun Mar 2:00 1
Sun Nov 2:00 60
```

Command Modes

```
PerleSwitch(config)#
```

Hardware model

```
All models
```

Usage Guidelines

Name of the summer time zone followed by start/end dates -numeric value for the day of the month to start summer timezone 1-31, name of the month to start January, February, March, April, May, June, July, August, September, October, November, December., time to start in hours (24) and minutes, numeric value for the day of the month to end summer timezone 1-31, name of the month to end January, February, March, April, May, June, July, August, September, October, November, December, time to end in hours(24), offset in minutes <1-1440>

Name of the timezone - Hours/minutes offset are going to be hours/minutes offset from utc (universal time clock).

Examples

This example sets the clock to a specified time.

```
PerleSwitch(config)#clock set 3:44:45 12 May 2016<cr>
```

Related Commands

[show clock](#)

crypto

```
crypto {key export rsa terminal | url http: | https: | sftp: | tftp:} |
{generate rsa modulus 768-4096} | {import client rsa [pem terminal password
passphrase] | [pem terminal url http: | https: | sftp: | tftp:] | [pkcs12
terminal password passphrase] | [pkcs2 [url http: | https: | sftp: | tftp:]} |
{import ssh-host rsa terminal | [rsa pkcs12 | pem url http: | https: | sftp: |
tftp:]} | {zerioze} | {pki import server trustpoint-label [pem terminal
password passphrase] | [pkcs12 terminal password passphrase] | [url http:
| https: | sftp: | tftp:]} }
```

Use the no form of this command to negate a command or set its defaults.

Syntax	crypto
Description	
{key export rsa terminal | url http: | https: | sftp: | tftp:}	
{generate rsa modulus 768-4096}	
{import client rsa [pem terminal password <i>passphrase</i>] | [pem terminal url http: | https: | sftp: | tftp:] | [pkcs12 terminal password <i>passphrase</i>] | [pkcs2 [url http: | https: | sftp: tftp:]] |	
{import ssh-host rsa terminal | [rsa pkcs12 | pem url http: | https: | sftp: | tftp:]} |	
{zerioze}	
{pki import server <i>trustpoint-label</i> [pem terminal password <i>passphrase</i>] | [pkcs12 terminal password <i>passphrase</i>] | [url http: | https: | sftp: | tftp:]} |	

Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Crypto operations.	

Examples

This example will import an ssh key via the terminal.

PerleSwitch(config)#crypto key import ssh terminal<cr>

Enter PEM-formatted RSA private key

End with 'quit 'on a blank line by itself

```
ssh-rsa
```

```
AAAAB3NzaC1yc2EAAAADAQABAAQCAQDXSoVYch1Elp1AO2z/Px17m3w
fuXBI/ZxTqvS7SQCJxWSLNZGphXN5VE9SGsp9D5wLAhIFrZKNc44T+O79A1
N3oCPhKnuxq24j444ybxOnF8Ttxtrib8fpfDH8pNstYIIX4QPvUUeTPaEc4QkJ+X
TI+hArI4PK1VYcksijKn6sucP0nqNlcQsGN5C0ST/SwreR/U4azwmaA+24+k/v1N
yBFFXecWp5gFvx8/7vsJMousiOmbvtjxQyUZJKkuudWvNxkrMs0QmcUsj7nz5
ODGwD2K55LVocKOzWqOQQN7R9w5LMF4Lyc7DIz5j81BUQpHpAPdIdyTj7J
UFlrnOF3NgLLmaVbqbUsrG3x5AzOQLW+AcpwPwnnt/BCIjaj1MAOH8NFCbB
AepKaY+BizlfJLtCDE0yZ3XO7c6kcv/qN07acC5edTCRyzDGqJ/1ronjtQYppPDO
5YaxQ4UfPbedC3OghJjvwSegq45bLuhYhIO+kLgPNe+jVKWXcckfjiePL2EYX0q
SdJQ+CWvy+qQS12+0HkuzKnEnT+t9XKqqvIPIWtxIo7vxfhqBP+Y+I5CzHxqOP
4nbMvUnIDN3blakRAp7wiTSeU7MbGi/c8qdjgSnRpIwW0Vcu4CHf6dvP8+wjf4L
sJPpyzW33+UakZLJST/ratP1OrdWn1mWsKxi+kWCQ==
```

Successfully imported SSH private key

Related Commands

show crypto

dot1x

dot1x {*credential credential-profile-name*} | {*guest-vlan supplicant*} |
 {*logging*} | {*system-auth-control*} | {*test timeout 1-65535*}

Use the no form of this command to negate a command or set its defaults.

Syntax	dot1x
Description	

```
{credential
credential-profile-n
ame} |
```

```
{guest-vlan
supplicant} |
```

```
{logging} |
```

```
{system-auth-
control} |
```

```
{test timeout
1-65535}
```

Command Default	no dot1x system-auth-control no dot1x guest-vlan-supplicant dot1x test timeout 10
------------------------	---

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Command Options:

credential - configure 802.1x credential profiles
guest-vlan - configure guest vlan or 802.1x supplicant behavior
logging - set logging parameters
system-auth-control - enable or disable SysAuthControl
test - configure 802.1x test related parameters.

Examples

This example will enable system auth control on the switch.

```
PerleSwitch(config)#dot1x system-auth-control<cr>
```

Related Commands

[\(config-if\)#dot1x](#)

(config-dot1x-creden)

```
{password | username}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-dot1x-creden)
Description	

```
{password |
username}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-dot1x-creden)#
----------------------	-----------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Command Options:

Password: set the authentication password

0 - Specifies that an UNENCRYPTED password will follow.

7 Specifies an ENCRYPTED password will follow

LINE - the UNENCRYPTED (cleartxt) password.

username - set the authentication userid

Examples

This example will set the password for Jerry to newuser.

```
PerleSwitch(config)#dot1x credential dot1x-user<cr>
```

```
PerleSwitch(config-dot1x-creden)#password newuser<cr>
```

Related Commands

[dot1x](#)

eap

```
eap {profile profile-name}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	eap
---------------	------------

Description	
--------------------	--

```
{profile
profile-name}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

This is the password to be used to enable privilege mode.

Examples

This example shows how to set a password for enable mode.

```
PerleSwitch(config)#eap profile eaptest<cr>
```

Related Commands

username

(config-eap-profile)

```
eap {method gtc md5 | method mschapv2 | peap [gtc | md5 | mschapv2] |  
tls | ttls chap | eap-gtc | eap-md5 | eap-mschapv2 | mschap | mschapv2 |  
pap} | {pki-trustpoint default pki-trustpoint}
```

Use the no form of this command to negate enable secret.

Syntax **eap****Description**

```
{method gtc md5  
| method  
mschapv2 | peap  
[gtc | md5 |  
mschapv2] | tls |  
ttls chap | eap-gtc  
| eap-md5 |  
eap-mschapv2 |  
mschap |  
mschapv2 | pap}
```

```
{pki-trustpoint  
default  
pki-trustpoint}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

This is the password to be used to enable privilege mode.

Examples

This example shows how to set a password for enable mode.

```
PerleSwitch(config)#enable secret testsecret<cr>
```

Related Commands*username***enable****enable** {secret 0 | 5 | cleartext}

Use the no form of this command to negate enable secret.

Syntax **enable**
Description**{secret 0 | 5 |
cleartext}**

Command Default None

Command Modes PerleSwitch(config)#

Hardware model All models

Usage Guidelines

This is the password to be used to enable privilege mode.

Examples

This example shows how to set a password for enable mode.

PerleSwitch(config)#enable secret testsecret<cr>

Related Commands*username***errdisable****errdisable** {detect cause all | bpdguard shutdown vlan | link-flap |
security-violation shutdown vlan} | {flap-setting cause link-flaps
max-link-flaps 1-100 time 1-20} | {recovery cause all | bandwidth |
bpdguard | link-flap | psecure-violation | security-violation}

Use the no form of this command to negate a command or set its defaults.

Syntax **errdisable**
Description

```
{detect cause all |
 bpdguard
 shutdown vlan |
 link-flap |
 security-violation
 shutdown vlan} |
```

```
{flap-setting cause
 link-flaps
 max-link-flaps
 1-100 time 1-20} |
```

```
{recovery cause all
 | bandwidth |
 bpdguard |
 link-flap |
 psecure-violation
 |
 security-violation}
```

Command Default

Recovery timer interval 300
link-flap enabled
bpdguard enabled (no disable)
security-violation enabled (no disable)
bandwidth-exceeded enabled (no disable)
psecure-violation (no disable)

Command Modes

None

Hardware model

All models

Usage Guidelines

Command Options

detect - error disable detection

flap-setting - error disable flap detection setting

recovery - disable recovery

Examples

In this example I have enabled errdisable psecure-violation on gigabitEthernet port 1/1. I have set my gigabitEthernet 1/1 switchport to a maximum port security of 1 (no more than one session can connect).

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config)#switchport port-security maximum 1<cr>
```

```
PerleSwitch(config)#switchport port-security violation shutdown<cr>
```

```
PerleSwitch#show errdisable detect <cr>
```

ErrDisable Reason	Detection	Mode
link-flap	Disabled	port
bpduguard	Disabled	port
psecure-violation	Enabled	port/vlan
security-violation	Disabled	port
bandwidth-exceeded	Disabled	port

If I telnet into my switch multiple times, I will see the errdisable leds flash on the port I have violated (both green and yellow flashing together). When I show port-security I will see port violation and the port is in a errdisable shutdown state.

```
PerleSwitch#show port-security<cr>
```

Secure Port	MaxSecureAddr	CurrentAddr	SecurityViolation	Security Action
1		0	0	shutdown

Total Addresses in System : 0
Max Addresses limit in System : 8192

```
PerleSwitch#show port-violation<cr>
```

```
00:12:00: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:12:02: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface GigabitEthernet1/1, changed state to up
00:12:02: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface Vlan1, changed state to up
00:12:02: %IFMGR-2: PSECURE_VIOLATION: Security violation occurred, caused by MAC address 4c00.82bb.f504 on port Gi1/1.
00:12:02: %IFMGR-4: ERR_DISABLE: psecure-violation error detected on Gi1/1. Putting in err-disable state
00:12:03: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface GigabitEthernet1/1, changed state to down
00:12:03: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface Vlan1, changed state to d
00:11:17: %IFMGR-5: LINK_UPDOWN: Line protocol on Interface Vlan1, changed state
To recover a port in errdisable shutdown state either perform a errdisable or alternatively you can do a shutdown and no shutdown on the interface
```

Related Commands

show errdisable
(config-if)#service

fair-queue**fair-queue**

Use the no form of this command to set fair-queue to strict.

Syntax	fair-queue
Description	
Command Default	Weighted Fair Queuing (WFQ)
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

(WFQ) - Packets are sent from all queues but the higher priority queues get more packets per pass. This ensures that lower priority queues still get serviced even when packets are waiting to transmit in higher priority queues.

Strict - All packets on a higher queue priority will egress before a lower priority queue is serviced.

Examples

This example set the switch to strict queuing.

```
PerleSwitch(config)#no fair-queue
```

Related Commands

mls

garp

```
garp {timer join 100-1000 | leave 300-6000 | leaveall 2000-60000}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	garp
Description	

```
{timer join  
100-1000 | leave  
300-6000 | leaveall  
2000-60000}
```


Command Default	garp timer join 200 garp timer leave 600 garp timer leaveall 10000
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Set GARP parameters:	
TIMERS	
join - this timer defines the maximum length of time an interface can wait before sending a JOIN message.	
leave - this timer defines the number of milliseconds an interface must wait after receiving a leave message before it removes the associated attribute from this interface.	
leaveall - this timer defines the period of time interested devices must sent a join message if they are still interested in a specific attribute.	

Examples

This example will set the leaveall timer to 5000.

```
PerleSwitch(config)#garp timer leaveall 5000<cr>
```

Related Commands

[gmrp](#)

[gvrp](#)

[show garp](#)

gmrp

gmrp {logging}

Use the no form of this command to set hostname back to default.

Syntax	gmrp
Description	
	{logging}
Command Default	no gmrp logging
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Turn logging on for GMRP.

Examples

This example set GMRP logging to on.

```
PerleSwitch(config)#gmrp logging<cr>
```

Related Commands

clear gmrp

show gmrp

gvrp

gvrp {*dynamic-vlan-creation* | *logging*}

Use the no form of this command to negate a command or set its defaults.

Syntax	gvrp
Description	

{*dynamic-vlan-creation* | *logging*}

Command Default	no gvrp no gfrp dynamic-vlan-creation
------------------------	--

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

dynamic-vlan-creation - when an interface attempts to join a vlan that does not exist, setting dynamic vlan creation on will allow the switch to automatically create the vlan.

Examples

This example sets GVRP logging to on.

```
PerleSwitch(config)#gvrp logging<cr>
```

Related Commands

clear gvrp

show gvrp

hostname

hostname {*name-of-server*}

Use the no form of this command to negate a command or set its defaults.

Syntax	hostname
Description	

{name-of-server}

Command Default

PerleSwitch

Command Modes

PerleSwitch(config)#

Hardware model

All models

Usage Guidelines

Set the hostname on the switch.

Examples

This example will set the hostname to TestHost.

PerleSwitch(config)#hostname TestHost<cr>

Related Commands

ip access-list

ip access-list {**log-update threshold** *0-2147483647*} | {**logging interval** *0-2147483647*} | {**resequence** [*1-99* | *1300-1999* *1-2147483647* *1-2147483647*]}
 {**standard** [*1-99* | *1300-1999* *access-list-name*]

Use the no form of this command to negate a command or set its defaults.

Syntax

ip access-list

Description

{**log-update**
threshold
0-2147483647} |

{**logging interval**
0-2147483647} |

{**resequence** [*1-99*
| *1300-1999*
1-2147483647
1-2147483647]}
|

{**standard** [*1-99* |
1300-1999
access-list-name]}
|

Command Default

ip access-list logging interval 0

ip access-list log-update threshold 0

Command Modes	PerleSwitch(config)#ip
----------------------	------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Use logging control access list to provide insight into transverse traffic on your network. ACL logging can be network performance intensive which could negatively impact your network. Configuration must be made to balance traffic visibility and the impact on your network performance.

log-update threshold - The log-update threshold can be used to configured how often syslog messages are generated and sent after an initial packet match.

logging interval - in milliseconds between sent log messages.

resequence - resequence of standard IP access list (start value, end value).

standard- ip access list number (standard 1-99) (expanded 1300-1999).

Examples

This example creates a standard access list.

```
PerleSwitch(config)#ip access standard 50<cr>
```

```
PerleSwitch(config-std-nac1)#
```

Related Commands

[\(config-std-nac1\)](#)

(config-std-nac1)

```
{1-2147483647} | {deny hostname/ipv4-address wildcard-bits log | any
hostname/ipv4-address log | host hostname/ipv4-address log} | {permit
hostname/ipv4-address wildcard-bits log | any hostname/ipv4-address log | host
hostname/ipv4-address log} | {remark remark_comment}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-std-nac1)
---------------	--------------------------

Description	
--------------------	--

```
{1-2147483647} |
```

```
{deny
hostname/ipv4-add
ress wildcard-bits
log | any
hostname/ipv4-add
ress log | host
hostname/ipv4-add
ress log} |
```

```
{permit
hostname/ipv4-add
ress wildcard-bits
log | any
hostname/ipv4-add
ress log | host
hostname/ipv4-add
ress log} |
```

```
{remark
remark_comment}
```

Command Default	None
Command Modes	PerleSwitch(config-std-nac1)#
Hardware model	All models

Usage Guidelines

This command will allow you to customize what packets you want to deny or permit to this access-list.

Examples

This example will deny packets from the specified host address 172.16.55.44.
PerleSwitch(config-std-nac1)#deny host 172.16.55.44<cr>

Related Commands

show ip access-list
ip access-list

ip default-gateway

```
{a.b.c.d}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip default-gateway
Description	

```
{a.b.c.d}
```

Command Default	None
Command Modes	PerleSwitch(config)#ip
Hardware model	All models

Usage Guidelines

Specify a default gateway for this network in xxx.xxx.xxx.xxx format.

Examples

This example will specific a default gateway for the switch.

```
PerleSwitch#ip default-gateway 172.16.1.1<cr>
```

Related Commands

show ip default-gateway

ip dhcp

```
ip dhcp {class class-name} | {excluded-addresses start-pool-address  
end-pool-address} | {ping packets 1-10 | timeout 100-100000} | {pool  
pool-name} | {relay information option remote-id vlan 1-4094 | ascii  
remote-id-string | hex remote-id-string | host-name | option-insert | policy  
drop | keep | replace | trust-all} | {subscriber-id interface-name} | {use  
subscriber-id client-id}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip dhcp
---------------	----------------

Description	
--------------------	--

{class <i>class-name</i> }	

{excluded-address es <i>start-pool-address</i> <i>end-pool-address</i> }	

{ping packets <i>1-10</i> | timeout <i>100-100000</i> }	

pool <i>pool-name</i> }	

```

{relay information
option remote-id
vlan 1-4094 | ascii
remote-id-string |
hex
remote-id-string |
host-name |
option-insert |
policy drop |
keep | replace |
trust-all} |

```

```

{subscriber-id
interface-name} |

```

```

{use subscriber-id
client-id}

```

Command Default

```

ip dhcp ping packets 2
ip dhcp ping timeout 500

```

Command Modes

```

PerleSwitch(config)#ip

```

Hardware model

```

All models

```

Usage Guidelines
Command Options:

class see [\(config-dhcp-class\)](#) for more parameters

excluded-address - exclude addresses in the DHCP pool starting at IPv4 address, ending at IPv4 address

ping packets/timeout -Before the DHCP server will assign an address to a client computer the switch will ping the client computer using the values specified by the packets and timeout (miliseconds) parameters. To disable the ping packets specify the value of packets to 0.

pool name - configure DHCP address pools

relay - DHCP relay agent parameters

subscriber-id - global subscriber-id configuration

use - configure use of certain parameters during allocation

Examples

This example will exclude addresses 172.16.55.77 to 172.16.55.79 from the DHCP pool.

```

PerleSwitch(config)#ip dhcp exclude-address 172.16.55.77 172.16.55.79<cr>

```

Related Commands

ip dhcp
(config-dhcp-class-relayinfo)

(config-dhcp-class)

{relay agent information}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip dhcp class
Description	
relay agent information	
Command Default	None
Command Modes	PerleSwitch(config-dhcp_class)#
Hardware model	All models

Usage Guidelines

Enters submenu (config-dhcp-class-relayinfo).

Examples

This example will take you to submenu mode (config-dhcp-class-relayinfo).

```
PerleSwitch(config-dhcp-class)#relay agent information<cr>
```

```
PerleSwitch(config-dhcp-class-relayinfo)#
```

Related Commands

ip dhcp
ip dhcp pool
(dhcp-config)
(config-dhcp-class-relayinfo)

(config-dhcp-class-relayinfo)

{relay-information hex hex-string mask hex-string}

Use the no form of this command to negate a command or set its defaults.

Syntax	dhcp class-relayinfo
Description	


```
{relay-information  
hex hex-string  
mask hex-string}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-dhcp_class-relayinfo)#
----------------------	---

Hardware model	All models
-----------------------	------------

Usage Guidelines

Specify the hex value of the entire relay information agent information option.

Examples

This example sets relay information on the switch.

```
PerleSwitch(config-dhcp-class-relayinfo)#relay-information hex f1f1 mask  
10<cr>
```

Related Commands

ip dhcp

ip dhcp pool

(dhcp-config)

ip dhcp pool

```
ip dhcp pool {pool-name}
```

Syntax	ip dhcp pool
Description	

{pool-name}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(dhcp-config)#
----------------------	---------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Create an DHCP pool.

Examples

This example will create a DHCP pool called pool-test.

```
PerleSwitch(dhcp-config)#ip dhcp pool pool-test<cr>
```

Related Commands

ip dhcp
ip dhcp pool
(dhcp-config)
(config-dhcp-class-relayinfo)

(dhcp-config)

```
{address client-id ascii ascii-string | hex dotted-hexadecimal-string |
hardware-address dotted-hexadecimal-string} | {bootfile bootfile-name} | {class
class-name} | {client-identifier ascii ascii-string | hex hexidecimal-string} |
{client-name client-name} | {default-router router-name/address} |
{dns-server dns-server-name/address} | {domain-name domain-name} |
{hardware-address dotted-decimal-string} | {host client-ip network-mask} |
{lease 0-365 | infinite} | {netbios-name-server netbios-server-name/address} |
{netbios-node-type 0-ff | b-node | h-node | m-node | p-node} | {network
network-ip network-mask} | {next-server next-server-ip-name/address} |
{option 1-254 ascii nvt-ascii-string | hex hexidecimal-string} | ip
server-name/ip-address} | {relay source network-number/network-mask}
```

Use the no form of this command to set hostname back to default.

Syntax	ip dhcp pool
Description	

```
{address client-id
ascii ascii-string |
hex
dotted-hexadecimal
-string |
hardware-address
dotted-hexadecimal
-string} |
```

```
{bootfile
bootfile-name} |
```

```
{class class-name}
|
```

```
{client-identifier
ascii ascii-string |
hex
hexidecimal-string
} |
```

{**client-name**
client-name} |

{**default-router**
router-name} |

{**dns-server**
dns-server-name/a
address} |

{**domain-name**
domain-name} |

{**hardware-address**
s
dotted-decimal-string} |

{**host** *client-ip*
network-mask} |

{**lease** **0-365** |
infinite} |

{**netbios-name-server** *netbios-server-name/address*} |

{**netbios-node-type**
0-ff | **b-node** |
h-node | **m-node** |
p-node} |

{**network**
network-ip
network-mask} |

{**next-server**
next-server-ip-name/address}

{**option** **1-254** **ascii**
nvt-ascii-string |
hex
hexidecimal-string
| **ip**
server-name/ip-address} |

```
{relay source
network-number/n
etwork-mask}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(dhcp-config)#
----------------------	---------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Command Options:

address - configure a reserved address
bootfile - boot file name
class - specify a DHCP class
client-identifier - client-identified by client-id option
client name - client host name
default router - default routers
dns server - DNS servers
domain name - domain name
hardware address - client hardware address
host - client ip address and mask
lease - address lease time
netbios name server - NetBIOS (WINS) name servers
netbois node type - NETBOIS node type
network - network number and mask
next server - next server in boot process
option - raw DHCP options
relay source - DHCP relay agent parameters

Examples

This example sets lease time to 30 days.
PerleSwitch(dhcp-config)#lease 30<cr>

Related Commands

ip dhcp
ip dhcp pool
(config-dhcp-class-relayinfo)

ip domain

```
ip {domain-lookup}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip domain
Description	
	{domain-lookup}
Command Default	ip domain lookup
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Enables or disables DNS lookup. (Domain Name System hostname translation)	
Examples	
This will disable ip domain name resolution.	
PerleSwitch#no ip domain lookup<cr>	
Related Commands	
<i>ip name-server</i>	

ip domain-name

ip {**domain-name** *domain-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip domain name
Description	
	{domain-name <i>domain-name</i> }
Command Default	no ip domain name
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Specify a default domain name.	
Examples	
This example will specify a default domain name of TestUnit.	
PerleSwitch(config)#ip domain-name TestUnit<cr>	

Related Commands

(dhcp-config)
ip name-server

ip forwarding-protocol

ip {**forward-protocol** **udp** *udp-port-number*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip forward-protocol udp
Description	

{**forward-protocol**
udp
udp-port-number}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

This command controls forwarding of physical and directed IP broadcasts,

Examples

This example show how to forward IP broadcasts to udp port 500.

PerleSwitch(config)ip#ip forward-protocol udp 500<cr>

Related Commands**ip ftp**

ip {**ftp passive**} | {**password** | *unencrypted* | *encrypted* | *cleartext*} |
{**username** *user-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip ftp
Description	

{**ftp passive** |

```
{password |
unencrypted |
encrypted |
cleartext}
```

```
{username
user-name}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

Command Options:

passive - connect using passive mode

paasword:

0 - Specifies that an UNENCRYPTED password will follow.

7 Specifies an ENCRYPTED password will follow

LINE - the UNENCRYPTED (cleartxt) password.

username - specify a username to use for ftp connections.

Examples

This example will specify a username of Tom for ftp connections.

```
PerleSwitch(config)#ip username Tom<cr>
```

Related Commands

[ip http](#)

[ip scp](#)

[ip stfp](#)

[ip ssh](#)

ip host

```
ip {host host-name host-ip-address}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip host
Description	

```
{host host-name
host-ip-address}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

Adds a host to the host table.

Examples

Add an ip host called office-host with an id address of 172.16.99.100 to the ip host table.

```
PerleSwitch(config)#ip#host office-host 172.16.99.100<cr>
```

Related Commands

show hosts

ip http

```
ip http {access-class 1-99} | {client password | unencrypted | encrypted | cleartext | proxy-server server-name | secure-trustpoint trustpoint-name | username username | verify server} | {server} | {secure-server} | {session-idle-timeout 1-1440}
```

Use the no form of this command to negate a command or set its defaults.

Syntax **ip http****Description**

{**access-class**
1-99}

{**client password** |
unencrypted |
encrypted |
cleartext |
proxy-server
server-name |
secure-trustpoint
trustpoint-name |
username
username | **verify**
server}

{**server**}

{**secure-server**}

{**session-idle-timeo**
ut 1-1440}

Command Default

ip http server

ip http secure-server

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines**Command Options:**

access-class - restrict http server by access class.
client password - http client configuration commands
secure-server - enable http secure server
server - enable http server
session-idle-timeout - sets the http server session idle timeout

Examples

This example will set the password for http clients.
PerleSwitch(config)# ip http password testuser<cr>

Related Commands

ip http
ip scp
ip stfp
ip ssh

ip igmp logging | snooping

```
ip {igmp logging} | {snooping last-member-query-count 1-7 |
last-member-query-interval | querier [address] | [max -response-time] |
[query-interval] | [tcn] | [timer] | [version] | report-suppression |
robustness-variable 1-3 | tcn flood query count 1-10 | query solicit | vlan
vlan_interface_number [immediate-leave | [mrouter interface fastethernet slot
/port-number | gigabitethernet slot /port-number | port-channel channel |
querier | static }
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip igmp logging | snooping
Description	

{igmp logging}

```
{snooping
last-member-quer
y-count 1-7 |
last-member-quer
y-interval |
querier [address]
| [max
-response-time] |
[query-interval] |
[tcn] | [timer] |
[version] |
report-suppression
|
robustness-variabl
e 1-3 | tcn flood
query count 1-10 |
query solicit |
vlan
vlan_interface_nu
mber
[immediate-leave
| [mrouter
interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel
channel | querier
| static }
```

Command Default	<pre> ip igmp snooping last-member-query-count 2 ip igmp snooping last-member-query-interval ip igmp snooping querier address 0.0.0.0 ip igmp snooping querier max-response-time 5 ip igmp snooping querier query-interval 60 ip igmp snooping querier tcn query count 2 ip igmp snooping querier tcn query interval 10 ip igmp snooping querier timer expiry 120 ip igmp snooping querier version 2 no ip igmp snooping report-suppression ip igmp snooping robustness-variable 2 ip igmp snooping tcn flood query count 2 no igmp snooping tcn query solicit ip igmp snooping vlan1 no ip igmp snooping vlan 1 immediate-leave no igmp snooping vlan 1 querier no igmp snooping querier no ip igm snooping </pre>
------------------------	---

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

IGMP snooping allows a switch to snoop or capture information from IGMP packets transmitted between hosts and the switch. The switch will then determine whether to add or delete multicast addresses from its address table, thereby enabling or disabling multicast traffic from flowing to individual host ports.

Examples

These examples enable and disable igmp logging.

```
PerleSwitch(config)# ip igmp logging<cr>
```

```
PerleSwitch(config)# no ip igmp logging cr> (shuts igmp logging off)
```

Related Commands

clear ip igmp

clear gmrp

ip name-server

```
ip {name-server a.b.c.d | x::x::x::x}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip name-server
Description	

```
{name-server
a.b.c.d |
x::x:x::x}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

IPv4 address format *a.b.c.d* (maximum of 6)

IPv6 address format *x::x:x::x* (maximum of 6)

Examples

This example shows you how to add three domain name servers.

```
PerleSwitch(config)# ip name-server 172.16.33.44 172.16.44.22 172.16.33.11
<cr>
```

Related Commands

hostname

(dhcp-config)

ip radius

```
ip {radius source-interface vlan 1-4094}
```

Use the no form of this command to negate the source-interface for RADIUS.

Syntax	ip
Description	

```
{radius
source-interface
vlan 1-4094}
```

Command Default	ip radius source-interface vlan 1
------------------------	-----------------------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

Specify interface for source address in RADIUS packets.

Examples

This example specifies vlan 2 for source address for RADIUS packets.

```
PerleSwitch(config)#ip radius source-interface vlan 2<cr>
```

Related Commands

aaa group
PerleSwitch(config-sg-radius)#
aaa accounting
aaa authentication
aaa authorization

ip scp

ip {**scp password** [*unencrypted* | *encrypted* | *cleartext*] | **username** *user-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip scp
Description	

{**scp password**
[*unencrypted* |
encrypted |
cleartext] |
username
user-name}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines**Command Options:**

password - specify a password for connection to a remote host using scp.

username - specify a username for connecton to a remote host using scp.

Examples

This example sets a scp username and password to connect to a scp host.

```
PerleSwitch(config)#ip scp username lyn<cr>
```

```
PerleSwitch(config)#ip scp password perle<cr>
```

Related Commands

ip http
ip scp
ip stfp
ip ssh

ip service

address-conflict-detection

Use the no form of this command to negate a command or set its defaults.

Syntax	address-conflict-detection
Description	

Command Default	Function is disabled.
------------------------	-----------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Enables or disables the logic which checks if an IP address which is being assigned to a management VLAN on the switch is not currently in use on the network.

Examples

This will disable duplicate IP address checking.

```
PerleSwitch#no ip service address-conflict-detection <cr>
```

Related Commands

show ip service

show facility-alarm

ip stfp

ip {**sftp password** *unencrypted* | *encrypted* | *cleartext* | **username** *user-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip stfp
Description	

```
{sftp password
unencrypted |
encrypted |
cleartext |
username
user-name}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines**Command Options:**

password - specify a password for connection to a remote host using stfp.

username - specify a username for connecton to a remote host using stfp.

Examples

This example sets a stfp username and password to connect to a stfp host.

```
PerleSwitch(config)#ip stfp username lyn<cr>
```

```
PerleSwitch(config)#ip stfp password perle<cr>
```

Related Commands

[ip http](#)

[ip scp](#)

[ip stfp](#)

[ip ssh](#)

ip ssh

```
ip {ssh authentication-retries 0-5} | {pubkey-chain} | {server} |  
{stricthostkeychecking} | {timeout 1-120} | {version 1-2}
```

Use the no form of this command to negate a command or set it to its defaults.

Enable

Syntax	ip ssh
Description	

```
{ssh  
authentication-  
retries 0-5} |  
{pubkey-chain} |  
{server} |  
{stricthostkeychec  
king} | {timeout  
1-120} | {version  
1-2}
```

Command Default	ip ssh server ip ssh timeout 120 no ip ssh stricthostchecking ip ssh authentication-retries 3
-----------------	--

Command Modes	PerleSwitch(config)#
---------------	----------------------

Usage Guidelines

Enables SSH server within the switch to allow ssh client connections.

Configuration of ssh parameters.

Examples

This example sets the ip ssh timeout interval to 60 seconds.

```
PerleSwitch(config)#ip ssh timeout 60<cr>
```

Related Commands

ip http

ip scp

ip stfp

ip ssh

ip telnet

ip subnet-zero

ip {**subnet-zero**}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip subnet-zero
Description	
Command Default	None
Command Modes	PerleSwitch(config)#

Usage Guidelines

Allow "subnet zero" subnets. Use all the zero and ones subnets.

Examples

This example will allow subnets with subnets of all 0's or 1's.

```
PerleSwitch(config)#ip subnet-zero<cr>
```

Related Commands**ip tacacs**

ip {**tacacs source-interface** **vlan** *vlan_interface_number*}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip tacacs
Description	


```
{tacacs
source-interface
vlan
vlan_interface_number}
```

Command Default	ip tacacs source-interface vlan 1
------------------------	-----------------------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

Specify the source interface for TACACS packets.

Examples

This example sets the source interface for TACACS to vlan 2

```
PerleSwitch(config)#ip tacacs source-interface vlan 2<cr>
```

Related Commands

ip telnet

```
ip {telnet server}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip telnet
Description	

```
{telnet server}
```

Command Default	ip telnet server
------------------------	------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

Enable or disable the server.

Examples

This example turns telnet server off.

```
PerleSwitch(config)#no ip telnet server<cr>
```

Related Commands

[ip ssh](#)

ipv6

ipv6 {**host** | **mld** | **neighbor** | **radius source interface vlan 1-4094** | **tacacs source interface vlan 1-4094**}

Use the no form of this command to negate a command or set its defaults.

Syntax	ip v6 host
Description	

{**host** | **mld** |
neighbor | **radius**
source interface
vlan 1-4094 |
tacacs source
interface vlan
1-4094}

Command Default

```

ipv6 mld snooping last-listener-query-count 2
ipv6 mld snooping last-listener-query-interval 1000
no ipv6 mld snooping listener-message-suppression
ipv6 mld snooping querier max-response-time 5
ipv6 mld snooping querier query-interval 60
ipv6 mld snooping querier tcn query count 2
ipv6 mld snooping querier tcn query interval 10
ipv6 mld snooping querier timer expiry 120
ipv6 mld snooping robustness-variable 2
ipv6 mld snooping tcn flood query count 2
no ipv6 mld snooping tcn query solicit
ipv6 mld snooping vlan 1
no ipv6 mld snooping vlan 1 immediate-leave
no ipv6 mld snooping vlan 1 querier
no ipv6 mld snooping querier
no ipv6 mld snooping
ipv6 radius source-interface vlan 1
ipv6 tacacs source-interface vlan 1

```

Command Modes

PerleSwitch(config)#

Usage Guidelines

host - configure static IPv6 hosts

mld - enable local MLD snooping for vlans

neighbors - add permanent neighbor entries

radius - configurations options for source interface

tacacs - configurations options for source interface

Examples

This example will add a static IPv6 host to the host table.

```
PerleSwitch(config)#ipv6 host testhost 123:123:123:123::123<cr>
```

```
PerleSwitch# show hosts<cr>
```

Host table :

```
testhost    123:123:123:123::123
```

Related Commands

ip host

lACP

lACP {**system-priority** *0-65535*}

Use the no form of this command to negate a command or set its defaults.

Syntax	lACP
---------------	-------------

Description	
--------------------	--

{**system-priority**
0-65535}

Command Default	lACP system-priority 65535
------------------------	----------------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Usage Guidelines

The lACP command determines which switch in an LACP link controls port priorities. The switch with the lowest LACP priority number determines which switch is in control.

Examples

This example set this switch to system priority 200.

```
PerleSwitch(config)#lACP system-priority 200<cr>
```

Related Commands

lACP

show lACP

lldp

lldp {**hold-mult** *2-10*} | {**logging**} | {**notification-interval** *5-3600*} | {**reinit**
-1-10} | {**run**} | {**timer** *5-32768*} | {**tlv-select** **link-aggregate** | **mac-phy-cfg**
| **management-address** | **max-frame-size** | **port-description** **port-vlan** |
system-capabilities | **system-description** | **system-name** | **vlan-name**} |
{**tx-delay** *1-8192*}

Use the no form of this command to negate a command or set its defaults.

Syntax	lldp
Description	
{hold-mult 2-10} |	
{logging} |	
{notification-inter val 5-3600} |	
{reinit -1-10} |	
{run} |	
{timer 5-32768} |	
{tlv-select link-aggregate | mac-phy-cfg | management-address | max-frame-size | port-description port-vlan | system-capabilities | system-description | system-name | vlan-name | profinet-port-status | profinet-alias | profinet-mrp } |	
{tx-delay 1-8192}	
Command Default	lldp run lldp hold-mult 4 lldp tx-delay 2 lldp reinit 2 no lldp logging lldp timer 30
Command Modes	PerleSwitch(config)ip#

Usage Guidelines

hold-mult -LDP transmit hold multiplier.

logging - enable/disable LLDP neighbor discovery logging.

notification interval -specify the minimum time (in secs) between successive LLDP SNMP notifications.

reinit - specify the delay (in secs) for the LLDP to initialize.

run - enable/disable lldp

timer -rate at which LLDP packets are sent in seconds.

tlv-select - selection of LLDP TLVs the ports are to transmit to their neighbors.

tx-delay - delay (in) sec between successive LLDP frame transmissions.

Examples

This example sets the tx-delay to 10 seconds.

```
PerleSwitch(config)#lldp tx-delay 10<cr>
```

Related Commands

show lldp

location

location {**civic-location identifier civic identifier string**} | {**elin-location elin-number identifier elin-identifier string**}

Use the no form of this command to negate a command or set its defaults.

Syntax	location
Description	

{**civic-location identifier civic identifier string**}

{**elin-location elin-number identifier elin-identifier string**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines.

Select either civic location or elin location to select submenu to configure.location parameters.

Examples

This example sets location to civic with identifier of civic-name-1.

```
PerleSwitch(config)location civic-location identifier civic-name-1<cr>
```

```
PerleSwitch(config-civic)#
```

Related Commands

(config-civic)

show location

(config-civic)

```
{[location additional-location-information additonal-civic-info] | [building
building-infor] | [city city-name] | [country two-letter-iso-country-code] |
[county county-name] | [division city-division-name] | [floor floor-number] |
[landmark landmark-information] | [anguage language] | [leading-street-dir
direction-of-leading-street] | [name resident-name] | [neighborhood
neighborhood-information] | [number street-number] | [postal-code
postal-code] | [room room-information] | [script script] | [state state-name]
| [street-group] | [street-number-suffix] | [trailing-street-suffix] |
[type-of-place type-of-place] | [unit unit]} | {location elin-location
elin-number identifier elin-id-string}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	location
Description	

```

{[location
additional-location
-information
additonal-civic-info
] | [building
building-infor] |
[city city-name] |
[country
two-letter-iso-count
ry-code] | [county
county-name] |
[division
city-division-name]
| [floor
floor-number] |
[landmark
landmark-informat
ion] | [language
language] |
[leading-street-dir
direction-of-leadin
g-street] | [name
resident-name] |
[neighborhood
neighborhood-info
rmation] |
[number
street-number] |
[postal-code
postal-code] |
[room
room-information]
| [script script] |
[state state-name]
| [street-group] |
[street-number-suf
fix] |
[trailing-street-suf
fix] |
[type-of-place
type-of-place] |
[unit unit]} |

```

**{location
elin-location
elin-number
identifier
elin-id-string}**

Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Sets additional information for location.

<https://www.unc.edu/~rowlett/units/codes/country.htm>

Maximum length of this field is 256. Character count will show you the remaining character count. The CA must be filled in or it will be padded with 2 blank characters.

Examples

This example set additional parameters for building and city.

```
PerleSwitch(config-civic)#building maincampus<cr>
```

```
PerleSwitch(config-civic)#city toronto<cr>
```

Related Commands

[\(config-civic\)](#)

[show location](#)

logging

```
logging {ip_address host_name} | {alarm-severity [major | minor]} |
{buffered [level 0-7 | 4096-32768] | [alert] | [critical] | [debugging] |
emergencies] | [errors] | [informational] | [notifications] | [warnings]} |
{console [severity-level 0-7] | [alert] | [critical] | [debugging] | [emergencies] |
[errors] | [informational] | [notifications] | [warnings]} | {delimiter tcp} |
{facility auth | cron | daemon | kern | local0 | local1 | local2 | local3 |
local4 | local5 | local6 | local7 | lpr | mail | news | sys10 | sys11 |
sys12 | sys13 | sys14 | sys9 | syslog | user | ucp} | {file flash: filename
[0-7] | [4096-32768] | [alert] | [critical] | [debugging] | [emergencies] |
[errors] | [informational] | [notifications] | [warnings]} | {host
ip_address host_name [transport tcp port 1-65535 | udp port 1-65535]} |
{monitor [0-7] | [4096-32768] | [alert] | [critical] | [debugging] |
[emergencies] | [errors] | [informational] | [notifications] | [warnings]} |
{on} | {origin-id | [hostname] | [ip] | [ipv6] | [string]} | {rate-limit
1-10000 [except [0-7] | [4096-32768] | [alert] | [critical] | [debugging] |
[emergencies] | [errors] | [informational] | [notifications] | [warnings]}
{source interface vlan 1-4094} | {trap [0-7] | [4096-32768] | [alert] |
```


[critical] | **[debugging]** | **[emergencies]** | **[errors]** | **[nformational]** | **[notifications]** | **[warnings]**}}

Use the no form of this command to negate a command or set its defaults.

Syntax **logging**
Description

{ip_address_host_name} |

{alarm-severity}
[major | minor] }

{buffered [level
0-7] |
[4096-32768]} |

{console
[severity-level 0-7]
| [alert] |
[critical] |
[debugging] |
[emergencies] |
[errors] |
[informational] |
[notifications] |
[warnings]}

{delimiter tcp}

{facility auth |
cron | daemon |
kern | local0 |
local1 | local2 |
local3 | local4 |
local5 | local6 |
local7 | lpr |
mail | news |
sys10 | sys11 |
sys12 | sys13 |
sys14 | sys9 |
syslog | user |
ucp} |

```
{file flash:  
filename [0-7] |  
[4096-32768] |  
[alert] | [critical]  
| [debugging] |  
[emergencies] |  
[errors] |  
[informational] |  
[notifications] |  
[warnings]}
```

```
{host  
ip_address_host_n  
ame [transport tcp  
port 1-65535 |  
udp port  
1-65535]}
```

```
{monitor [0-7] |  
[4096-32768] |  
[alert] | [critical]  
| [debugging] |  
[emergencies] |  
[errors] |  
[informational] |  
[notifications] |  
[warnings]} |
```

```
{on} |
```

```
{origin-id |  
[hostname] [ ip] |  
[ipv6] | [string]}
```

```
{rate-limit  
1-10000 [except  
[0-7] |  
[4096-32768] |  
[alert] | [critical]  
| [debugging] |  
[emergencies] |  
[errors] |  
[informational] |  
[notifications] |  
[warnings]} |
```

```
{source interface
vlan 1-4094} |
```

```
{trap [ 0-7] |
[4096-32768] |
[alert] | [critical]
| [debugging] |
[emergencies] |
[errors] |
[informational] |
[notifications] |
[warnings]}
```

Command Default

logging buffered 4096 debugging
logging console debugging
logging monitor debugging

Command Modes

PerleSwitch(config)#

Hardware model

All models

Usage Guidelines

Enable logging setting.

Examples

This example will enable logging to the host 172.16.55.88.

```
PerleSwitch(config)#logging 172.16.55.88<cr>
```

Related Commands

show logging

login

```
login {[on-failures [every 1-65535] | [log every 1-65535] | [trap every
1-65535]} | {on-success [every 1-65535] | [log every 1-65535] | [trap every
1-65535]}
```

Use the no form of this command to negate a command or set its defaults.

Syntax

login

Description

```
{[on-failures
[every 1-65535] |
[log every
1-65535] |
```

```
{on-success [every
1-65535] | [log
every 1-65535] |
[trap every
1-65535]}
```

Command Default

Command Modes

PerleSwitch(config)#

Hardware model

All models

Usage Guidelines

on-failures - failure logins

on-success - successful logins

every/log/trap -number of times login success needs to happen before the event is recorded.

Examples

This example will log all successes logins to syslog.

```
PerleSwitch(config)#login on-success log<cr>
```

Related Commands

show logging

mac address-table

```
mac {address-table aging time 0 | 15-3825} | {learning fastethernet slot /
port-number | gigabitethernet slot / port-number | port-channel channel vlan
1-4094} | {address-table move update receive | transmit} | {notification
mac-move [syslog] | [threshold 1-1000] | [trap]} | {quick-disconnect
fastethernet slot / port-number | gigabitethernet slot / port-number
port-channel channel} | {[static address 48 bit mac address vlan 1-4094 drop |
interface fastethernet slot / port-number | gigabitethernet slot / port-number |
port-channel channel] | [ip hostname or ip addressvlan 1-4094 drop | interface
fastethernet slot / port-number | gigabitethernet slot / port-number |
port-channel channel] | [ipv6 x:x:x::x vlan 1-4094 drop | interface
fastethernet slot / port-number | gigabitethernet slot / port-number |
port-channel channel]}
```

Syntax

mac address-table

Description

```
{address-table  
aging time 0 |  
15-3825} |
```

```
{learning  
fastethernet slot /  
port-number |  
gigabitethernet  
slot / port-number  
| port-channel  
channel vlan  
1-4094} |
```

```
{address-table  
move update  
receive |  
transmit} |
```

```
{notification  
mac-move [syslog]  
| [threshold  
1-1000] | [trap]} |
```

```
{quick-disconnect  
fastethernet slot /  
port-number |  
gigabitethernet  
slot / port-number  
port-channel  
channel}
```

```

{[static address 48
bit mac address
vlan 1-4094 drop |
interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel
channel] | [ip
hostname or ip
addressvlan 1-4094
drop | interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel
channel] | [ipv6
x:x:x:x::x vlan
1-4094 drop |
interface
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel
channel]}}

```

Command Default

Command Modes

PerleSwitch(config)#

Hardware model

All models

Usage Guidelines

Examples

Related Commands
mls

mls {**qos output-queue** [**cos-map 0-7 queue 0-3/7**] | [**dscp-map 0-63 queue 0-3/7**]}

Use the no form of this command to negate a command or set its defaults.

Syntax	mls
Description	

{ qos output-queue [cos-map 0-7 queue 0-3/7] | [dscp-map 0-63 queue 0-3/7]}	Range of output queues depends on specific switch. Some have 4 output queues and some have 8.
--	---

Command Default	no mls qos trust mls qos cos 0 no mls qos cos override
------------------------	--

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Enables the quality of service (QoS) globally on the switch. This setting will override any mls configuration done at the interface level

Examples

This example will set QoS trust on interface g1/2 for dscp.

```
PerleSwitch(config)#interface g1/2<cr>
PerleSwitch(config-if)mls qos trust dscp<cr>
PerleSwitch(config-if)exit<cr>
PerleSwitch(config)exit<cr>
PerleSwitch#show mls qos interface g1/2<cr>
```

```
GigabitEthernet1/2
trust state: DSCP
trust mode: DSCP
trust enabled flag: enable
CoS override: enable
default CoS: 0
```

Related Commands*show mls**fair-queue***monitor**

monitor {*session 1-1* **source** *fastethernet slot / port-number* | **gigabitethernet slot / port-number** [*^> | , | - | both | rx | tx*]} | {**destination interface** *fastethernet slot / port-number* | **gigabitethernet slot / port-number**}

Use the no form of this command to negate a command or set its defaults.

Syntax	monitor
Description	

{*session 1-1* **source** *fastethernet slot / port-number* | **gigabitethernet slot / port-number** [*^> | , | - | both | rx | tx*]}

{**destination interface** *fastethernet slot / port-number* | **gigabitethernet slot / port-number**}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

This command is used to mirror traffic received on a source port/s and send that traffic to a destination port..

session - select session

destination - select a destination port for the data to be steamed to (only one destination port)

source - one or many source ports to mirror the traffic

Examples

This example show you how to monitor session 1 interface gigabitethernet 1/1 and mirror the data received and output it to a destination port.

PerleSwitch(config)#monitor session 1 destination interface<cr>

Related Commands

logging

show monitor

debug

tracert

ping

mrp

mrp {ring <1-1 >}

Use the no form of this command to negate a command or set its defaults.

Syntax	mrp
Description	
mrp {ring <1-1 >}	
Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Enter MRP submenu and set the default ring protocol for DIP switches to MRP.

Under the MRP submenu, the user can set various parameters associated with the MRP feature.

If Profinet MRP is enabled, the ability to manually configure and manage MRP is disabled. It can only be managed via the Profinet protocol.

Examples

This example show you how to enter mrp submenu mode.

```
PerleSwitch(config)#mrp ring 1<cr>
```

Related Commands

(config-mrp)#mode

mode {auto | client | manager}

Use the no form of this command to negate a command or set its defaults.

Syntax	mode
Description	
mode {auto | client | manager}	
Command Default	mode auto
Command Modes	PerleSwitch(config-mrp)#
Hardware model	All models

Usage Guidelines

Sets the mode of the switch on the ring.

Auto - Will dynamically determine the role of the node to be either master or client. In this mode, all the nodes on the ring will arbitrate who the manager node will be. The winner will become the "manager" and all other nodes (which are set to "auto") will assume the role of "client". If the ring includes a node which does not support the "auto" mode, but also includes other nodes which do support this mode, the node which doesn't support "auto" must be set to "client". Alternatively, the user can manually set one node to "master" and all of the rest of the nodes to "client" since a ring can only support one manager node.

If the node elected to be the "manager" stops working (i.e. stops sending beacon frames on the ring), the switches on the ring will elect a new node to act as the manager.

When arbitrating for which node will be the master, the lowest priority value will win. If there is a tie with regards to priority value, the lowest MAC address will win.

Master - Fixes the role of the node as ring master.

Client - Fixes the role of the node as ring client.

Examples

This example show you how to set the mode to manager.

First enter MRP config submenu.

```
PerleSwitch(config)#mrp ring 1<cr>
```

Next set the mode.

```
PerleSwitch(config-mrp)#mode manager<cr>
```

Related Commands

mrp

show mrp

(config-mrp-auto)

```
{autoconfig} | {domain-id <uuid-string>} | {domain-name<name-string>} |  
{priority <0-65535>} | {profile 10 | 200 | 30 | 500} | {vlan-id<1-4000>}
```

Use the no form of this command to negate a command or set its defaults.

Syntax (config-mrp-auto)

Description

```
{autoconfig} |
```

{domain-id <uuid-string> } |	36 character, hexadecimal Default: ffffffff-ffff-ffff-ffffffffffff
{domain-name <name-string> } |	Default: IDS MRP Ring
{priority} <0-65535> |	Used when arbitrating for manager. Default: 32768
{profile 10 | 200 | 30 | 500} |	Default: 200 ms
{vlan-id <1-4000>}	Default: 1
Command Default	
Command Modes	PerleSwitch(config-mrp-manager)#
Hardware model	All models

Usage Guidelines

This command will configure the MRP parameters which will be used if the node is in "auto manager" mode.

The following parameters can be set;

autoconfig - running autoconfig will automatically detect and configure your switches on this ring.

domain-id of the ring. The uuid string must be a string of 32 hexadecimal digits in five groups separated by hyphens. (see example below). The ID is used to easily identify the ring when displaying the status.

domain-name - this is the domain name for this ring. Up to 32 characters long.

priority - the manager priority for multiple managers is not supported , so this parameter is not currently used.

profile - the profile sets the maximum convergence time in ms after a fault has been detected on the ring.

vlan-id - the ring will run on the configured vlan id <1-4000>

Examples

Enter the mrp configuration mode

```
(config)#mrp ring 1<cr>
```

Set the mode to "auto"

```
(config-mrp)#mode auto
```

Set the domain-id 641d931f-f1aa-50e5-b625-537564531f1f

```
PerleSwitch(config-mrp-auto)# domain-id  
641d931f-f1aa-50e5-b625-537564531f1f <cr>
```

Set the domain name to ids-production.

```
PerleSwitch(config-mrp-auto)#domain-name ids-production<cr>
```

Set the profile maximum recovery time to 200 milliseconds.

```
PerleSwitch(config-mrp-auto)#profile 200 <cr>
```

Set the vlan id to 10

```
PerleSwitch(config-mrp-auto)#vlan-id 10 <cr>
```

Related Commands

mrp

(config-mrp)#mode

(config-mrp-client)

```
{domain-id <uuid-string>} | {domain-name<name-string>} | {profile 10 |  
200 | 30 | 500} | {vlan-id<1-4000>}
```

Use the no form of this command to negate a command or set its defaults.

Syntax (config-mrp-client)**Description**

{ domain-id <uuid-string>} |	36 character, hexadecimal Default: ffffffff-ffff-ffff-ffffffffffff
--------------------------------------	---

{ domain-name <name-string>} |	Default: IDS MRP Ring
--	-----------------------

{ profile 10 | 200 | 30 | 500} |	Default: 200 ms
--	-----------------

{ vlan-id <1-4000>}	Default: 1
-------------------------------	------------

Command Default**Command Modes**

PerleSwitch(config-mrp-client)#

Hardware model

All models

Usage Guidelines

This command will configure the MRP parameters which will be used if the node is in "mrp client" mode.

The following parameters can be set;

domain-id of the ring. The uuid string must be a string of 32 hexadecimal digits in five groups separated by hyphens. (see example below). The ID is used to easily identify the ring when displaying the status.

domain-name - this is the domain name for this ring. Up to 32 characters long.

profile - the profile sets the maximum convergence time in ms after a fault has been detected on the ring.

vlan-id - the ring will run on the configured vlan id <1-4000>

Examples

Enter the mrp configuration mode

```
(config)#mrp ring 1<cr>
```

Set the mode to "client"

```
(config-mrp)#mode client
```

Set the domain-id 641d931f-f1aa-50e5-b625-537564531f1f

```
PerleSwitch(config-mrp-client)# domain-id
641d931f-f1aa-50e5-b625-537564531f1f <cr>
```

Set the domain name to ids-production.

```
PerleSwitch(config-mrp-client)#domain-name ids-production<cr>
```

Set the profile maximum recovery time to 200 milliseconds.

```
PerleSwitch(config-mrp-client)#profile 200 <cr>
```

Set the vlan id to 10

```
PerleSwitch(config-mrp-client)#vlan-id 10 <cr>
```

Related Commands

mrp

(config-mrp)#mode

(config-mrp-manager)

```
{autoconfig} | {domain-id <uuid-string>} | {domain-name<name-string>} |
{priority <0-65535>} | {profile 10 | 200 | 30 | 500} | {vlan-id<1-4000>}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-mrp-manager)
Description	

{autoconfig} |	
{domain-id <uuid-string> } |	36 character, hexadecimal Default: ffffffff-ffff-ffff-ffffffffffff
{domain-name <name-string> } |	Default: IDS MRP Ring
{priority} <0-65535> |	Default: 32768
{profile 10 | 200 | 30 | 500} |	Default: 200 ms
{vlan-id <1-4000> }	Default: 1
Command Default	
Command Modes	PerleSwitch(config-mrp-manager)#
Hardware model	All models

Usage Guidelines

This command will configure the MRP parameters which will be used if the node is in "mrp manager" mode.

The following parameters can be set;

autoconfig - running autoconfig will automatically detect and configure your switches on this ring.

domain-id of the ring. The uuid string must be a string of 32 hexadecimal digits in five groups separated by hyphens. (see example below). The ID is used to easily identify the ring when displaying the status.

domain-name - this is the domain name for this ring. Up to 32 characters long.

priority - the manager priority for multiple managers is not supported , so this parameter is not currently used.

profile - the profile sets the maximum convergence time in ms after a fault has been detected on the ring.

vlan-id - the ring will run on the configured vlan id <1-4000>

Examples

Enter the mrp configuration mode

```
(config)#mrp ring 1<cr>
```

Set the mode to "manager"

```
(config-mrp)#mode manager
```

Set the domain-id 641d931f-f1aa-50e5-b625-537564531f1f

```
PerleSwitch(config-mrp-manager)# domain-id
```

```
641d931f-f1aa-50e5-b625-537564531f1f <cr>
```

Set the domain name to ids-production.

```
PerleSwitch(config-mrp-manager)#domain-name ids-production<cr>
```

Set the profile maximum recovery time to 200 milliseconds.

```
PerleSwitch(config-mrp-manager)#profile 200 <cr>
```

Set the vlan id to 10

```
PerleSwitch(config-mrp-manager)#vlan-id 10 <cr>
```

Related Commands

mrp

(config-mrp)#mode

network-policy

```
network-policy {profile 1-4294967295}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	network-policy
Description	

{**profile**
1-4294967295}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

If the profile exists you will be in configuration mode for that network-policy profile, if not the profile will be created for you.

Examples

This example show s you how to create policy profile 1.

```
PerleSwitch#network-policy profile 1<cr>
```

Command

show network-policy
(config-network-policy)

(config-network-policy)

```
{voice vlan 1-4094 [cos 0-7] | [dscp 0-63] | dot1x [cos 0-7] | [dscp 0-63]
| [none] | [untagged]} | {[voice-signalling vlan 1-4094 [cos 0-7] | [dscp
0-63] | dot1p [cos 0-7] | [dscp] | [none] | [untagged]}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-network-policy)#
Description	

```
{voice vlan 1-4094
[cos 0-7] | [dscp
0-63] | dot1x [cos
0-7] | [dscp 0-63]
| [none] |
[untagged]}
```

```
[voice-signalling
vlan 1-4094 [cos
0-7] | [dscp 0-63]
| dot1p [cos 0-7] |
[dscp] | [none] |
[untagged]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-network-policy)#
----------------------	-------------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Configuration network policy commands.

voice - voice appliance attributes

voice-signaling - voice signaling appliance attributes

Examples

This example will set voice attribute on vlan 2 to use cos priority 3 for voices devices.

```
PerleSwitch(config-network-policy)#voice vlan 2 cos 3<cr>
```

Related Commands
ntp

```
ntp {authentication} | {authentication-key 1-65534 md5 [authentication-key]
|[0 unencrypted-key] |[7 encrypted-key]} | {broadcastdelay 1-999999 } |
{logging} | {master 1-15} | {[peer aaa.bbb.ccc.ddd] | [hostname-of-peer] |
{x:x:x:x:x} | ip ip-name-resolution | ipv6 ipv6-name-resolution]} | {server
[aaa.bbb.ccc.ddd] | [hostname-of-peer] | [x:x:x:x:x] | [ ip
ip-name-resolution] | [ipv6 ipv6-name-resolution]} | {trusted-key 1-65534}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ntp
Description	

```
{authentication} |
```

```
{authentication-key
1-65534 md5
[authentication-key
] |[0
unencrypted-key] |
[7 encrypted-key]}
|
```

```
{broadcastdelay
1-999999 } |
```

```
{logging} |
```

```
{master 1-15} |
```

```
{[peer
aaa.bbb.ccc.ddd] |
[hostname-of-peer]
| {[x:x:x:x:x] |
ip
ip-name-resolution
| ipv6
ipv6-name-resoluti
on]} |
```

```

{server
 [aaa.bbb.ccc.ddd]
 |
 [hostname-of-peer]
 | [x:x:x:x::x] | [
ip
ip-name-resolution
] | [ipv6
ipv6-name-resoluti
on}} |

```

```

{trusted-key
1-65534}

```

Command Default	no ntp disable
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Command Options

- authenticate** - authenticate time sources
- authentication-key** - authentication key for trusted time sources
- broadcast delay** - estimated round trip delay
- logging** - enable ntp logging
- master** - act as a master ntp clock
- peer** - configure ntp peer
- server** - configure ntp server
- trusted-key** - key numbers for trusted time sources

Examples

This example shows you how to use a ntp server to synchronize the switch's internal clock.

PerleSwitch(config)#ntp logging<cr>

PerleSwitch(config)#ntp server 172.16.4.181<cr>

```
23:40:31: %NTPD-5: ntpd 4.2.8p6@1.3265-o Wed May 18 14:33:49 UTC 2016 (10):
Starting
23:40:31: %NTPD-6: Command line: ntpd -n -g
23:40:31: %RSYSLOGD-6:LOGGINGHOST_STARTSTOP: Logging to UDP host
172.16.55.88 port 514 started
23:40:31: %NTPD-6: proto: precision = 3.840 usec (-18)
23:40:31: %NTPD-6: Listen and drop on 0 v6wildcard [::]:123
23:40:31: %NTPD-6: Listen and drop on 1 v4wildcard 0.0.0.0:123
23:40:31: %NTPD-6: Listen normally on 2 lo 127.0.0.1:123
23:40:31: %NTPD-6: Listen normally on 3 V11 172.16.113.77:123
23:40:31: %NTPD-6: Listen normally on 4 lo [::1]:123
23:40:31: %NTPD-6: Listen normally on 5 Gi2 [fe80::6ac9:bff:fec1:58da%4]:123
23:40:31: %NTPD-6: Listen normally on 6 Gi1 [fe80::6ac9:bff:fec1:58d9%3]:123
23:40:31: %NTPD-6: Listen normally on 7 eth0 [fe80::6ac9:bff:fec1:58d8%2]:123
23:40:31: %NTPD-6: Listening on routing socket on fd #38 for interface updates
23:40:31: %NTPD-3: Unable to listen for broadcasts, no broadcast interfaces available
23:40:31: %NTPD-6: 0.0.0.0 c01d 0d kern kernel time sync enabled
23:40:31: %NTPD-6: 0.0.0.0 c012 02 freq_set kernel 0.000 PPM
23:40:31: %NTPD-6: 0.0.0.0 c011 01 freq_not_set
23:40:31: %NTPD-6: 0.0.0.0 c016 06 restart
NewSwitchName(config)# 23:40:33: %NTPD-6: Listen for broadcasts to 172.16.255.255 on
interface #3 V11
23:40:33: %RSYSLOGD-6:LOGGINGHOST_STARTSTOP: Logging to UDP host
172.16.55.88 port 514 started
23:40:35: %NTPD-6: 0.0.0.0 c614 04 freq_mode
```

PerleSwitch(config)#do show ntp status<cr>

```
Clock is synchronized, stratum 12, reference is 172.16.4.180
Precision is 2**-18 s
Reference time is dae84dc5.33013328 (Thu, May 19 2016 10:35:49.199)
Clock offset is 7.595002 msec, root delay is 0.439 msec
Root dispersion is 7956.293 msec
System poll interval is 64 s
```

Related Commands

Use the no form of this command to negate a command or set its defaults.

Syntax	p-ring
Description	
Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Enter p-ring submenu mode..	
Examples	
This example shows you how to enter p-ring submenu mode. PerleSwitch(config)#p-ring<cr>	
Related Commands	
<i>ring</i>	

ring

(config-p-ring)

p-ring | {enable} | {mode client | manager} | {ring-port-1 fastethernet slot / port-number} | {gigabitethernet slot / port-number} | {port-channel 1-2} | {ring-port-2 fastethernet slot / port-number} | {gigabitethernet slot / port-number} | {port-channel 1-2} | {save} | {show}

Use the no form of this command to negate a command or set its defaults.

Syntax	p-ring
Description	
{enable} |	
{mode client | manager}	
{p-ring-1 fastethernet slot / port-number | gigabitethernet slot / port-number | port-channel 1-2} |	

```
{p-ring-2
fastethernet slot /
port-number |
gigabitethernet
slot / port-number
| port-channel 1-2}
```

```
{save} |
```

```
{show}
```

Command Default	None
Command Modes	PerleSwitch(config-p-ring)#
Hardware model	All models

Usage Guidelines

Command Options

mode - select with client or manager (only one manager per p-ring)

ring-port-1 - first ring port

ring-port-2 - second ring port

save - save config to running config

show - show config for p-ring

Examples

This example will set p-ring to manager. There can only be one manager on a p-ring. All other switches must be in client mode.

```
PerleSwitch(config-p-ring)#mode manager<cr>
```

Related Commands

show p-ring

power inline

```
power inline {consumption default 4000-100000| logging | no-input-validation
| retry | usage-threshold | wattage }
```

Use the no form of this command to negate a command or set its defaults.

Syntax

power inline

Description

consumption default <i><mWatts></i>	Defines the amount of power to grant a PD with an "unknown device class". Range: 4000 - 100000 mWatts Maximum will vary depending on model. Default: 30000 mWatts
logging	Enables additional log messages for PoE feature.
no-input-validation	Instruct the IDS switch not to monitor the amount of power being supplied to the IDS switch to ensure that it meets the minimum PoE specified levels.
retry { <i>errorisable</i> | <i>immediately</i> | <i>reconnect</i> }	Define the action to take if there is insufficient PoE budget left to accommodate the PD.
usage-threshold <i><percentage></i>	When the amount of power being allocated to all of the PoE devices reaches this percentage of the PoE budget, a trap and log message will be issued.
wattage max <i><Watts></i>	Defines the total PoE budget. Range: 4 - 450 Watts Maximum will vary depending on model. Default: 240 Watts (PoE, PoE+) 450 Watts (PoE++)
Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All PoE models

Usage Guidelines

The above command is used to set the global parameters of the Power Over Ethernet feature.

Command Options

consumption default - Defines the amount of power to grant a PD with an unknown class.

logging - Controls additional logging for feature.

no-input-validation - Determines if the supply power for the IDS switch will be validated to ensure that it meets the minimum PoE requirements.

retry - Defines the action to take when an "overdrawn" condition occurs.

usage-threshold - Defines the point at which a message will be generated indicating the PoE power allocation has reached a configured percentage of the PoE budget.

wattage - Defines how much wattage is available to be allocated to all devices.

Examples

For unknown PD class, grant the device 15.4 Watts of power.

```
PerleSwitch(config)#power inline consumption default 15400<cr>
```

Do not monitor that the amount of power being supplied to the IDS switch meets the minimum PoE requirements.

```
PerleSwitch(config)#power inline no-input-validation<cr>
```

Related Commands

[*show power inline*](#)

power-supply

power-supply dual

Use the no form of this command to negate a command or set its defaults.

Syntax	power-supply
Description	

dual

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Enable to monitor dual power supply status.

Examples

This example shows how to monitor for dual power supply status.

```
PerleSwitch(config)#power-supply dual<cr>
```

 Related Commands

show facility-alarm

profinet

profinet {**id** | **vlan** | **mrp**}

Use the no form of this command to negate a command or set its defaults.

Syntax	profinet
Description	
{cr |	Enable Profinet on switch
id |	Set the Profinet "name of station"
vlan |	Set the Profinet vlan
mrp }	Enable Profinet MRP. This disables the ability to set MRP parameters via the "(config)#mrp" command.
Command Default	
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Command is used to set Profinet parameters.

By default, the IDS switch is in "Profinet auto mode" of operation. In this mode, it listens for Profinet frames. If Profinet frames are detected, the Profinet feature will be enabled automatically. This allows a switch which is in "factory default" state to be configured using the Profinet DCP utility. The user can force the Profinet state to enabled or disabled using the "Profinet" command.

Examples

This example shows how to enable Profinet , set the vlan for Profinet to 2 and enable Profinet Media Redundancy Protocol.

```
PerleSwitch(config)#Profinet
PerleSwitch(config)#profinet vlan 2<cr>
PerleSwitch(config)#profinet mrp <cr>
```

Related Commands

show profinet

(config-if)#profinet dcp

ptp

ptp {**version 1** | **2**}

Use the no form of this command to negate a command or set its defaults.

Syntax	ptp
Description	
{version 1 | 2}	Select PTPv1 or PTPv2 version.
Command Default	ptp version 2
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Set the version number for ptp.

Examples

This example sets the ptp version to 1.

```
PerleSwitch(config)#ptp version 1<cr>
```

Related Commands

[\(config-ptp-v1\)](#)

[\(config-ptp-v2\)](#)

(config-ptp-v1)

ptp {domain 0-3} | {mode boundary | forward} | {sync interval 0-5}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-ptp-v1)
Description	
{domain 0-3} |	
{mode boundary | forward}	
{sync interval 0-5}	
Command Default	None
Command Modes	PerleSwitch(config-ptp-v1)#
Hardware model	All models

Usage Guidelines**Command Options****domain** - domain range**mode** - ptpv1 clock mode configuration. Select boundary clock mode or forward ptpv1 PDUs mode**sync interval** - interval between sync messages.

Examples

This example sets the mode to boundary for ptpv1.

PerleSwitch(config-ptp-v1)#mode boundary<cr>

Related Commands

[\(config-ptp-v2\)](#)**(config-ptp-v2)****{clock-class 0-255} | {domain 0-127} | {mode boundary-e2e | boundary-p2p | forward | transparent-e2e [one-step | two-step] | transparent-p2p} | {sync interval 0-5} | {priority1 0-255} | {transport 8023 | udp4 | udp}**

Use the no form of this command to negate a command or set its defaults.

Syntax (config-ptp-v2)**Description**

{clock-class 0-255}
|

{domain 0-127} |

{mode
boundary-e2e |
boundary-p2p |
forward |
transparent-e2e
[one-step |
two-step] |
transparent-p2p} |

{priority1 0-255} |

{transport 8023 |
udp4 | udp}

Command Default	ptpv2 mode transparent-e2e two-step doamin 0 transport udp4 clock-class 248 priority1 128 priority2 128
------------------------	---

Command Modes	PerleSwitch(config-ptp-v2)#
----------------------	-----------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Command Options

clock-class - ptpv2 clock class configuration

domain - ptp2 domain configuration

mode - set type of clock mode

priority1 -ptpv2 clock priority1

priority2 -ptpv2 clock priority 2

transport - ptpv2 PDU transport type configuration

Examples

This example sets the mode clock type to forward.

```
PerleSwitch(config)#mode forward<cr>
```

Related Commands

[\(config-ptp-v1\)](#)

radius

radius {**server** *name-of-radius*}

Use the no form of this command to negate the RADIUS server name.

Syntax	radius
---------------	---------------

Description	
--------------------	--

{**server**
name-of-radius}

Command Default	radius-server retransmit 3 radius-server timeout 5 radius-server deadtime 0
------------------------	---

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Set the RADIUS server name.

Examples

This example sets the RADIUS server name to office-radius.

```
PerleSwitch(config)#radius server office-radius<cr>
```

(config-radius-server)

```
radius {address [ipv4 a.b.c.d | ipv6 x:x:x:x::x | hostname] | [acct-port
0-65535] | [auth-port 0-65535] | [key 0 | 7 | shared-key] | [retransmit 1-100] |
timeout 1-1000}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	radius
Description	

```
{address [ipv4
a.b.c.d | ipv6
x:x:x:x::x |
hostname] |
[acct-port
0-65535] |
[auth-port
0-65535] | [key 0 |
7 | shared-key] |
[retransmit 1-100]
| timeout 1-1000}
```

Command Default	retransmit 3 timeout 5
------------------------	---------------------------

Command Modes	PerleSwitch(config-radius-server)#
----------------------	------------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines**Command Options**

address - specify the address of the RADIUS server. (hostname must exist in the host table if specifying by hostname)

key - encryption key shared with the RADIUS server.

retransmit - specify the number of retries to the active server

timeout - time (in seconds) to wait for a RADIUS server to reply

Examples

This example shows you how to set the address for the RADIUS server to IPv4 address 172.16.55.44.

```
PerleSwitch(config)#address ipv4 172.16.55.44<cr>
```

scada modbus

```
tcp server {<cr> | port <tcp number> | connections <number>}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	tcp server
Description	

<cr>	Enable/Disable Modbus.
port <1-65535>	Set the TCP port number the Modbus server will listen on. Default port is 502
connection <1-5>	The number of simultaneous connection Modbus will support. Default is 1.

Command Default	Modbus is disabled by default.
------------------------	--------------------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

The "scada" command is used to set the Modbus Server feature parameters. The user can enable/disable the server, set the TCP port the server listens on and define how many Modbus connections can exist at the same time.

The list of Modbus registers the user can read and their content is described following the "Related Commands" section.

Examples

This example shows you how to set the Modbus parameters.

```
PerleSwitch(config)#scada modbus tcp server<cr>
```

Enables the Modbus Server feature.

```
PerleSwitch(config)#scada modbus tcp server port 627<cr>
```

The Modbus Server will listen on TCP port 627 for incoming Modbus requests.

```
PerleSwitch(config)#scada modbus tcp server connections 2<cr>
```

Two Modbus connections can be established at the same time.

Related Commands*show scada modbus**clear scada modbus***Global Modbus Registers.**

Address	# of registers	Description	Format
0x0000	64	Vendor Name	Text
0x0040	64	Software Image Name	Text
0x0080	64	Software Image Version	Text
0x00C0	64	Product Name	Text
0x0100	64	System Name	Text
0x0140	64	Serial Number	Text
0x0180	64	Uptime (days, hours, minutes)	Text
0x0200	64	Alarm 1 Description	Text
0x0240	64	Alarm 2 Description	Text
0x0300	1	Power Supply 1 Status (1=good, 0=bad)	Uint16
0x0301	1	Power Supply 2 Status (1=good, 0=bad)	Uint16
0x0302	1	Alarm relay status (1 = alarm, 0 = no alarm)	Uint16
0x0303	1	Alarm input 1 (1=alarm, 0=no alarm,2=no digital input.	Uint16
0x0304	1	Alarm input 2 (1=alarm, 0=no alarm,2=no digital input.	Uint16
0x0305	1	System Temperature (in Celsius)	Int16

- **Port Specific Modbus Registers.**

Address	# of registers	Description	Format
0x1000	64	Port 1 Name	Text
0x1040	64	Port 2 Name	Text
0x1080	64	Port 3 Name	Text
....	....	Additional ports, up to the number of ports supported by your switch.	Text
0x1FC0	64	Port 64 Name	Text
0x2000	1	Port 1 Status 0 = link down, 1 = link up 2 = link disabled, F = no port	Uint16
0x2001	1	Port 2 Status 0 = link down, 1 = link up 2 = link disabled, F = no port	Uint16
....	....	Additional ports, up to the number of ports supported by your switch.	Uint16

0x203F	1	Port 64 Status 0 = link down, 1 = link up 2 = link disabled, F = no port	Uint16
0x2040	4	Port 1 Statistics, packets received	Uint64
0x2044	4	Port 2 Statistics, packets received	Uint64
.....	....	Additional ports, up to the number of ports supported by your switch. If port does not exist, returns a zero value.	Uint64
0x213C	4	Port 64 Statistics, packets received	Uint64
0x2140	4	Port 1 Statistics, packets sent	Uint64
0x2144	4	Port 2 Statistics, packets sent	Uint64
.....	....	Additional ports, up to the number of ports supported by your switch. If port does not exist, returns a zero value.	Uint64
0x223C	4	Port 64 Statistics, packets sent	Uint64
0x2240	4	Port 1 Statistics, bytes received	Uint64
0x2244	4	Port 2 Statistics, bytes received	Uint64
.....	....	Additional ports, up to the number of ports supported by your switch. If port does not exist, returns a zero value.	Uint64
0x233C	4	Port 64 Statistics, bytes received	Uint64
0x2340	4	Port 1 Statistics, bytes sent	Uint64
0x2344	4	Port 2 Statistics, bytes sent	Uint64
.....	....	Additional ports, up to the number of ports supported by your switch. If port does not exist, returns a zero value.	Uint64
0x243C	4	Port 64 Statistics, bytes sent	Uint64

sdm

sdm {dual prefer default | dual-ipv4-and-ipv6 default}

Use the no form of this command to negate a command or set its defaults.

Syntax **sdm**
Description

**{dual prefer
default |
dual-ipv4-and-ipv
6 default}**

Command Default sdm prefer default

Command Modes PerleSwitch(config)#

Hardware model All models

Usage Guidelines

The sdm command is used to set IP protocols on your switch. By default the switch is set for IPv4. To enable both IPv4 and IPv6 see the example below.

Examples

This example shows you how to set the switch for both IPv4 and IPv6 traffic.

```
PerleSwitch(config)# sdm prefer dual-ipv4-and-ipv6 default<cr>
```

Related Commands**service**

```
service {dhcp} | {password-encryption} | {sequence-numbers} |
{timestamps log [datetime] | [localtime] | [msec] | [showtime-zone] | [year]
| uptime}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	service
Description	

```
{dhcp} |
{password-encrypt
ion} |
{sequence-number
s} | {timestamps
log [datetime] |
[localtime] |
[msec] |
[showtime-zone] |
[year] | uptime}
```

Command Default

```
service dhcp
no service sequences numbers
no service timestamps log uptime
```

Command Modes

```
PerleSwitch(config)#
```

Hardware model

```
All models
```

Usage Guidelines

dhcp - enable dhcp server and relay agent.

password-encryption - encrypt system passwords

password-recovery- configure password recovery

sequence-numbers- stamp logger messages with a sequence number.

timestamp - timestamp log messages

Examples

This example shows you how to encrypt system passwords.

```
PerleSwitch(config)# service password-encryption<cr>
```

Related Commands

ip dhcp

(config-dhcp-class)

(config-dhcp-class-relayinfo)

release

renew

snmp-server

```
snmp-server {community community-string [1-99] | [1300-1999]  
[access-list-name] | [ro] | [rw]} | {contact contact-person-name} | {enable  
traps [alarms 1-4] | [major] | [minor] | [authentication] |  
[bandwidth-exceeded] | [bridge] | [dot1x] | [entity] | [envon] |  
[errdisable] | [gmrp] | [gvrp] | [igmp] | [link-standby] | [lldp] |  
[mac-notification] | [mld] | [ring] | [port-security] | [snmp  
[authentication] | [coldstart] | [linkdown] | [link-up] | [warmstart]] |  
[transceiver] | [vlan-membership] | [vlancreate] | [vlandelete]} | {engineid}  
| {group} | {host} | {inform} | {location} | {queue-length} | {user} | {view}
```

Use the no form of this command to negate a command or set its defaults.

Syntax

snmp-server

Description

```

{community
community-string
[1-99] |
[1300-1999]
[access-list-name]
| [ro] | [rw]} |
{contact
contact-person-na
me} | enable traps
[alarms 1-4 |
[major] | [minor]
| [authentication] |
[bandwidth-excee
ded] | [bridge] |
[dot1x] | [entity]
| [envon] |
[errdisable] |
[gmrp] | [gvrp] |
[igmp] |
[link-standby] |
[lldp] |
[mac-notification]
| [mld] | [ring] |
[port-security]
[snmp
[authentication] |
[coldstart] |
[linkdown] |
[link-up] |
[warmstart]] |
[transceiver |
[vlan-membership
| [vlancreate[ |
[vlandelete]}

```

Command Default

None

Command Modes

PerleSwitch(config)#

Hardware model

All models

Usage Guidelines**Command Options****community**- set community strings and access privileges**contact** - text for mib object sysContact**enable** - enables traps**engineID** - configure a local or remote SNMPV3 engineID**group** - define a SNMPv3 user security model**host** - specify hosts to receive SNMP notifications**inform** - configure SNMP inform options**location** - text for MIB object sysLocation**queue-length** - message queue length for each TRAP host**user** - define a user who can access the SNMP engine**view** - define an SNMPv3 MIB view

Examples

This example will set community name to public and contact person to admin, then enable trap messages for authentication.

PerleSwitch(config)#community public<cr>**PerleSwitch(config)#snmp-server contact admin<cr>****PerleSwitch(config)#snmp-server enable traps authentication<cr>**

Related Commands*show snmp**(config-if)#sgmii***spanning-tree**

```
spanning-tree {aging-time 10-1000000} | {logging} | {loopguard default} |
{maxhops 6-40} | {mode [mstp | rstp | stp]} | {mst configuration} |
{ring-mode} | {pathcost method [long | short]} | {portfast [bpdufilter |
bpduguard | default]} | {tx-hold-count 1-20} | {vlan vlan-range
[forward-time 4-30] | [hello-time 1-10] | [max-age 6-40] | [priority
0-61440] | [root]}
```

Use the no form of this command to negate a command or set its defaults.

Syntax **spanning-tree**
Description

{aging-time
10-1000000} |

{logging} |

```
{loopguard  
default} |
```

```
{maxhops 6-40} |
```

```
{mode [mstp | rstp  
| stp]} |
```

```
{mst  
configuration} |
```

```
{ring-mode} |
```

```
{pathcost method  
[long | short]} |
```

```
{portfast  
[bpdufilter |  
bpduguard |  
default]} |
```

```
{tx-hold-count  
1-20} |
```

```
{vlan vlan-range  
[forward-time  
4-30] |  
[hello-time 1-10]  
| [max-age 6-40]  
| [priority  
0-61440] | [root]}
```

Command Default	no spanning-tree bpdguard no spanning-tree bpdudfilter no spanning-tree cost no spanning-tree port-priority no spanning-tree link-type no spanning-tree port-type no spanning-tree guard root no spanning-tree guard restrict_tcn no spanning-tree mcheck spanning-tree pathcost long spanning-tree aging 300 seconds no spanning-tree logging spanning-tree loop guard default(off) spanning-tree max-hops 20 spanning-tree mode RSTP no spanning-tree ring-mode spanning-tree portfast default(off) spanning-tree tx-hold-count 6 spanning-tree forward-time 15 spanning-tree priority 8 (32768)
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Command Options

aging time is the timeout period, in seconds, for aging out dynamically learned forwarding information.

logging - turn logging on for spanning-tree

loop guard - this causes additional checks to be made before a port moves from blocked to listening/learning/forwarding state. STP determines that a port is not a candidate for a loop if it does not detect BPDU messages on it for a certain amount of time. With loop guard when this happens, the port transitions to a "loop consistent blocking" state.

max-hops - this is the maximum number of hops that a BPDU is valid for.

mode - RSTP (fallback to STP if not supported on network).

mst configuration - go into mst config mode (config-mst)#

p-ring-mode - This parameter defines whether we are running spanning-trees on p-ring ports. Off - if p-ring is being used, spanning tree will be disabled on any p-ring ports. On - P-ring ports will now advertise their path to the root as a cost of 1. This will prevent these ports from ever being blocked due to spanning tree redundancy detection logic. If spanning tree is being used in conjunction with p-ring, the spanning-tree "root" must reside on the ring.

pathcost method (applies to vlans only) -this is the method used to determine the cost to the root. It is only used with STP. All nodes on the network need to be using the same method.

portfast (applies to vlans only) - this feature is used when a port needs to go into port forwarding mode quickly such as for an application like DHCP or DNS. Portfast should only be used on a port that is directly connected to a server/workstation (never to a hub or switch). The portfast feature is automatically enable when you configure a voice vlan this port.

tx-hold-count (applies to vlans only)- the transmit hold counter is a counter used to limit the maximum transmission rate of the switch. The number of BPDUs transmitted during every hello-time period from a minimum of one to a maximum that is not more then the tx-hold-counter set by the user.

forward-time (applies to vlans only)- the forward delay timer is the time interval (in seconds) that is spend in the listening and learning state.

hello-time (applies to vlans only) - the hello timer is the time interval between each BPDU that is sent on a port.

max-age - the max age timer controls the maximum length of time interval that a STP switch port saves it configuration BPDU information.

priority - every switch participating in a spanning tree protocol network is assigned with a numerical number called a switch priority value. Priority values decide who will be elected as root. Priority values must be specified in increments of 4096.

root - the switch will automatically negotiate with other switches for who will be root. If you configure the switch to be root, the switch will set the priority of this switch to 0 (highest priority) and force this switch to become root.

Examples

This example will set the switch to root.

```
PerleSwitch(config)#spanning-tree vlan 3 root<cr>
```

Related Commands

(config-if)spanning-tree

(config-mst)#

{**abort** | **exit** | **instance** | **name** | **no** | **revision** | **show**}

Use the no form of this command to negate a command or set its defaults.

Syntax	system
---------------	---------------

Description	
--------------------	--

{**abort** | **exit** |
instance | **name** |
no | **revision** |
show}

Command Default	
------------------------	--

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines**Command Options**

abort - exit region configuration mode, aborting changes

exit - exit region configuration mode, saving changes

instance - map vlans to an MST instance (0-63). Instance 0 cannot be deleted and will be used to map unmapped vlans to instance 0

name - set configuration name

revision - set configuration revision number

show - display region configuration

Examples

This example will group vlans 10 to 20 bundled as instance 3.

```
PerleSwitch(config-mst)#instance 3 vlan 10-20<cr>
```

```
PerleSwitch#show<cr>
```

Pending MST configuration

Name: []

Revision: 0 Instances configured 2

Instance	Vlans mapped
-----	-----
0	1-9, 21-4094
3	10-20

Related Commands

(config-if)#spanning-tree

clear scada modbus

system

system {**mtu jumbo**}

Use the no form of this command to negate a command or set its defaults.

Syntax	mtu jumbo
Description	

{**mtu jumbo**}

Command Default	system mtu jumbo
------------------------	------------------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Sets maximum transmission units to jumbo frames. Applies only to gigabitethernet interfaces.

Examples

This example will set mtu to jumbo frames.

```
PerleSwitch(config)# system mtu jumbo<cr>
```

tacacs

tacacs server {*name-of-tacacs-server*}

Use the no form of this command to negate tacacs server name.

Syntax	tacacs server
Description	
	<i>name-of-tacacs-server</i>
Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models
Usage Guidelines	
Set the name of your TACACS server.	

Examples

This example shows you how to name the TACACS+ server and enter into TACACS+ config mode.

```
PerleSwitch(config)# tacacs server tac+<cr>
```

```
PerleSwitch(config-tacacs-server)#
```

(config-tacacs-server)

```
tacacs-server {deadtime 1-1440 in mintues } | [key 0 - unencrypted-shared-key | 7 - hidden-key | shared-key] | [retransmit 1-100] | [timeout 1-1000 wait-time] }
```

Use the no form of this command to negate parameters.

Syntax	config-radius-server
Description	
	{ <i>deadtime 1-1440 in mintues</i> } | [<i>key 0 - unencrypted-shared-key | 7 - hidden-key | shared-key</i>] | [<i>retransmit 1-100</i>] | [<i>timeout 1-1000 wait-time</i>] }
Command Default	tacacs deadtime 0 tacacs timeout 5

Command Modes	PerleSwitch(config-tacacs-server)#
----------------------	------------------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines**Command Options**

address - specify the address of the TACACS server.

key - encryption key shared with the TACACS server.

retransmit - specify the number of retries to the active server

timeout - time to wait for a TACACS server to reply

Examples

This example will set the deadtime to 5 minutes for a TACACS+ server that doesn't respond.

```
PerleSwitch(config-tacacs-server)#deadtime 5<cr>
```

Related Commands

PerleSwitch(config-sg-tacacs+)

clear tacacs+ statistics

show tacacs+

username

username {*name-of-user* [**nopassword**] | [**privilege 1 | 15**] | [**secret**]}

Use the no form of this command to negate username.

Syntax	username
---------------	-----------------

Description	
--------------------	--

```
{name-of-user
[nopassword] |
[privilege 1 | 15]
| [secret]}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config)#
----------------------	----------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines**Command Options**

privilege level

- 1 specifies user privilege level (user exec)
- 15 specifies privilege exec level (privilege exec)

Secret

0 - Specifies that an UNENCRYPTED password will follow.

7 Specifies an ENCRYPTED password will follow

LINE - the UNENCRYPTED (cleartxt) password.

Examples

This example creates a user with user exec privileges and a clear text password.

PerleSwitch(config)#username lyn privilege 1 secret password123<cr>

Related Commands*show users***vlan***vlan-id-or-range*

Syntax	vlan
Description	
<i>vlan-id-or-range</i>	
Command Default	None
Command Modes	PerleSwitch(config)#
Hardware model	All models

Usage Guidelines

Specify the number or range of vlans you want to perform commands on.

Examples

This example shows you how to select the vlan you want to perform commands on.

PerleSwitch(config)#vlan 10<cr>

This example shows you how to select a range of vlans to perform commands on.

PerleSwitch(config)#vlan 5-10<cr>

Related Commands*show vlan***(config-vlan)****(config-vlan)#{name} | shutdown**

Use the no form of this command to negate the name or to enable the vlan.

Syntax	(config-vlan#
Description	
{name} | shutdown	
Command Default	vlan 1
Command Modes	PerleSwitch(config-vlan)#
Hardware model	All models

Usage Guidelines

Use the name command to give a vlan a name. You cannot assign names to a range. Default vlan 1 cannot be deleted or changed.

Examples

This example shows you how to give a name to a vlan.

From config mode select the vlan number to name. Now from config-vlan mode name the vlan.

```
PerleSwitch(config)#vlan 10<cr>
```

```
PerleSwitch(config-vlan)#name office
```

This example shows how to shutdown a range of vlans.

```
PerleSwitch(config)#vlan 10-20<cr>
```

```
PerleSwitch(config-vlan)#shutdown
```

Related Commands*show vlan*

5 Interface configuration

This chapter contains the CLI commands for Interface Config Mode.

Interface

interface {[fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [range]}

See [Interface configuration](#) to configure switchports.

See [Interface Port Channels](#) to configure port channels.

See [Vlan config mode](#) to configure vlans.

See [Interface line mode](#) to configure console and vtys.

Use the no form of this command to negate a command or set its defaults.

.

Syntax	interface
--------	------------------

Description	
-------------	--

{[fastethernet slot / port-number] | [gigabitethernet slot / port-number] | [port-channel port-channel-number] | [vlan 1-4094] | [range]}

Command Default	None
-----------------	------

Command Modes	PerleSwitch(config-if)#
---------------	-------------------------

Usage Guidelines

Select the interface, port channel, vlan or interface range that you want to perform commands on. You will now be in (config-if) mode.

Examples

This example shows you how to enter interface config command mode for a vlan interface.

```
PerleSwitch(config)# interface vlan 1<cr>
```

This example shows you how to group vlan interface 1 and 2. Any config commands will now be performed on vlan 1 and 2.

```
PerleSwitch(config-if-range)# interface range vlan 1 - 2 <cr>
```

```
PerleSwitch(config-if-range)# no interface range<cr>
```

This example shows you how to set a gigabitethernet range and how to set the gigabitethernet range to defaults.

```
PerleSwitch(config-if-range)# interface range gigabitethernet 1/1<cr>
```

```
PerleSwitch(config-if-range)#default interface range gigabitethernet 1/1<cr>
```

Related Commands

Interface configuration
Interface Port Channels
Vlan config mode
Interface line mode

(config-if)#alarm

alarm {**profile** *profile-name*}

Use the no form of this command to negate a command or set its defaults.

Syntax	alarm
Description	

{**profile**
profile-name}

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Create alarm profiles.

Examples

This example shows you how to create an alarm.

```
PerleSwitch(config)# alarm profile alarm1 <cr>
```

This example shows you how to attach the alarm to a gigabitEthernet port.

```
PerleSwitch(config)# interface gig 1 / 1 <cr>
```

```
PerleSwitch(config-if)# alarm profile alarm1 <cr>
```

Related Commands

(config-if)#alarm
alarm
(alarm-profile)

(config-if)#authentication

authentication {**event** [**fail action** **authorize** **vlan** *vlan_interface_number*] | [**no-response action** **authorize** **vlan** *vlan_interface_number*]} | {**host-mode** **multi-auth** | **multi-host** | **single-host**} | {**periodic**} | {**port-control** **auto** | **force-authorized** | **force-unauthorized**} | {**timer** **reauthenticate** *1-65535* | **restart** *0-65535*} | {**violation** **protect** | **replace** | **restrict** | **shutdown**}

Syntax	(config-if)#authentication
Description	
	<pre>{event [fail action authorize vlan vlan_interface_number] | [no-response action authorize vlan vlan_interface_number]}profile profile-name</pre>
	<pre>{host-mode multi-auth | multi-host | single-host}</pre>
	<pre>{periodic}</pre>
	<pre>{port-control auto | force-authorized | force-unauthorized}</pre>
	<pre>timer reauthenticate 1-65535 | restart 0-65535 }</pre>
	<pre>{violation protect | replace | restrict | shutdown}</pre>
Command Default	<pre>authentication host mode single-host authentication port-control forced-authorized no authentication periodic authentication timer re-authenticate 3600 seconds authentication timer restart 60 seconds authentication violation shutdown</pre>
Command Modes	PerleSwitch(config-if)#

Usage Guidelines**Command Options**

event - sets the action for authentication events.

host-mode - Set the host mode for authentication on this interface.

periodic - Enable or disable re-authentication for this port

port-control - Set the port control value. Auto - port state set to automatic, force-authorized - port state set to authorized, force authorize - port state set to unauthorized.

timer-authentication - time in seconds after which an automatic re-authentication should be initiated. **Restart** - interval in seconds after which an attempt should be made to authenticate an unauthorized port.

violation - Configure action to take on a security violation.

Examples

This example sets the retry timer for failed authentications to 3.

```
PerleSwitch(config-authentication event fail retry 3<cr>
```

Related Commands**(config-if)#bandwidth-control**

```
bandwidth-control {egress | ingress> traffic all | bc | bc+mc pps  
0-10000000 0-1000000 action shutdown | trap}
```

Use the no form of this command to negate a command or set its defaults.

Syntax**bandwidth-control****Description**

```
{egress | ingress>
traffic all | bc |
bc+mc pps
0-1000000
0-1000000 action
shutdown | trap}
```

Enter the first parameter as high level threshold in packets per second format.

Enter the second parameter as low level threshold in packets per second format.

If the high level threshold on this interface is reached and it is configured to shutdown then the following will happen:

- port will be put in a errdisable state
- the recovery of the port will be determined by the errdisable recovery setting.
- a trap will be set to the configured snmp server
- If the high level threshold on this interface is reached and it is configured to trap then the following will happen:
 - a trap will be sent to a configured snmp server when the high level threshold is reached. Once a trap is issued, no traps will be issued for this condition until the packets per second (pps) has dropped below to or below the low level at the point another trap message will be sent to indicate the event has occurred again.
- the port will continue to operate normally

Command Default

Command Modes

PerleSwitch(config-if)#

Usage Guidelines

When a port channel group is specified, all channels within that group are adding to the frame counter.

Examples

This example shows how you can enable a port in errdisable state.

PerleSwitch(config)#errdisable recovery cause bandwidth-exceeded (this setting applies to all interfaces, not individual interfaces).

Related Commands

bandwidth-control
(config-if)#bandwidth-control
show bandwidth-control

(config-if)# channel-group

channel-group {1-2 [**mode active** | **on** | **passive**]}

Use the no form of this command to negate a command or set its defaults.

Syntax	channel-group
Description	
	{1-2 [mode active | on | passive]}
Command Default	no channel group
Command Modes	PerleSwitch(config)#
Usage Guidelines	
Sets the behavior of the channel group	
active - enable LACP unconditionally	
on - enable Etherchannel only	
passive - enable LACP only if LACP device is detected	
Examples	
This example sets the mode for channel port 1 to active.	
PerleSwitch(config-if)#channel group 1 mode active<cr>	
Related Commands	
<i>(config-if)#lacp</i>	
<i>show lacp</i>	

(config-if)#description

description {*interface-description*}

Syntax	description
Description	
	{<i>interface-descripti on</i>}
Command Default	None
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Set a description for the specified interface.	
Examples	
This example sets the description on gigabit interface 1 to office-1.	
PerleSwitch(config)#interface g1/1<cr>	
PerleSwitch(config-if)description office-1<cr>	

Related Commands

(config-if)#dot1x

dot1x {**credentials** *credential-profile-name*} | {**max-reauth-req** *1-10*} | {**max-req** *1-10*} | {**pae authenticator** | **supplicant**} | {**timeout quiet-period** *1-65535* | **supp-timeout** *1-65535* | **tx-period** *1-65535*}

Use the no form of this command to negate a command or set its defaults.

Syntax	dot1x
Description	

{**credentials**
*credential-profile-n
ame*} |

{**max-reauth-req**
1-10} |

{**max-req** *1-10*} |

pae authenticator |
supplicant} |

{**timeout**
quiet-period
1-65535 |
supp-timeout
1-65535 |
tx-period *1-65535*}

Command Default

```
no dot1x pae
dot1x credential
dot1x supplicant eap profile
dot1x timeout tx-period 30
dot1x timeout supp-timeout 30
dot1x timeout quiet-period 60
dot1x timeout server-timeout 30
dot1x max-reauth-req 2
dot1x max-req 2
```

Command Modes

```
PerleSwitch(config-if)#
```

Usage Guidelines

Interface config commands for IEEE 802.1x.

Examples

This example shows how to enable pae authenticator for dot1x on interface g1/1.

```
PerleSwitch(config)#interface g1/1<cr>
PerleSwitch(config-if)switchport mode access<cr>
PerleSwitch(config-if)#dot1x pae authenticator<cr>
```

Related Commands

[aaa authorization](#)
[aaa authentication](#)

*only applies to All models models

(config-if)#duplex

duplex {**auto** | **full** | **half** }

Use the no form of this command to negate a command or set its defaults.

Syntax

duplex

Description

{**auto** | **full** | **half**
}

Duplex applies to GigabitEthernet.

Command Default

None

Command Modes

PerleSwitch(config-if)#

Usage Guidelines

Sets the duplex mode for the specified interface.

Examples

This example shows you how to set duplex mode for a specified interface.

First, set the interface you want to perform the duplex command.

```
PerleSwitch(config-if)# interface gigabitEthernet 1 /1 <cr>
```

Next, set duplex on that interface

```
PerleSwitch(config-if)# duplex full <cr>
```

Related Commands

[\(config-if\)#duplex](#)

(config-if)#flowcontrol

flowcontrol {**send-receive auto** | **off** | **on**}

Use the no form of this command to negate a command or set its defaults.

Syntax	flowcontrol
Description	
	{send-receive auto | off | on}
Command Default	None
Command Modes	PerleSwitch(config-if)#

Usage Guidelines

You can set flowcontrol options on FastEthernet and GigabitEthernet interfaces.

Flow control **auto** on this line means allow but do not require flow control packets on port.

Flowcontrol **off**, disables flowcontrol packets or back-pressure on the port.

Flow control **on**, enables flow control packets or back pressure on the port.

Examples

This example shows you how to set flow control for a specified interface.

First, set the interface you want to perform the flowcontrol command. You can also set a range of interfaces.

```
PerleSwitch(config-if)# interface gigabitEthernet 1 /1 <cr>
```

Next, set flow control on that interface

```
PerleSwitch(config-if)# flowcontrol on <cr>
```

Related Commands

[\(config-if\)#duplex](#)

(config-if)#gmrp

gmrp {forward all} | {service all groups | unregistered-groups}

Syntax	gmrp
Description	

{forward all} |

**{service all groups
|
unregistered-grou
ps}**

Command Default	no gmrp no gmrp forward-all no gmrp service
------------------------	---

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Sets the parameters for GMRP. GMRP must be enabled globally for GMRP to work on all interface.

Examples

This example will enable GMRP on interface g1/1.

```
PerleSwitch(config-if)gmrp<cr>
```

Related Commands

clear gmrp

gmrp

show gmrp

Note: GMRP must be enabled at the global config level for any GMRP interface parameters to take affect.

(config-if)#gvrp

```
gvrp {dynamic-vlan-creation}
```

Syntax	gvrp
Description	

{dynamic-vlan-creation}

Command Default	no gvrp no gvrp dyanmic-vlan-creation
------------------------	--

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Use this command to enable GVRP on your switch. Configuring the dynamic-vlan-creation on will enable the switch to add vlans to its database when it receives a GVRP join message about VLANs it does not have.

Examples

This example show how to enable GVRP for the selected interface.

```
PerleSwitch(config)interface g1/1<cr>
```

```
PerleSwitch(config-if)#gvrp<cr>
```

Related Commands

clear gvrp
show gvrp
gvrp

Note: GVRP must be enabled at the global config level for any GVRP interface parameters to take affect.

(config-if)#ip

ip {**max-groups** *0-8192* | **snooping tcn flood**} | {**dhcp server use subscriber-id client-id**}

Syntax	ip
Description	
{ max-groups <i>0-8192</i> | snooping tcn flood }	
{ dhcp server use subscriber-id client-id }	
Command Default	None
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Enables or disables igmp snooping tcn flood.	
Examples	
This example enables igmp snooping tcn flood.	
PerleSwitch(config)#igmp snooping tcn flood<cr>	
Related Commands	
<i>ip igmp logging</i> | <i>snooping</i>	
<i>clear ip igmp</i>	
<i>show ip igmp</i>	
*only applies to All models models	

Usage Guidelines

Enables or disables igmp snooping tcn flood.

Examples

This example enables igmp snooping tcn flood.

PerleSwitch(config)#igmp snooping tcn flood<cr>

Related Commands

ip igmp logging | *snooping*
clear ip igmp
show ip igmp

*only applies to All models models

(config-if)#ipv6

ipv6 {**mld max-groups** *0-8192* | **snooping tcn flood**}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#ipv6
Description	
	{mld max-groups 0-8192 | snooping tcn flood}
Command Default	ipv6 mld snooping ipv6 mld max-groups 0 ipv6 mld snooping tcn flood
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
max-groups - set the maximum number of groups that can be joined. Groups exceeding the max threshold will be denied.	
snooping - global mld snooping enabled for Vlans	
Examples	
This example sets max groups to 50.	
PerleSwitch(config-if)#ipv6 mld max-groups 50<cr>	
Related Commands	
<i>clear ipv6</i>	
<i>show ipv6</i>	
*only applies to All models models	

(config-if)#lACP**lACP** {port-priority 0-65535}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#lACP
Description	
	{port-priority 0-65535}
Command Default	logging event bundle-status logging link-status
Command Modes	PerleSwitch(config-if)#

Usage Guidelines

The port priority determines which ports will be put in standby mode when a hardware limitation prevents all compatible ports from aggregating.

Examples

This example sets the port-priority to 100 on gigabitethernet 1/1<cr>

```
PerleSwitch(config)interface g1/1<cr>
```

```
PerleSwitch(config-if)#lacp port-priority 100<cr>
```

Related Commands

lacp

show lacp

(config-if)# channel-group

*only applies to All models models

(config-if)#lldp

```
lldp {max-neighbors 1-50} | {med-tvl-select location | network-policy} |  
receive} | {tvl-select link-aggregate | mac-phy-cfg | management-address |  
max-frame-size | port-description | port-vlan | system-capabilities |  
system-description | system-name | vlan-name} | {transmit}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#lldp
---------------	-------------------------

Description	
--------------------	--

```
{max-neighbors  
1-50} |
```

```
{med-tvl-select  
location |  
network-policy} |
```

```

{tlv-select
link-aggregate |
mac-phy-cfg |
management-address |
max-frame-size |
port-description |
port-vlan |
system-capabilities
|
system-description
| system-name |
vlan-name} |

```

```
{transmit}
```

Command Default	lldp max-neighbors 10
------------------------	-----------------------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Parameters for usage.

max-neighbors -set the ports maximum number of LLDP neighbors

med-tlv-select - selection of LLDP MED TLVs to send

receive - enable LLDP reception on the interface

tlv-select - selection of LLDP TLVs to send on the interface

transmit - enable LLDP transmission on the interface.

Examples

This example will show you how to enable LLDP transfer and receive on the specified interface.

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config-if)#lldp receive<cr>
```

```
PerleSwitch(config-if)#lldp transmit<cr>
```

Related Commands

lldp

clear lldp

show lldp

(config-if)#location

```
location {civic-location-id | elin-location-id} | {none port-location}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#logging
Description	
	{ civic-location-id | elin-location-id} |
	{ none port-location }
Command Default	None
Command Modes	PerleSwitch(config-if)#
Usage Guidelines.	
Specify the location to use for this interface or select none and provide the port location.	
Examples	
This example will set the location for this interface to civic-location-id civictest. PerleSwitch(config-if)#location civic-location-id civictest<cr>	
Related Commands	
<i>location</i>	

(config-if)#logging

logging {**event bundle-status** | **link-status**}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#logging
Description	
	{ event bundle-status | link-status }
Command Default	logging event bundle-status logging link-status
Command Modes	PerleSwitch(config-if)#
Usage Guidelines.	
Enable or disable logging messages for event and link status on selected interface.	

Examples

This command will disable logging link-status for g1/1.

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config-if)#no logging event link-status<cr>
```

Related Commands

logging

(config-if)#mab

mab {*eap*}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#mab
---------------	------------------------

Description	
--------------------	--

{*eap*}

Command Default	no mab no mab eap
------------------------	----------------------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

If mab is enabled on the port the switch will use the normal protocol to communicate to the Radius server.

If mab eap is enabled on the switch, the switch will use the EAP protocol to communicate with the RADIUS server.

Examples

This example shows how to set mab eap on interface g1/1.

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config-if)mab eap<cr>
```

Related Commands

*only applies to All models models

(config-if)#mdix

mdix {*auto* | *off* | *on*}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#mdix
Description	
{[auto] | {auto | off | on}}	MDIX applies to GigabitEthernet interfaces.
Command Default	None
Command Modes	PerlSwitch(config-if)#
Usage Guidelines	
Sets the media dependent interface with crossover.	
Examples	
This example will set the mdix crossover on this interface g 1/1 to auto.	
PerleSwitch(config)interface g 1/1<cr>	
PerleSwitch(config-if)mdix auto	
Related Commands	
<i>(config-if)#duplex</i>	
<i>(config-if)#flowcontrol</i>	

(config-if)#mls qos

mls {qos cos 0-7 | override} | {trust cos | dscp}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#mls qos
Description	
{qos {cos 0-7 | override} | {trust cos | dscp}}	
Command Default	no mls qos trust mls qos cos 0 no mls qos cos override
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Parameters for usage.	
qos - select the class of service 0-7 or select to override cos	
trust - select to trust either cos or dscp keyword.	

Examples

This example sets g1/2 interface to trust only dscp.

```
PerleSwitch(config)#interface g1/2<cr>
```

```
PerleSwitch(config-if)#mls qos trust cos<cr>
```

Related Commands

show mls

Note: mls must be enabled at the global config level for any mls interface parameters to take affect.

(config-if)#network-policy

```
network-policy {1-4294967295}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#network-policy
Description	

```
network-policy  
1-4294967295
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Enable network policy on this interface.

Examples

Enable network-policy 4 on interface g1/1.

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config-if)#network-policy 4<cr>
```

Related Commands

network-policy

*only applies to All models models

(config-if)#power

```
power {efficient-ethernet auto}
```

Syntax	(config-if)#power
Description	
	{efficient-ethernet auto}
Command Default	no power efficient ethernet auto
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Enables Energy Efficient Ethernet on this interface.	
Examples	
This example enables energy efficient ethernet on gig 1/1.	
PerleSwitch(config-if)#power efficient-ethernet auto<cr>	
Related Commands	
<i>show eee</i>	

(config-if)#power inline

power inline {**auto max 4000 - 30000** | **static max 4000 - 30000** | **consumption 4000 - 30000** | **never** | **police action [errdisable | log]** | **priority [low | high | critical]}**}

Syntax	(config-if)#power inline
Description	
static [max mWatts | cr]	Amount of power to pre-allocate for this port out of the PoE budget. This is done even if the port is shutdown. If the device requirement based on classification is greater than the configured amount, the device is not powered up.
auto [max mWatts | cr]	Amount of power to allocate for this port out of the PoE budget. If the device requirement based on classification is greater than the configured amount, the device is not powered up.
consumption mWatts	Amount of power to allocate for this port out of the PoE budget. This value overrides the power requirements identified via class and/or LLDP.

priority [<i>low</i> | <i>high</i> | <i>critical</i>]	If there is insufficient PoE budget to power all devices, power is removed from devices based on the priority of the port. Low priority ports are powered down first, followed by high priority and finally ports defined as critical.
--	--

police action [<i>errdisable</i> | <i>log</i>]	Action to be taken if the port is overdrawn (requesting more power than is identified by its class, LLDP or configuration. Under this condition, the port will be automatically powered down. This command defines additional action to be taken.
---	---

never	Disable PoE on this port.
--------------	---------------------------

Command Default	power inline auto max 15400
------------------------	-----------------------------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Hardware model	All PoE models
-----------------------	----------------

Usage Guidelines

Defines port specific parameters for the PoE feature. Port specific parameters would override global parameters when defined.

The following rules apply to power allocation;

1. If "static" is configured, it is used.
 2. If "static" is not configured, "consumption" is used.
 3. If "consumption" is not configured, classification and/or LLDP is used.
-

Examples

This example disables PoE on the port.

```
PerleSwitch(config-if)#power inline never<cr>
```

This example pre-allocates out of the PoE total budget, 4000 mWatts for this port.

```
PerleSwitch(config-if)#power inline static max 4000<cr>
```

Related Commands

show power inline

(config-if)#power

power {*efficient-ethernet auto*}

Syntax	(config-if)#power
---------------	-------------------

Description

```
{efficient-ethernet
auto}
```

Command Default no power efficient ethernet auto

Command Modes PerleSwitch(config-if)#

Usage Guidelines

Enables Energy Efficient Ethernet on this interface.

Examples

This example enables energy efficient ethernet on gig 1/1.

```
PerleSwitch(config-if)power effieient-ethernet auto<cr>
```

Related Commands

show eee

(config-if)#profinet dcp

```
block egress {hello | identity}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#profinet dcp block egress
Description	

hello	Will prevent DCP hello frames from being propagated to other switch ports.
--------------	--

identity	Will prevent DCP identity frames from being propagated to other switch ports.
-----------------	---

Command Default Frames will not be blocked.

Command Modes PerleSwitch(config-if)#

Usage Guidelines

DCP (Discovery and Configuration Protocol) is used in Profinet environments to both discover units and perform basic configuration on them. A factory default Perle switch which is plugged into the network can be discovered and configured via Profinet DCP.

This command controls whether specific DCP frames received by the switch will get propagated to other switch ports.

Examples

This example will prevent DCP identity frames received on this switch port from being propagated out other switch ports.

```
PerleSwitch(config-if)profinet dcp block egress identity<cr>
```

Related Commands

profinet
show profinet

(config-if)#service**dhcp**

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#service
Description	

dhcp

Command Default	service dhcp
------------------------	--------------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Enable or disable the DHCP service and relay agent for this interface.

Examples

This command will disable the DHCP service for this interface. (All models model only)

PerleSwitch(config-if)no service dhcp<cr>

Related Commands

show dhcp lease
ip dhcp

(config-if)#shutdown

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#shutdown
Description	

Command Default

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Use this shutdown command to shutdown the interface.

Examples

This example will shutdown the g1/1 interface.

PerleSwitch(config-if)#shutdown g1/1<cr>

Related Commands

(config-if)#sgmii

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#sgmii
Description	
Command Default	no sgmii (Fiber SFP)
Command Modes	PerleSwitch(config-if)#

Usage Guidelines

This command is only applicable on SFP ports. It is used to indicate that an SGMII SFP is being used in this interface.

Examples

```
PerleSwitch(config-if)#sgmii<cr>
```

Related Commands

(config-if)#duplex
(config-if)#flowcontrol
(config-if)#speed

(config-if)#snmp

snmp {trap link status}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#snmp
Description	
trap link status	
Command Default	snmp trap link-status
Command Modes	PerleSwitch(config-if)#

Usage Guidelines

Capture snmp trap link-status messages on this interface.

Examples

This command will enable snmp to trap link status messages.

PerleSwitch(config-if)#snmp trap link-status.

Related Commands

(config-if)#sgmii

(config-if)spanning-tree

spanning-tree {**bpdufilter** **disable** | **enable** } | {**bpduguard** **disable** | **enable**} | {**mst cost** *1-200000000* } | {**guard loop** | **none** | **root** | **topology_** | **change** } | {**link-type** **auto** | **point-to-point** | **shared**} | {**mcheck**} | {**mst** *mst-instance-list*} | {**port-priority** *0-240*} | {**port-type** **edge** | **network** | **normal**} | {**portfast** **disable** | **trunk**} | {**vlan** *vlan-range 1-200000000* | **port-priority** *0-240* }

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#spanning-tree
Description	

{**bpdufilter** **disable**
| **enable** } |

{**bpduguard**
disable | **enable**} |

{**cost** *1-200000000*
}

{**guard loop** |
none | **root** |
topology_change }
|

{**link-type** **auto** |
point-to-point |
shared} |

{**mcheck**} |

{**mst**
mst-instance-list} |

{**port-priority**
0-240} |

```
{port-type edge |
network |
normal} |
```

```
{portfast disable |
trunk}
```

```
{vlan vlan-range
1-20000000 |
port-priority 0-240
}
```

Command Default

```
no spanning-tree bpduguard
no spanning-tree bpdfilter
spanning-tree cost 2000000
spanning-tree port-priority 128
spanning-tree link-type auto
spanning-tree port-type normal
no spanning-tree guard root
no spanning-tree guard restriction
no spanning-tree mcheck
```

Command Modes

```
PerleSwitch(config-if)#
```

Usage Guidelines

Parameters for usage.

bpduguard - disable or enable - don't send or receive BPDUs on this interface.

bdpfilter - disable or enable - don't accept BPDUs on this interface.

cost - change this interfaces spanning tree port path costs.

guard loop/none/root or topology - change this interface's spanning tree guard mode link-type auto/point-to-point/shared - specify a link type for spanning tree protocol use.

mcheck -try to get back from STP to rapid (RSTP/MSTP) mode.

mst - multiple spanning tree configurations.

port-priority - change this interface's spanning tree port priority (must be specified in increments of 16).

port-type edge/network/normal -mspecify a port type for this interface.

portfast disable or trunk - enable this interface to move directing to port forwarding on a link up

vlan - vlan switching tree

Examples

This example will enable spanning-tree bdpuguard on interface g1/1.

```
PerleSwitch(config)#interface g1/1<cr>
```

```
PerleSwitch(config-if)spanning-tree bdpuguard<cr>
```

Related Commands*clear scada modbus**show spanning-tree***(config-if)#speed****speed** {10 | 100 | 1000 | auto}

Use the no form of this command to negate a command or set its defaults.

Syntax (config-if)#speed**Description**

{10 | 100 | 1000 | auto}	Speed applies to GigabitEthernet interface
--------------------------	--

Command Default	speed-auto
------------------------	------------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Sets the speed for this interface or select auto and the switch will determine the fastest speed to connect with.

Examples

This example sets the speed on gigabitethernet 1 to 1000.

PerleSwitch(config)#interface g1/1<cr>**PerleSwitch(config-if)#speed 1000<cr>****Related Commands***(config-if)#flowcontrol**(config-if)#duplex***(config-if)#storm-control****storm-control** {egress [level 1-100] | kbps 64-1000000} | {ingress [bc | bc+mc | bc+mc+uuc [level 1-100] | [kbps 64-1000000]]}

Use the no form of this command to negate a command or set its defaults.

Syntax (config-if)#storm-control**Description**

{egress [level 1-100] | kbps 64-1000000}
--

```
{ingress [bc |
bc+mc |
bc+mc+uuc [level
1-100] | [kbps
64-1000000]}
```

Command Default no storm control egress
no storm-control ingress

Command Modes PerleSwitch(config-if)#

Usage Guidelines

Specify a rate in percentage or kbps where egress or ingress frames will be discarded if the configured threshold is reached.

Examples

This example sets the egress threshold to 50 percentage. Frames that exceed the threshold will be discarded.

```
PerleSwitch(config)#storm-control egress level 50<cr>
```

```
PerleSwitch(config)#do show storm-control<cr>
```

```
Interface  Port State  Ingress Limit  Egress Limit
```

```
-----
Gi1/1     Forwarding  Disabled       50 %
Gi1/2     Forwarding  Disabled       Disabled
Gi1/3     Forwarding  Disabled       Disabled
Gi1/4     Forwarding  Disabled       Disabled
Gi1/5     Forwarding  Disabled       Disabled
```

Related Commands

(config-if)switchport

```
switchport {access vlan 1-4094} | {backup coupling active control-port |
extended-redundancy | standby control-port interface mmu primary vlan
1-4094 | multicast fastconvergence | preemption delay 1-300 | {block
multi-cast | unicast} | {mode access | trunk} | {port-security [mac-address
h.h.h | sticky] | [maximum 1-8192] | {violation protected vlan | restrict vlan
| shutdown vlan} | {trunk allowed vlan-id-or-range [add] | [all] | [except] |
[none] [remove] | native vlan-id-or-range } | {voice vlan 1-4094 | dot1p |
none | untagged}}
```

Use the no form of this command to negate a command or set its defaults.

Syntax (config-if)#switchport
Description

```
{access vlan
1-4094} |
```

```
backup coupling
active control-port
|
extended-redunda
ncy | standby
control-port
interface mmu
primary vlan
1-4094 | multicast
fastconvergence |
preemption delay
1-300 | mode
bandwidth |
forced | off} |
```

```
{block multi-cast
| unicast} |
```

```
{mode access |
trunk} |
```

```
{port-security
[mac-address
h.h.h | sticky] |
[maximum
1-8192] |
{violation
protected vlan |
restrict vlan |
shutdown vlan} |
```

```
{trunk allowed
vlan-id-or-range
[add] | [all] |
[except] | [none]
[remove] | native
vlan-id-or-range } |
```

```
{voice vlan 1-4094
| dot1p | none |
untagged}
```

Command Default	switchport mode access switchport access vlan 1 switchport voice vlan none switchport trunk allowed vlan 1-4094 no switchport block multicast no switchport block unicast switchport port-security maximum 1 switchport port-security maximum 8192 vlan
------------------------	--

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Parameters for usage.

access vlan - sets access mode characteristics for this interface

backup coupling - sets backup for this interface

block multicast/unicast - disable forwarding of unknown multicast/unicast addresses

mode -set trunking mode on this interface

port-security - port security related commands

trunk-allowed -set trunking characteristics for this interface.

voice - voice appliance attributes

Examples

This example will set gigabitethernet interface 1 to trunking mode access.

```
PerleSwitch(config-if)#switchport mode access<cr>
```

Related Commands

6 Interface Port Channels

This chapter contains the CLI commands for Port Channel Config Mode.

(config-if)#bandwidth-control

```
bandwidth-control {egress | ingress traffic all | bc | bc+mc pps  
0-10000000 0-1000000 action shutdown | trap}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	bandwidth-control
Description	
	{egress | ingress traffic all | bc | bc+mc pps 0-10000000 0-1000000 action shutdown | trap}
Command Default	None
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

Enter the first parameter as high level threshold in packets per second format.

Enter the second parameter as low level threshold in packets per second format.

If the high level threshold on this interface is reached and it is configured to shutdown then the following will happen:

- port will be put in a errdisable state
- the recovery of the port will be determined by the errdisable recovery setting.
- a trap will be set to the configured snmp server
- If the high level threshold on this interface is reached and it is configured to trap then the following will happen:
 - a trap will be sent to a configured snmp server when the high level threshold is reached. Once a trap is issued, no traps will be issued for this condition until the packets per second (pps) has dropped below to or below the low level at the point another trap message will be sent to indicate the event has occurred again.
- the port will continue to operate normally

When a port channel group is specified, all channels within that group are adding to the frame counter.

Examples

In this example all outbound traffic (egress) would be restricted to a rising threshold of 10000 and a falling threshold of 100 packets per second. In addition inbound broadcast (ingress) packets would be restricted to a rising threshold of 100000 and a falling threshold of 10000 packets per second.

```
PerleSwitch(config-if)bandwidth-control egress traffic all pps 10000 100<cr>
PerleSwitch(config-if)#bandwidth-control ingress traffic bc pps 100000
10000<cr>
```

Related Commands

bandwidth-control

show bandwidth-control

*only applies to All models models

(config-if)#description

description *{interface-description}*

Use the no form of this command to negate a command or set its defaults.

Syntax	description
Description	

*{interface-
description}*

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Adds a description for the specified Port channel.

Examples

This example add description "testport1" to port-channel 1.

```
PerleSwitch(config-if)#description testport1<cr>
```

```
PerleSwitch(config-if)#exit<cr>
```

```
PerleSwitch(config)#exit
```

```
PerleSwitch>show interface port-channel 1<cr>
```

Port-channel1 is down, protocol is down

Description: testport1

Hardware is EtherChannel

MTU 10240 bytes

0 packets input, 0 bytes,

Received 0 broadcasts (0 multicasts)

0 runts, 0 giants

0 input errors, 0 CRC, 0 frame

Packet Sizes

1 - 64 0

65 - 127 0

128 - 255 0

256 - 511 0

512 - 1023 0

1024 - Max 0

Related Commands

show ip access-list

(config-if)#duplex

duplex {**auto** | **full** | **half**}

Use the no form of this command to negate a command or set its defaults.

Syntax	duplex
---------------	---------------

Description	
--------------------	--

{**auto** | **full** |
half}

Command Default	None
------------------------	------

Command Modes	PerleSwitcg(config-if)#
----------------------	-------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Set the duplex on this Port channel.

Examples

This example shows you how to set duplex mode for a specified interface. First, set the interface you want to perform the duplex command.

```
PerleSwitch(config-if)# interface gigabitEthernet 1 /1 <cr>
```

Next, set duplex on that interface

```
PerleSwitch(config-if)# duplex full <cr>
```

Related Commands

[\(config-if\)#flowcontrol](#)

(config-if)#flowcontrol

```
flowcontrol {send-receive auto | off | on}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	flowcontrol
Description	
{send-receive auto | off | on}	
Command Default	None
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

Flow control auto on this line means allow but do not require flow control packets on port.

Flowcontrol off, disables flowcontrol packets or back-pressure on the port.

Flow control on, enables flow control packets or back pressure on the port.

Examples

This example shows you how to set flow control for a specified interface. First, set the interface or range of interfaces, then set the flow control.

```
PerleSwitch(config-if)# interface port-channel 1 <cr>
```

Next, set flow control on that interface

```
PerleSwitch(config-if)# flowcontrol on <cr>
```

Related Commands

[\(config-if\)#duplex](#)

(config-if)#ip**ip {igmp snooping tcn flood}**

Use the no form of this command to negate a command or set its defaults.

Syntax **ip**
Description

**{igmp snooping
tcn flood}****Command Default** None**Command Modes** PerleSwitch(config-if)#**Hardware model** All models**Usage Guidelines**

IGMP snooping command.

Examples

This example will enable ip igmp snooping tcn flood.

PerleSwitch(config-if)#ip igmp snooping tcn flood<cr>**Related Commands***ip igmp logging | snooping***(config-if)#ipv6****ipv6 {mld igmp snooping tcn flood}**

Use the no form of this command to negate a command or set its defaults.

Syntax **ipv6**
Description

**{mld igmp
snooping tcn
flood}****Command Default** None**Command Modes** PerleSwitch(config-if)#**Usage Guidelines**

IGMP snooping command.

Examples

This example will enable ip igmp snooping tcn flood.

```
PerleSwitch(config-if)ipv6 mld igmp snooping tcn flood<cr>
```

Related Commands

clear ipv6

show ipv6

(config-if)#logging

logging {*event bundle-status* | *link-status*}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#logging
---------------	----------------------------

Description	
--------------------	--

{*event bundle-status* | *link-status*}

Command Default	logging event bundle-status logging link-status
------------------------	--

Command Modes	SwitchPerle(config-if)#
----------------------	-------------------------

Usage Guidelines

Enable or disable logging messages for event and link status on selected interface.

Examples

This command will disable logging link-status for port channel 1.

```
PerleSwitch(config)#interface port-channel 1<cr>
```

```
PerleSwitch(config-if)#no logging event link-status<cr>
```

Related Commands

logging

(config-if)#network-policy

network-policy {*1-4294967295*}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#network-policy
---------------	-----------------------------------

Description	
--------------------	--

network-policy*1-4294967295***Command Default** None**Command Modes** PerleSwitch(config-if)#**Usage Guidelines**

Enable network policy on this port channel.

Examples

Enable network-policy 4 on port channel 1.

PerleSwitch(config)#interface port channel 1<cr>**PerleSwitch(config-if)#network-policy 4<cr>****Related Commands***network-policy***only applies to All models models***(config-if)#service**

Use the no form of this command to negate a command or set its defaults.

Syntax **(config-if)#service****Description****dhcp****Command Default** service dhcp**Command Modes** PerleSwitch(config-if)#**Usage Guidelines**

Enable or disable the DHCP service and relay agent for this port channel.

Examples

This command will disable the DHCP service for this port channel. (All models model only)

PerleSwitch(config-if)no service dhcp<cr>**Related Commands****(config-if)#shutdown**

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#shutdown
Description	
Command Default	None
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Use this shutdown command to shutdown the port channel.	
Examples	
This example will shutdown port channel 1.	
PerleSwitch(config-if)#shutdown port-channel 1<cr>	
Related Commands	
<i>Interface</i>	

(config-if)snmp

snmp {trap link status}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#snmp
Description	
trap link status	
Command Default	snmp trap link-status
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Capture snmp trap link-status messages on this port channel	
Examples	
This command will enable snmp to trap link status messages on this port channel.	
PerleSwitch(config-if)#snmp trap link-status.	
Related Commands	
<i>(config-if)#sgmii</i>	

(config-if)spanning-tree

```
spanning-tree {bpdudisable | enable } | {bpduguard disable | enable} |
{mst cost 1-200000000 } | {guard loop | none | root | topology_ | change } |
{link-type auto | point-to-point | shared} | {mcheck} | {mst
mst-instance-list} | {port-priority 0-240} | {port-type edge | network |
normal} | {portfast disable | trunk} | {vlan vlan-range 1-200000000 |
port-priority 0-240 }
```

Use the no form of this command to negate a command or set its defaults.

Syntax	spanning-tree
Description	

```
{bpdudisable
| enable }
```

```
{bpduguard
disable | enable}
```

```
{cost 1-200000000
}
```

```
{guard loop | none
| root |
topology_ |change
}
```

```
{link-type auto |
point-to-point |
shared}
```

```
{mcheck}
```

```
{mst
mst-instance-list}
```

```
{port-priority
0-240}
```

```
{port-type edge |
network | normal}
```

```
{portfast disable |
trunk}
```

```
{vlan vlan-range
1-200000000 |
port-priority 0-240
}
```

Command Default

```
no spanning-tree bpduguard
no spanning-tree bpdfilter
no spanning-tree cost
no spanning-tree port-priority
no spanning-tree link-type
no spanning-tree port-type
no spanning-tree guard root
no spanning-tree guard restriction
no spanning-tree mcheck
```

Command Modes

```
PerleSwitch(config-if)#
```

Usage Guidelines

bpdfilter (disable or enable) - don't send or receive BPDUs on this interface.

bpduguard (disable or enable) - don't accept BPDU's on this interface.

cost - change this interfaces spanning tree port path costs.

guard loop (/none/root or topology) - change this interface's spanning tree guard mode link-type auto/point-to-point/shared - specify a link type for spanning tree protocol use.

mcheck -try to get back from STP to rapid (RSTP/MSTP) mode.

mst - multiple spanning tree configurations.

port-priority - change this interface's spanning tree port priority (must be specified in increments of 16).

port-type edge/network/normal -mspecify a port type for this interface.

portfast disable or trunk - enable this interface to move directing to port forwarding on a link up

vlan - vlan switching tree

Examples

This example will enable spanning-tree bdpuguard on port channel 1.

```
PerleSwitch(config)#interface port channel 1<cr>
```

```
PerleSwitch(config-if)spanning-tree bdpuguard<cr>
```

Related Commands

clear scada modbus

(config-if)#spanning-tree

spanning-tree

(config-if)#speed

```
speed {10 | 100 | 1000 | auto}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#speed
Description	
{10 | 100 | 1000 | auto}	Speed applies to GigabitEthernet and Port channels only.
Command Default	speed-auto
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Sets the speed for this interface or select auto and the switch will determine the fastest speed to connect with.	
Examples	
This example sets the speed on gigabitethernet 1 to 1000.	
PerleSwitch(config)#interface g1/1<cr>	
PerleSwitch(config-if)#speed 1000<cr>	
Related Commands	
<i>(config-if)#flowcontrol</i>	
<i>(config-if)#duplex</i>	

(config-if)#speed

speed {10 | 100 | 1000 | auto}

Use the no form of this command to negate a command or set its defaults.

Syntax	(config-if)#speed
Description	
{10 | 100 | 1000 | auto}	
Command Default	speed-auto
Command Modes	PerleSwitch(config-if)#
Usage Guidelines	
Examples	
This example sets port channel speed to 1000 bps.	
PerleSwitch(config)#interface port channel 1<cr>	
PerleSwitch(config-if)#speed 1000<cr>	

Related Commands

(config-if)#flowcontrol

(config-if)#duplex

(config-if)#switchport

switchport {**access vlan 1-4094**} | {**backup coupling active control-port**
[interface fastethernet slot / port-number] | **[gigabitethernet slot / port-number]** |
[port-channel port-channel-number] | **extended-redundancy**} | {**block**
multi-cast | **unicast**} | {**mode [access | trunk]**} | {**port-security mac-address**
[h.h.h | sticky] | **maximum 1-8192 vlan access** | **violation [protected vlan]** |
[restrict vlan] | **[shutdown vlan]**} | {**trunk allowed van-ids** | **add** | **all** | **except** |
none | **remove**} | {**voice vlan 1-4094** | **dot1p** | **none** | **untagged**}

Syntax (config-if)#switchport

Description

{**access vlan**
1-4094} |

{**backup coupling**
active control-port
[interface
fastethernet slot /
port-number] |
[gigabitethernet
slot / port-number]
| [port-channel
port-channel-numb
er] |
extended-redunda
ncy} |

{**block multi-cast** |
unicast} | {**mode**
[access | trunk]}
| {port-security
mac-address
[h.h.h | sticky] |
maximum 1-8192
vlan access |
violation
[protected vlan] |
[restrict vlan] |
[shutdown vlan]}

```

{port-security
mac-address
[h.h.h | sticky] |
maximum 1-8192
vlan access |
violation
[protected vlan] |
[restrict vlan] |
[shutdown vlan]} |

```

```

{trunk allowed
van-ids | add | all |
except | none |
remove} |

```

```

{voice vlan 1-4094
| dot1p | none |
untagged} {10 |
100 | 1000 | auto}

```

Command Default	switchport mode access switchport access vlan 1 switchport voice vlan none switchport trunk allowed vlan 1-4094 no switchport block multicast no switchport block unicast switchport port-security maximum
------------------------	--

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Usage Guidelines

Usage Guidelines

Parameters for usage.

access vlan - sets access mode characteristics for this interface

backup coupling - sets backup for this interface

block multicast/unicast - disable forwarding of unknown mulicast/unicast addresses

mode -set trunking mode on this interface

port-security - port security related commands

trunk-allowed -set trunking characteristics for this interface.

voice - voice appliance attributes

Examples

This example will set gigabitethernet interface 1 to trunking mode access.

```
PerleSwitch(config-if)#switchport mode access<cr>
```

Related Commands

7 Vlan config mode

This chapter contains the CLI commands for VLAN Config Mode.

(config-if)#arp

arp {*timeout 1-34560*}

Use the no form of this command to negate a command or set its defaults.

Syntax	description
Description	
<i>{timeout 1-34560}</i>	
Command Default	240 minutes
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

The vlan arp timeout value (in minutes) overrides the value as specified by the global time out value. Executing the no command will set the vlan arp timeout value back to the global timeout value.

Examples

This examples sets the arp timer to 20 minutes. Dynamic entries in the arp table will be cleared from the table.

```
PerleSwitch(config-if)#arp timeout 20<cr>.
```

Related Commands

clear arp-cache

(config-if)#description

description {*interface-description*}

Use the no form of this command to negate a command or set its defaults.

Syntax	description
Description	
<i>{interface-descripti on}</i>	
Command Default	None
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

Adds a description for the specified fastethernet, gigabitethernet, port channel or vlan interface.

Examples

This example sets the description for vlan2 to office-van.

```
PerleSwitch(config-if) interface vlan 2<cr>
```

```
PerleSwitch(config-if)#description office-vlan<cr>
```

Related Commands**(config-if)#ip**

```
ip {address aaa.bbb.ccc.ddd aaa.bbb.ccc.ddd | {dhcp client-id fastethernet  
slot / port-number | gigabitethernet slot / port-number | vlan 1-4094} |  
{hostname} }
```

Use the no form of this command to negate a command or set its defaults.

Syntax	ip
Description	

```
{address  
aaa.bbb.ccc.ddd  
aaa.bbb.ccc.ddd |  
dhcp}
```

```
{dhcp client-id  
fastethernet slot /  
port-number |  
gigabitethernet  
slot / port-number |  
vlan 1-4094}
```

```
{hostname}
```

Command Default	None
------------------------	------

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Parameters for usage.

aaa.bbb.ccc.ddd - specify the IP address for this vlan interface followed by the subnet mask.

dhcp client-id hostname - specify the switch's class-id for this vlan either as a character string (up to 200 characters - any characters over 200 will be truncated) or as a hexadecimal string (up to 100 hex characters). This value must be configured the same on the server side and associated with an address to give the switch or specify the hostname for this switch. By default this is the name of the Perle switch (PerleSwitch).

hostname - specify the hostname for this switch. By default this is the name of the Perle switch (PerleSwitch).

Examples

This example shows you how to set a IPv4 address for vlan 3.

```
PerleSwitch(config)#interface vlan 3<cr>
```

```
PerleSwitch(config-if)#ip address 172.17.55.66 255.255.0.0<cr>
```

Related Commands

show ip dhcp

ip dhcp

(config-if)#ipv6

```
ipv6 {address x:x:x:x:x | x:x:x:x:x /0-128 | autoconfig} | {enable}
```

Syntax	ipv6
--------	-------------

Description	
-------------	--

```
{address x:x:x:x:x  
| x:x:x:x:x /0-128  
| autoconfig} |
```

```
{enable}
```

Command Default	None
-----------------	------

Command Modes	PerleSwitch(config-if)#
---------------	-------------------------

Hardware model	All models
----------------	------------

Usage Guidelines

Enter IPv6 local link address, IPv6 address with prefix length or autoconfig.

Examples

This example sets the IPv6 address to autoconfig.

```
PerleSwitch(config)#ipv6 autoconfig<cr>
```

Related Commands*(config-if)#ip***(config-if)#logging****logging**{event link-status}

Use the no form of this command to turn off event logging for this interface.

Syntax	logging
Description	
	{event link-status}
Command Default	no logging event link-status
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

Log link status events for this vlan.

Examples

This example logs link status events for this van.

PerleSwitch(config-if)#logging event link-status<cr>**Related Commands***clear logging**show logging***(config-if)#ntp**

ntp {[broadcast client] | [broadcast destination ip-address] | [key 1-65534] | [minpoll 4-17] | [version 1-4]} | {disable} | {multicast [ipv4address] | [ipv6address] | [client ipv4address | ipv6address] | key 1-65534} | minpoll 4-17 | [ttl 1-255] | [version 1-65534]}

Use the no form of this command turns ntp for this interface.

Syntax	ntp
Description	

```
{[broadcastclient]
| [broadcast
destination
ip-address] [key
1-65534] |
[minpoll 4-17] |
[version 1-4]}
```

```
{disable}
```

```
{multicast
[ipv4address] |
[ipv6address] |
[client ipv4address
| ipv6address] |
key 1-65534] |
minpoll 4-17] |
[ttl 1-255] |
[version 1-65534]}
```

Command Default no ntp disable

Command Modes PerleSwitch(config-if)#

Hardware model All models

Usage Guidelines

Configuration Parameters

broadcast - configures parameters for ntp broadcast services.

disable - disables ntp on this vlan.

multicast - configures ntp multicast services

Examples

This example will set the ntp broadcast version to 4.

```
PerleSwitch(config-if)#ntp broadcast version 4<cr>
```

Related Commands

ntp

show ntp

(config-if)#service

```
service {dhcp}
```

Use the no form of this command to turn DHCP off for this vlan

Syntax	service
Description	
{dhcp}	
Command Default	
Command Modes	PerleSwitch(config-if)#
Hardware model	All models
Usage Guidelines	
Turn the DHCP service and relay agent on for this vlan or range of vlans.	
Examples	
This example shows you how to turn off DHCP for this vlan.	
PerleSwitch(config)#no service dhcp<cr>	
Related Commands	
<i>show ip dhcp</i>	
<i>ip dhcp</i>	

(config-if)#shutdown

shutdown

Use the no form of this command to enable this vlan interface.

Syntax	shutdown
Description	
Command Default	no shutdown (interface vlan1)
Command Modes	PerleSwitch(config-if)#
Hardware model	All models
Usage Guidelines	
Enable or disable vlan interfaces.	
Examples	
This example shows you how to turn off vlan 1.	
PerleSwitch(config)#shutdown<cr>	
Related Commands	

(config-if)#snmp**snmp** {**trap link-status**}

Use the no form of this command to disable snmp trap on this vlan interface.

Syntax	snmp
Description	
	{trap link-status}
Command Default	snmp trap link-status
Command Modes	PerleSwitch(config-if)#
Hardware model	All models

Usage Guidelines

Enable or disable trap link status messages.

Examples

This example shows you how to disable traps for this vlan interface.

PerleSwitch(config)#no trap link-status<cr>**Related Commands***snmp-server**show snmp**(config-if)#sgmii***(config-if)#spanning-tree**

spanning-tree {**bpdufilter** [**disable** | **enable**]} | {**bpduguard** [**disable** | **enable**]} | {**cost** *1-200000000*} | {[**guard loop**] | [**none**] | [**root**] | [**topology_change**]} | {[**link-type** [**auto**] | [**point-to-point**] | [**shared**]} | {[**port-priority** *0-240*]} | {[**portfast** [**disable** | **trunk**]} |

Syntax	spanning-tree
Description	

{bpdufilter
[**disable** | **enable**]}
|

{bpduguard
[**disable** | **enable**]}
|

{cost
1-200000000} |

```
{[guard loop] |
[none] | [root] |
[topology_change]
} |
```

```
{[link-type [auto]
| [point-to-point] |
[shared]] |
```

```
{[port-priority
0-240]} |
```

```
{[portfast [disable
| trunk]]
```

Command Default	spanning-tree cost 2000000 spanning-tree port priority 128
------------------------	---

Command Modes	PerleSwitch(config-if)#
----------------------	-------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

Parameter options:

bpdufilter (disable or enable) - don't send or receive BPDUs on this interface.

bdpuguard (disable or enable) - don't accept BPDU's on this interface.

cost - change this interfaces spanning tree port path costs.

guard loop (/none/root or topology) - change this interface's spanning tree guard mode link-type auto/point-to-point/shared - specify a link type for spanning tree protocol use.

mcheck -try to get back from STP to rapid (RSTP/MSTP) mode.

mst - multiple spanning tree configurations.

port-priority - change this interface's spanning tree port priority (must be specified in increments of 16).

port-type edge/network/normal -mspecify a port type for this interface.

portfast disable or trunk - enable this interface to move directing to port forwarding on a link up

Examples

This example will enable spanning-tree bdpuguard on vlan 2.

```
PerleSwitch(config)#interface vlan 2<cr>
```

```
PerleSwitch(config-if)spanning-tree bdpuguard<cr>
```

Related Commands

clear scada modbus

(config-if)spanning-tree

spanning-tree

*only applies to All models models

8 Interface line mode

This chapter defines all the CLI commands associated with configuring the console and vty ports.

line

line console 0-0 | **vtty 0-15**

Syntax	line
Description	
Command Default	
Command Modes	PerleSwitch(config-line)#
Hardware model	All models
Usage Guidelines	Use this command to change to line mode.
Examples	This example switched to line console mode. PerleSwitch(config-line)# line console 0 <cr>
Related Commands	<i>console 0-0</i>

console 0-0

{**accounting exec** *accounting-list* | **default**} | {**databits** 7 | 8} | {**exec**} |
{**exec-timeout** 0-35791 [0-2147483]} | {**login authentication**
authentication-list-name | **default**} | {**parity** [even | odd | none]} | {**speed** |
115200 | 19200 | 38400 | 57600} | {**stopbits** 1 | 2} | {**timeout login response**
1-300} | {**media-type** *rj45*} | {**usb-inactivity-timeout** [1 - 240]}

Use the no form of this command to negate a command or set its defaults.

Syntax	console 0-0
Description	
	{ accounting exec <i>accounting-list</i> | default }
	{ databits 7 | 8} |
	{ exec} |

```
{exec-timeout
0-35791
[0-2147483]} |
```

```
{login
authentication
authentication-list-
name | default } |
```

```
{parity even | odd
| none} |
```

```
{speed | 115200 |
19200 | 38400 |
57600} |
```

```
{stopbits [1 | 2]} |
```

```
{timeout login
response 1-300}
```

```
{media-type rj45}
```

```
{usb-inactivity-tim
eout 1 - 240
minutes}
```

Command Default

```
console 0
timeout login response 30
no exec-timeout
login authentication default
accounting exec default
databits 8
parity none
stopbits 1
speed 9600
no media-type rj45
no usb-inactivity-timeout.
```

Command Modes

```
PerleSwitch(config-line)#
```

Hardware model

```
All models
```

Usage Guidelines

accounting exec - (account list or default list) - use an accounting list with the specified name.

databits - *s* specify the databits to use for this console.

exec - disables CLI mode on the console.

exec timeout - time in minutes, then seconds for CLI to timeout for the console session.

history size - specify the size of the history buffer.

login authentication - select the list to use for authentication requests or use default list.

timeout login in response - how many seconds before the users needs to attempt login else the session times out.

media-type - this is used on switches which support both and RJ45 and a USB console port. If the user wants the console to only be operational on the RJ45 port, he can use this command to force this behavior. Otherwise, the switch will automatically use the RJ45 or USB port, depending on which port is physically connected. The USB takes precedence.

usb-inactivity-timeout - how many minutes of inactivity must be detected before the console port reverts back to RJ45 port (applies after USB device was detected).

Examples

These commands will set your console to speed 38400, databits 7 and stopbits 2.

```
PerleSwitch(config-line)#speed 38400<cr>
```

```
PerleSwitch(config-line)#databits 7<cr>
```

```
PerleSwitch(config-line)#stopbits 2<cr>
```

Related Commands

clear line

show line

vty 0-15

vty 0-15

```
{access-class 1-99 in | out | 1300-1999 in | out | access-list in | out} |
{accounting exec accounting-list | default} | {exec} | {exec-timeout 0-35791
[0-2147483]} | {history size 0-256} | {length 0-512} | {login
authentication-list-name} | {monitor authentication-list-name | default}
{timeout login response default} | {transport input all | none | ssh | telnet |
output all | none | ssh | telnet} | {width 0-512}
```

Use the no form of this command to negate a command or set its defaults.

Syntax	vty 0-15
Description	

```
{access-class 1-99
in | out |
1300-1999 in | out
| access-list in |
out}
```

```
{accounting exec
accounting-list |
default}
```

```
{exec} |
```

```
{exec-timeout
0-35791
[0-2147483]} |
```

```
{history size
0-256} |
```

```
{length 0-512} |
```

```
{login
authentication-list-
name} |
```

```
{monitor
authentication-list-
name | default} |
```

```
{timeout login
response default} |
```

```
{transport input
all | none | ssh |
telnet | output all |
none | ssh | telnet
} |
```

```
{width 0-512}
```

Command Default	transport input all transport output all length 24 width 80 history size 20 terminal history no exec-timeout timeout login response 30 login authentication default account exec default
------------------------	---

Command Modes	PerleSwitch(config-line)#
----------------------	---------------------------

Hardware model	All models
-----------------------	------------

Usage Guidelines

databits - specify the databits to use for this console.

exec - disables CLI mode on this vty or range of vtys.

exec timeout - time in minutes, then seconds for CLI to timeout for this vty session.

history size - specify the size of the history buffer.

login authentication - select the list to use for authentication requests or use default list.

timeout login in response - how many seconds before the users needs to attempt login else the session times out.

transport - define what protocols for incoming connections

length - length of terminal screen

width - width of terminal screen

terminal history - enable terminal history (up arrow or cntrl /P to scroll through history)

Examples

This example disables CLI mode for vty 5-10.

```
PerleSwitch(config)#vty 10-5<cr>
```

```
PerleSwitch(config-line)no exec<cr>
```

Related Commands

console 0-0

clear line

show line

9 Alerts

This chapter defines all alerts messages generated by the IDS switch.

Error Code and Timestamp (mm/dd/yyyy hh/mm/ss)	Description	Recommendation
PORT_LINK_FLAP	Detected lower performance on this link, possibility because of a possible duplex mismatch or a bad cable.	Change the Duplex setting of both the ports on this link to "auto" or "full-duplex". Inspect the cable and cable connector for faults.
PORT_SECURE_VOLIATION	Access denied to one or more connecting devices on this port.	Maximum allowed devices on this port are already connected, or an unauthorized device attempted to connect on this secure port. Disconnect the device.
PORT_BPDU_GAURD_ERROR	bpduguard error detected on port, putting the port in err-disable state.	Verify that the port is connected to an end station and not a switch, bridge or router.
802.1X_SECURITY_VIOLATION	A dot1x unauthorized device attempted to connect on a secure port	Disconnect the unauthorized device
BANDWIDTH_EXCEEDED	The configured traffic bandwidth has been exceeded for the port	Disconnect or reduce the source of the traffic that is being monitored.
INLINE_POWER_OVERDRAWN	PoE has detected an overdrawn condition, putting the port in err-disable state.	Correct the power consumption and re-enable the port.
SFP_SPEED_MISMATCH	Detected that the speed of the SFP inserted does not match the default SFP speed (Gigabit) or speed of the previously inserted SFP	Recycle power on the switch with the SFP still inserted.