BitStorm 2600 and GranDSLAM 4200 IP DSLAM

Command Line Interface

Reference

Document No. 2600-A2-GB21-30

March 2005

PARADYNE®

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About This Guide

Document Purpose and Intended Audience

This guide describes the Command Line Interface (CLI) used to configure and monitor the BitStorm® 2600 and GranDSLAM® 4200 IP DSLAMs. It is designed for installer and operators of those devices.

Document Summary

Section	Description
Chapter 1, System Concepts	Describes basic system concepts and terminology.
Chapter 2, CLI Conventions	Describes how to use the CLI.
Chapter 3, Commands	Describes the individual CLI commands in detail.
Appendix A, Reference Tables	Provides information applicable to some commands.
Appendix B, *Command Summary*	Lists all the commands and their formats for easy reference.
Index	Lists key terms, concepts, and sections in alphabetical order.

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Document Number	Document Title
2600-A2-GB22	*BitStorm 2600 and GranDSLAM 4200 IP DSLAM SNMP Reference*
2600-A2-GN20	*BitStorm 2600 IP DSLAM Installation Guide*
4200-A2-GN21	*GranDSLAM 4200 IP DSLAM Installation Guide*
6210-A2-GB21	*Hotwire 6210, 6211, and 6381 User's Guide*
7890-A2-GB22	*GrandVIEW EMS User's Guide*

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System Concepts

1

Active Configurations

The system has two configuration memories:

- Running configuration (RAM)
- Startup configuration (NVRAM)

The system operates based on the settings in the running configuration memory (RAM). This configuration may or may not be the same as the configuration in NVRAM. All configuration changes made through any of the user interfaces (CLI, web interface, NMS) are stored only in the running configuration area. You must explicitly copy the Running configuration to the Startup configuration.

Multiple users are permitted to be in the configuration mode at the same time, on all three interfaces. If any of the users perform a save command, then the configuration changes made by all the users will be saved to the startup configuration.

System Terminology

The following terms are used in this manual and the product's user interfaces.

Port

A port is one of the physical interfaces on the device.

These include:

- ALARM RELAY
- CONSOLE
- DSL Ports 1–24
- MANAGEMENT (Port 1)
- UPLINK (Port 2 or Port 3)
- DOWNLINK (Port 2 or Port 3)

Unit

A single 1U chassis is referred to as a unit.

Port ID

Port ID is the generic term used to refer to a DSL or Ethernet port in this document regardless of what method is used. For DSL ports, the port ID can be a number from 1 to 24, or an interface name as described below. The fast Ethernet ports are named eth1 and eth2. The GigE Ethernet port is named eth3.

DSL Port ID

There are several ways a DSL port can be identified in the unit.

Interface Number. DSL ports 1–24 of the unit can be referred to by the numbers 1–24 respectively.

Example:

```
PDYN# configure interface dsl 24 line-code dmt
```

Interface Name. You can use the **configure interface dsl name** command to assign a name to the port, which you can then use instead of the number.

Example:

```
PDYN# configure interface dsl room_401 line-code dmt
```

Port Name or Number with Priority Group. You can additionally specify a specific priority group to modify. The priority group is specified using a colon (:) and a number from 1 (lowest priority) to 8 (highest priority) after the port name or number. If no priority group is specified, then group 1 is assumed.

Example:

```
PDYN# configure interface dsl room_401:8 line-code dmt
```

All. The keyword **all** may be used to specify all DSL ports in a command that refers only to DSL ports.

Example:

```
PDYN# configure interface dsl all line-code dmt
```

Range. Any of the port ID types may be used as an operator in a range specification. The only requirement is that the port used as the first operator in a range must have a lower interface number than the second operator.

Example:

```
PDYN# configure interface dsl 1-24 line-code dmt
```

Ethernet Port ID

The Ethernet ports on the unit are identified by the following names which correspond to the labeling on the front of the unit:

- eth1 (Port 1)
- eth2 (Port 2)
- eth3 (Port 3)

```
PDYN# configure interface ethernet eth2 mode auto
```

Reserved Names

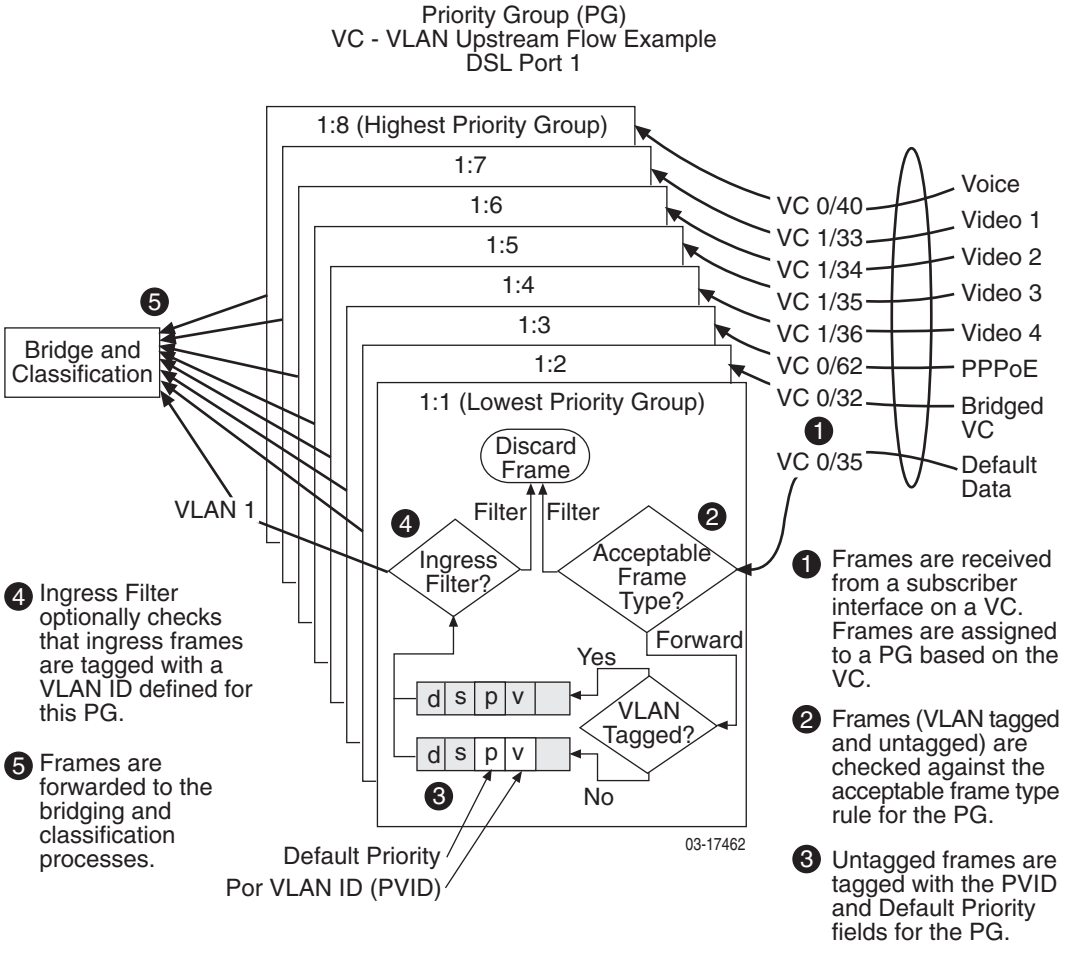
The following are reserved names and may not be assigned as DSL port names:

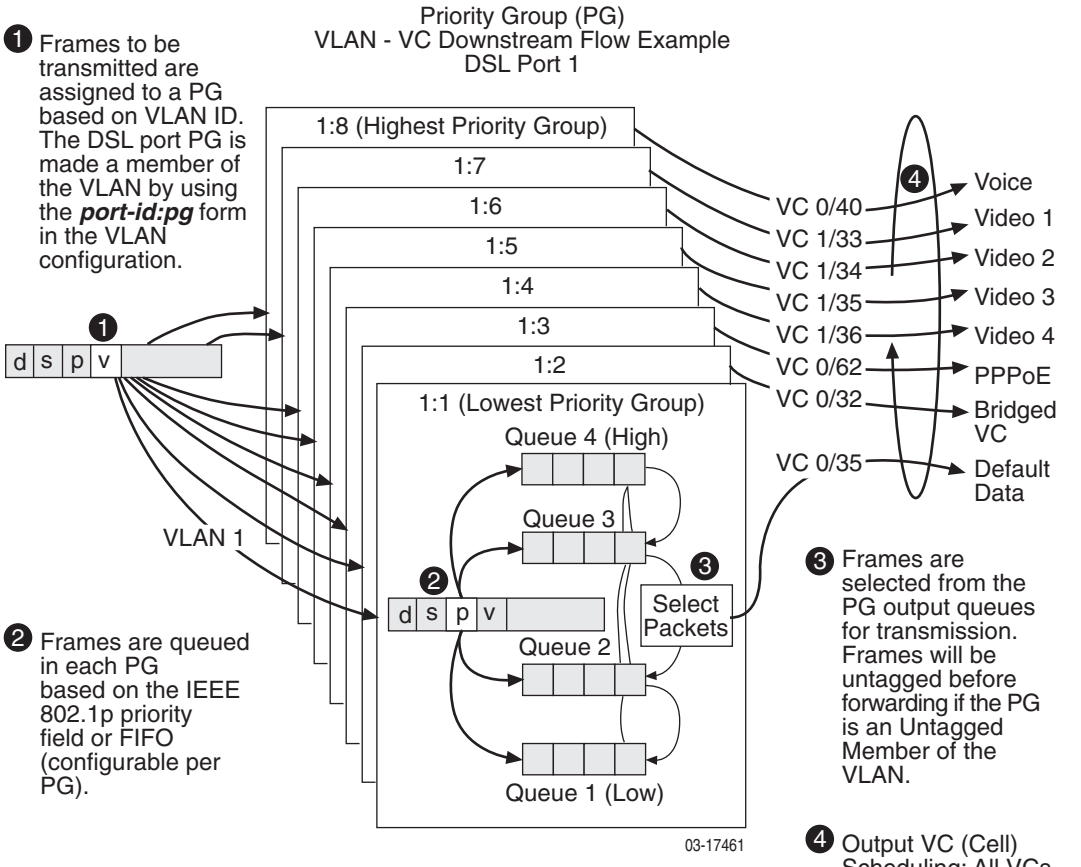
- / (slash)
- - (dash)
- all
- dhcp
- downlink
- management
- uplink
- eth1
- eth2
- eth3
- mgmt_i
- mgmt_o

Priority Groups

When entering tagged or untagged members of a VLAN that are DSL ports, specify a priority group on the DSL port using the *port-id:pg* form. (See *DSL Port ID* on page 1-2.) If only the DSL port number is specified then the VLAN is mapped to priority group 1 for that DSL port. A VLAN can at most have only one priority group per DSL port as a member of the VLAN.

The following illustrations show how priority groups affect upstream and downstream traffic.




Priority Group (PG)
VLAN - VC Downstream Flow Example
DSL Port 1
1 Frames to be transmitted are assigned to a PG based on VLAN ID. The DSL port PG is made a member of the VLAN by using the port-id:pg form in the VLAN configuration.
1:8 (Highest Priority Group)
1:7
1:6
1:5
1:4
1:3
1:2
1:1 (Lowest Priority Group)
d s p v
VLAN 1
Queue 4 (High)
Queue 3
Queue 2
Queue 1 (Low)
2 Frames are queued in each PG based on the IEEE 802.1p priority field or FIFO (configurable per PG).
3
Select Packets
3 Frames are selected from the PG output queues for transmission. Frames will be untagged before forwarding if the PG is an Untagged Member of the VLAN.
4
VC 0/40
VC 1/33
VC 1/34
VC 1/35
VC 1/36
VC 0/62
VC 0/32
VC 0/35
Voice
Video 1
Video 2
Video 3
Video 4
PPPoE
Bridged VC
Default Data
4 Output VC (Cell) Scheduling: All VCs are AAL5 Strict Priority PG 8 Queue 4 (High) to PG 1 Queue 1 (Low).
03-17461

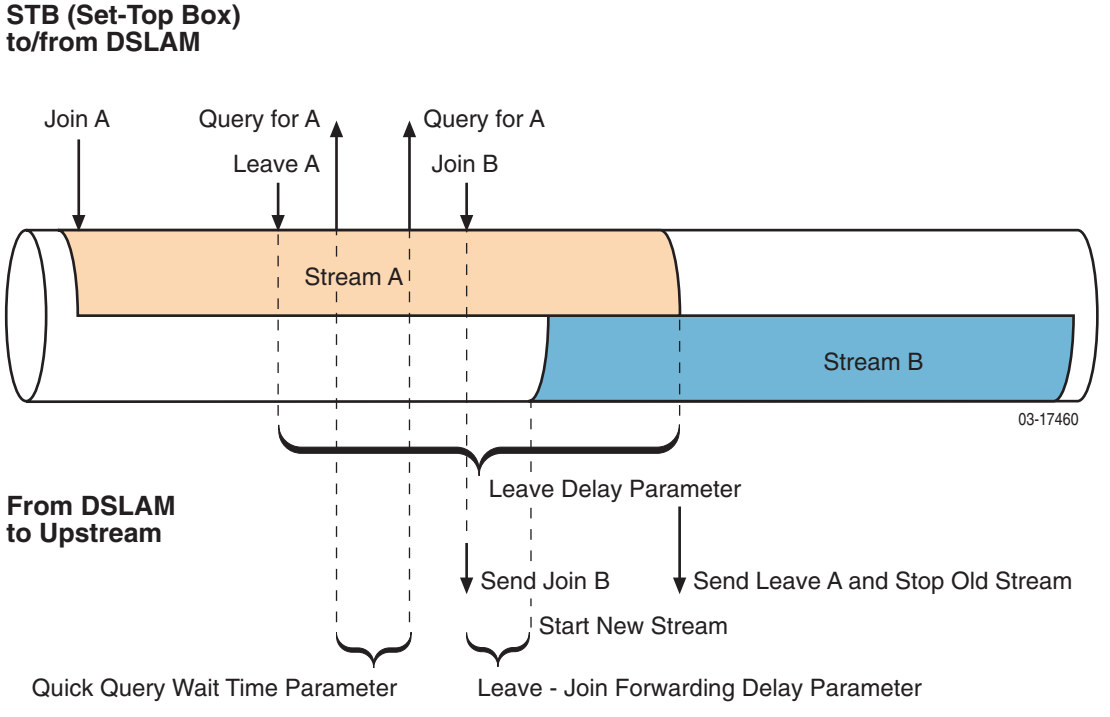
IGMP Snooping

Internet Group Management Protocol (IGMP) snooping is a method of handling multicast data streams by analyzing IGMP packets to learn multicast group address and port associations.

The following parameters control IGMP snooping:

- **Leave Delay** – The amount of time that the multicast stream will continue on a port after the receipt of a Leave message.
- **Leave-Join Forwarding Delay** – The amount of time that the start of a new multicast stream on a port is delayed following the receipt of a leave message.
- **Quick Query Wait Time** – The amount of time to wait for a reply before issuing another Quick Query message.

These parameters are set using the CLI or web interface.



CLI Conventions

2

Overview

The Command Line Interface (CLI) is accessible via either a directly connected terminal session or a Telnet connection. You can use the CLI to:

- Change the operational characteristics of the device by setting configuration values
- Display system status
- Perform diagnostics

The system supports multiple simultaneous CLI sessions.

Access Levels

CLI users have one of two access levels:

- **User** – The user may display certain configuration and status information.
- **Administrator** – The user has access to all commands.

The Administrator level requires a second password.

At least one login ID and one password are internally stored for each user, and can be modified by the administrator. If the user has administrator privileges, one login ID and two passwords are stored (one for User privilege and one for Administrator privilege). The passwords must be different for User level and Administrator level access for the same login ID.

Logging In

When the CLI connection is first established, a login prompt is displayed:

```
Login>
```

Enter a user name. The first time you log in on a new unit, type the name **admin** and press Enter. The password prompt is displayed:

```
Password>
```

Enter the password associated with the user name. The default password for admin is null, so press Enter without typing anything. The following prompt is displayed:

```
PDYN>
```

Type **privilege** and press Enter. The password prompt is displayed again to show that you must enter the administrator privilege password. The first time you log in, just press Enter.

The following prompt is displayed:

```
PDYN#
```

For security purposes, immediately establish new passwords for the user name admin.

Command Line Prompts

The command line prompt shows the user access level, whether there are any unsaved configuration changes, and at what level you are in the command tree.

For the User access level, the following prompt is displayed:

```
PDYN>
```

For the Administrator access level, the following prompt is displayed:

```
PDYN#
```

If changes have been made to the configuration in this or a previous session that have not been changed, an exclamation point is added to the prompt. For example:

```
PDYN#!
```

The next section, *Modes of Operation*, shows how your position in the command tree further affects the prompt.

Modes of Operation

You may enter CLI commands in their entirety on one line. For example:

```
PDYN#!configure interface dsl 1/1 line-code dmt

PDYN#!configure interface dsl 1/1 latency fast
```

Alternatively, you may logically position the command interface at any point in the command tree structure by entering partial commands. The prompt shows where you are in the command structure. For example:

```
PDYN#configure

PDYN(configure)#interface

PDYN(configure-interface)#dsl

PDYN(configure-interface-dsl)#1/1

PDYN(configure-interface-dsl-1/1)#line-code dmt

PDYN(configure-interface-dsl-1/1)#!latency fast
```

You can move back up the command tree using the **back** command.

Back Command

The **back** command positions the CLI up one level in the command tree. For example, if DSL interface 1/1 is being configured, the following prompt is displayed:

```
PDYN(configure-interface-dsl-1/1)#
```

Each **back** command positions the interface one level higher:

```
PDYN(configure-interface-dsl-1/1)#back

PDYN(configure-interface-dsl)#back

PDYN(configure-interface)#back

PDYN(configure)#_
```

Automatic Command Completion

Commands and keywords can be abbreviated to as few characters as are required to make them uniquely identifiable. For example, **con** is a valid abbreviation for **configure** and **cop** is a valid abbreviation for **copy**, but the abbreviation **co** is ambiguous.

You can request automatic completion of a command or keyword you have partially typed by pressing the Tab key. If the command or keyword you have typed is ambiguous, the Tab key displays the options for completion.

Command History Buffer

The last 15 commands are maintained in a command history buffer. You can use the Up Arrow and Down Arrow keys to scroll through and redisplay commands, then alter and resubmit a command maintained in the buffer.

More Prompt

The CLI lets you control the flow of text to the screen with a **paging** command.

If paging is disabled, text is sent to the screen without interruption. If paging is enabled, only 23 lines of text are displayed at a time. A **More** prompt is displayed on line 24 of your screen, and you can do the following:

- To view the next screen of output, press the spacebar.
- To view the next line of output, press the Enter key.
- To return to the command line, press **q** or any other key besides the spacebar and Enter key.

The paging command affects only the user who enters the command.

Command Help

You can obtain help when you enter commands by using the following methods:

- To list all commands for a specific level, enter a question mark (?) at the system prompt:

  ```
  PDYN#?
  ```

- To obtain a list of commands that start with a particular character set, enter an abbreviated command immediately followed by a question mark:

  ```
  PDYN#configure sys?
  ```

- To list a command's keywords or arguments, enter a question mark in place of a keyword or argument on the command line:

  ```
  PDYN#configure management ?
  ```

Keyboard Definitions

The following table summarizes the special uses of keys in the CLI:

Press . . .	To . . .
Ctrl-c	Clear the current command line entry, exit a command line prompt without answering, or abort the command in progress.
Ctrl-z	Terminate a privileged mode session and continue the session in standard mode. If Ctrl-z is entered by a user not in privileged mode, it places the user at the top of the command tree.
Down Arrow	Recall commands from the command line history buffer starting with the first command in the buffer.
Enter	Submit the current command line, or, if a **More** prompt is displayed, display the next line of text.
q	Abort a **More** prompt and return to the command line prompt. (Pressing any key other than Enter or the spacebar has this effect.)
? (Question Mark)	Display the Help text for the current command.
Spacebar	Display the next page of output when a **More** prompt is displayed on line 24 of your screen.
Up Arrow	Scroll to the previous valid command line entry leaving the cursor at the end of the entry.

Command Syntax Error Handling

The CLI checks the syntax of commands you enter. If an error is detected, the following prompt is displayed:

```
Syntax error - use '?' to see valid completions
```

The prompt returns to normal when you press the Enter key.

Automatic Logout

The unit automatically terminates the CLI session if the Inactivity Timeout duration is exceeded. The Inactivity Timeout is configurable.

Configuring the System

In order to configure the unit you must be at the Administrator access level.

Configuration changes take effect immediately. However, the changes are made to the running configuration, which is in RAM (Random Access Memory). You must enter the **save** command to save your changes to the startup configuration in NVRAM (Non-Volatile RAM).

If there are unsaved changes, an exclamation point (!) is added to the prompt to remind you, or other administrators, of the outstanding changes. The changes remain in RAM and can be saved until the unit is powered off or reset.

For information about what elements of the system you can configure, see *Configure* in Chapter 3, *Commands*.

Commands

3

Typographic Conventions

Command descriptions in this chapter use the following conventions:

- Vertical bars (|) separate alternative, mutually exclusive, elements.
- Braces ({ }) indicate a required choice.
- Square brackets ([ ]) indicate optional elements.
- Braces within brackets ([{ }]) indicate a required choice within an optional element.
- **Boldface** indicates fixed commands and keywords.

Back

back
Minimum Access Level: **User**
The **back** command moves you back one level in the command tree. For example, if DSL 1 is being configured the following prompt is displayed: PDYN(configure-interface-dsl-1)# The back command returns the display to the PDYN (configure-interface-dsl)# prompt. **Example**: PDYN(configure-interface-dsl-1)#**back** PDYN(configure-interface-dsl)#_ PDYN(configure-interface-dsl)#**back** PDYN(configure-interface)#_

Clear

Clear Bridge

clear bridge
Minimum Access Level: **Administrator**
The **clear bridge** command deletes learned entries from the bridge table. Static entries are not affected. **Example**: PDYN# clear bridge

Clear Management

clear management snmp nms-address {ip-address_1**} … [**ip-address_8**]**
Minimum Access Level: **Administrator**
The **clear management snmp nms-address** command clears the IP addresses that were defined for NMS validation. ***ip-address_1 … ip-address_8*** - Specifies one or more NMS addresses **Example**: PDYN# clear management snmp nms-address 192.168.1.1 192.168.1.2

clear management snmp nms-traps {ip-address_1**} … [**ip-address_8**]**
Minimum Access Level: **Administrator**
The **clear management snmp nms-traps** command clears the IP addresses that were defined for up to eight NMS trap managers. ***ip-address_1 … ip-address_8*** - Specifies one or more trap manager addresses **Example**: PDYN# clear management snmp nms-address 192.168.1.1 192.168.1.2

Clear Syslog

clear syslog
Minimum Access Level: **Administrator**
The **clear syslog** command clears all the entries in the system log. **Example** PDYN# clear syslog

Configure

The **configure** command causes the CLI to enter configuration mode, from which you can specify what element of the system you would like to configure.

configure
Minimum Access Level: **Administrator**
The **configure** command causes the CLI to enter configuration mode. Once the **PDYN(configure)#** prompt is displayed, you can enter one of the configuration subcommands. **Example** PDYN# configure PDYN(configure)#**interface** PDYN(configure-interface)#**bridge** PDYN(configure-interface-bridge)#**mode switch** PDYN(configure-interface-bridge)#!**save** PDYN(configure-interface-bridge)#

Configure Bridge

This command is used to configure the parameters related to the bridge table.

Configure Bridge Clear

configure bridge clear
Minimum Access Level: **Administrator**
The **configure bridge clear** command deletes learned entries from the bridge table. Static entries are not affected. **Example**: PDYN# configure bridge clear

Configure Bridge Mode

configure bridge mode {mux | switch | sms | uplink-tag}
Minimum Access Level: **Administrator**
The **configure bridge mode** command specifies the mode the bridge will operate in. **mux** – Multiplexing forwarding mode. The system treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port. **sms** – Subscriber Management System (SMS) mode. The system treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port. In addition, a management Virtual Local Area Network (VLAN) is created on the uplink for use by the SMS. **switch** – Switched mode. The system acts as a transparent learning bridge. This is the default. **uplink-tag** – Uplink Tagging mode. Traffic from each DSL subscriber port is given a unique VLAN tag. The system therefore treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port. **Example**: PDYN# **configure bridge mode mux** **Notes**: **mux** In this mode all traffic is routed to the uplink port . Port to port switching is not allowed. Unit performs a Proxy ARP function. **sms**In this mode all traffic is routed to the Ethernet uplink port. Port to port switching is not allowed. When this mode is selected, an external management VLAN will be established to the Subscriber Management System. In this mode Proxy ARP is disabled. **uplink-tag** When this mode is selected all traffic is forwarded to the uplink port as in the mux mode. In addition, all user traffic from the DSL subscriber ports will be have a VLAN tag. Proxy ARP is enabled in this mode.

Configure Bridge Timeout

configure bridge timeout {time}
Minimum Access Level: **Administrator**
The **configure bridge timeout** command specifies the maximum amount of time a learned entry may exist in the bridge table without appearing as the source address of a received frame. **time** – The amount of time, in seconds, that an entry may exist. The valid range is 10–1,000,000 seconds, or 0 (zero, which specifies that no timeouts will occur). The default is 300. **Example**: PDYN# configure bridge timeout 600

Configure Date and Time

configure date [mm/dd/yy | dd/mm/yy] [hh:mm]
Minimum Access Level: **Administrator**
The **configure date** command sets the date and time. **mm/dd/yy** or **dd/mm/yy** – specifies the month, day, and year, each as two digits. The date format is set by the **configure system options** command (see Configure System Options Command); the default order is month, day, and year. **hh:mm** – Specifies the time in hours (0–23) and minutes (0–59). **Example**: PDYN# configure date 03/21/02 13:05 **Note:** If the you have specified SNTP as the source for the date and time, then that option will overwrite whatever you enter for the date and time. The unit will maintain the date and time through power cycles of up to 1 hour. If a power outage lasts longer than 1 hour, the unit will attempt to automatically obtain the date and time from NTP server on the network. If it cannot get time from the specified server, the time will be set to **01/01/01 00:00:00**.

Configure Date-Timezone

configure date-timezone {time-zone**}**
Minimum Access Level: **Administrator**
The **configure date-timezone** command specifies the offset in hours from Greenwich Mean Time (GMT) that the date and time represent. **time_zone** – Specifies the offset in hours from Greenwich Mean Time (GMT). Hours before GMT are expressed as negative numbers and hours after GMT are expressed as positive numbers (with or without a plus sign). Half hours are supported as decimals. Valid values are –12 through 12. You can also obtain a list of time zone offsets using the command: **`configure date-timezone ?`** The unit does not adjust for Daylight Savings Time. **Example**: PDYN# configure date-timezone +2 PDYN# configure date-timezone 9

Configure Factory Defaults

The **configure factory** command loads the factory default parameters into the running configuration. The default parameters take immediate effect, but are not saved. Execute the Save command to save the parameters to Non-Volatile Random-Access Memory (NVRAM).

configure factory
Minimum Access Level: **Administrator**
The **configure factory** command loads factory default parameters. **Example**: PDYN# configure factory **Notes:** This command will cause the factory default parameters to be loaded into the running configuration and immediately take effect. The parameters will not be saved to NVRAM unless save command is issued after this. The reset to factory defaults is a two-step process. This prevents the Administrator from accidentally destroying the configuration. After the administrator enters the configure factory command, a warning message ("Warning: This will reset all configuration values. Proceed (yes/no) ?") is displayed. The administrator must enter "yes" in order to change the configuration. To save the configuration to the NVRAM, the administrator must also enter the save command. Factory defaults include an out-of-band management address of 10.10.10.10, and an in-band management address of 0.0.0.0. If you are managing the unit using a different IP address, your connection is terminated upon execution of the **configure factory** command. It is therefore recommended that this command be executed only from the Console port.

Configure Filter

Filters are used to restrict selected types of user data. A filter is made up of one or more rules. Each rule that is defined for a filter is processed in the order defined in the filter configuration command. As soon as one of the rules is matched, the action for that rule is taken. The remaining rules, if any, are not checked.

In this system, the rules must be defined before the rule name can be specified in the filter statement. This process is different from the process found in some routers, where the rules are buried in the definition of the filter. A **maximum of 16 rules** can be defined for a filter.

The activation of a filter is a three-step process that need to be executed in this order:

1. Define filter rules (see Configure Filter-Rule)
2. Define a named filter comprising one or more rules (see Configure Filter Command)
3. Bind the filter to an interface (see Configure Filter-Binding)

Configure Filter Create

configure filter create filter_name {forward | discard} [**rule_name_1**]... [**rule_name_16**]
Minimum Access Level: **Administrator**
The **configure filter create** command creates a filter based on existing filter rules. **filter_name** – Specifies the filter to be created. The name may contain up to 32 printable characters. **forward** – Specifies that a packet is to be forwarded to the user when none of the conditions specified in the rule or rules are matched. **discard** – Specifies that a packet is to be discarded when none of the conditions specified in the rule or rules are matched. **rule_name_1** through **rule_name_16** – Specifies up to 16 different rule names. These must be already defined using the **configure filter-rule** command (see Configure Filter-Rule Command). **Example**: PDYN# **configure filter create no_at_or_ipx forward no_at no_ipx** **Note**: A **maximum of 16 rules** can be defined for a filter.

Configure Filter Delete

configure filter delete filter_name
Minimum Access Level: **Administrator**
The **configure filter delete** command deletes a filter. **filter_name** – Specifies the filter to be deleted. It must not be bound to an interface. To delete a binding, use the **configure filter-binding** command (see Configure Filter-Binding Command). **Example**: PDYN# **configure filter delete no_decnet**

Configure Filter Modify

configure filter modify filter_name {forward | discard} [**rule_name_1**]... [**rule_name_16**]
Minimum Access Level: **Administrator**
The **configure filter modify** command modifies a filter based on existing filter rules. **filter_name** – Specifies the filter name. The name may contain up to 32 printable characters. **forward** – Specifies that a packet is to be forwarded to the user when none of the conditions specified in the rule or rules are matched. **discard** – Specifies that a packet is to be discarded when none of the conditions specified in the rule or rules are matched. **rule_name_1** through **rule_name_16** – Specifies up to 16 different rule names. These must be already defined using the **configure filter-rule** command (see Configure Filter-Rule Command). **Example**: PDYN# **configure filter modify no_at_or_ipx forward no_at no_ipx** **Note**: A **maximum of 16 rules** can be defined for a filter.

Configure Filter Protocol-Specific

configure filter proto-specific {netbios} {deny | permit}
Minimum Access Level: **Administrator**
The **configure filter proto-specific** command denies or permits traffic for a particular protocol. **Protocols** netbios – Microsoft's NetBIOS traffic. **deny** – Specifies that traffic for the particular protocol should be denied (frames/packets are discarded). **permit** – Specifies that traffic for the particular protocol should be permitted (frames/packets are forwarded).
Example: PDYN# **configure filter proto-specific netbios deny**

Configure Filter-Binding

This command is used to bind filter to a port. A filter has no effect until it is bound to a port. The same filter may be bound to multiple ports.

Configure Filter-Binding Create

configure filter-binding create filter_name port_id
Minimum Access Level: **Administrator**
The **configure filter-binding create** command associates a filter to a port. **filter_name** – Specifies the inbound filter to be associated with a port. It must exist. (See *Configure Filter* on page 3-7.) **port_id** – Specifies the DSL port whose inbound traffic is to be filtered. **Example**: PDYN# configure filter-binding create no_at_or_ipx 1 The same filter may be bound to multiple ports. There is a maximum of 4 filters per port (2 Ethernet filters (1 input and 1 output) and 2 IP filters). Only one filter can be bound to a port per command. At this time, the filters apply only to the DSL ports.

Configure Filter-Binding Delete

configure filter-binding delete filter_name port_id
Minimum Access Level: **Administrator**
The **configure filter-binding delete** command removes the association of a filter to a port. **filter_name** – Specifies the filter to be associated with a port. It must exist. (See *Configure Filter* on page 3-7.) **port_id** – Specifies the DSL port whose traffic is to be filtered. **Example**: PDYN# configure filter-binding delete no_at_or_ipx 1

Configure Filter-Rule Create (L2 filter)

configure filter-rule create { rule_name} {forward | discard} {ether | ether-snap} [ethertypes]
Minimum Access Level: **Administrator**
he **configure filter-rule create** command creates a rule for filtering traffic. **rule_name** – The name of the rule to be created. The name may contain up to 32 printable characters. **forward** – If a packet matches the rule it is forwarded. **discard** – If a packet matches the rule it is discarded. **ether** – Specifies that the rule applies to Layer 2 Ethernet traffic. **ether-snap** – Specifies that the rule applies to Layer 2 SubNetwork Access Protocol (SNAP) traffic. **ethertypes** – Specifies the Ethertype to be filtered in hexadecimal. The hexadecimal values for Ethertypes as listed in RFC 1700 are valid. These Ethertypes are shown in *Ether Types* in Appendix A, *Reference Tables*. **Example**: PDYN# **configure filter-rule create DecNetdrop discard ether 6003** PDYN# **configure filter-rule create IPXdrop discard ether 8137**

Configure Filter-Rule Modify (L2 filter)

configure filter-rule modify { rule_name} {forward | discard} {ether | ether-snap} [ethertypes]
Minimum Access Level: **Administrator**
The **configure filter-rule modify** command modifies the parameters of an existing filtering rule. **rule_name** – The name of the rule to be modified. **forward** – If a packet matches the rule it is forwarded. **discard** – If a packet matches the rule it is discarded. **ether** – Specifies that the rule applies to Layer 2 Ethernet traffic. **ether-snap** – Specifies that the rule applies to Layer 2 SubNetwork Access Protocol (SNAP) traffic. **ethertypes** – Specifies the Ethertype to be filtered in hexadecimal. The hexadecimal values for Ethertypes as listed in RFC 1700 are valid. These Ethertypes are shown in *Ether Types* in Appendix A, *Reference Tables*. **Example**: PDYN# **configure filter-rule create DecNetdrop discard ether 6003** PDYN# **configure filter-rule create IPXdrop discard ether 8137**

Configure Filter-Rule Delete

configure filter-rule delete { rule_name}
Minimum Access Level: **Administrator**
The **configure filter-rule delete** command deletes a rule for filtering traffic. **rule_name** – The name of the rule to be deleted. **Example**: PDYN# **configure filter-rule delete IPXdrop** Note that if a rule is part of an active filter, the system will not delete the rule. It must first be removed from the filter.

Configure Filter Operational Notes

The following operational restriction apply to filters and bindings:

- Filters and Rules can exist independently, without regard to whether they are used in bindings.
- A Filter-Rule binding can be created only if both the filter and rule exist.
- A Port-Filter binding can be created only if both the Port and the Filter exist.
- A rule cannot be deleted while any filter is bound to it.
- A filter cannot be deleted while any port is bound to it.
- Filter-Rule bindings and Port-Filter bindings can be deleted at any time.
- When a filter is deleted, any Filter-Rule bindings for it are automatically deleted

Configure IGMP Snooping

configure igmp {port_id} snooping {enabled | disabled}
Minimum Access Level: **Administrator**
The **configure igmp snooping** command enables the unit to process multicast data streams. This is done by snooping the content of IGMP messages. **port_id** – Identifies the IGMP DSL port to be configured. Enter “all” for all ports. **enabled** – The unit will process multicast packets and snoop IGMP packets to learn multicast group address and port associations. Only ports that have joined a multicast group will receive multicast traffic. **disabled** – The unit will not recognize multicast packets. Multicast packets will be flooded to all ports. **Example**: PDYN# **configure igmp 1 snooping enabled**

Configure IGMP Snooping Leave Delay

configure igmp {port_id} snooping leave-delay {delay**}**
Minimum Access Level: **Administrator**
The **configure igmp snooping leave-delay** command specifies the period of time during which a multicast stream will continue to be forwarded on an interface after receipt of an IGMP leave message for that stream. **port_id** – Identifies the IGMP DSL port to be configured. Enter **all** for all ports. **delay** - The amount of time, in tenth of seconds, that the multicast stream will continue after the receipt of a leave message. The default value is 3. The range is 0 to 25.5 seconds in units of tenths of seconds. **Example**: `PDYN#` **configure igmp 1 leave-delay 3**

Configure IGMP Snooping Leave Join Delay

configure igmp {port_id} snooping leave-join-delay {delay**}**
Minimum Access Level: **Administrator**
The **configure igmp snooping leave-join-delay** command specifies the period of time during which new multicast streams will not be forwarded on a port following a Leave Message for another stream on that port. **port_id** – Identifies the IGMP DSL port to be configured. Enter “all” for all ports. **delay** - The amount of time, in tenths of seconds, that a new multicast stream on a port is delayed following the receipt of a leave message. The default value is 3. The range is 0 to 25.5 seconds in units of tenths of seconds. **Example**: `PDYN#` **configure igmp 1 leave-join-delay 3**

Configure IGMP Query Count

configure igmp {port_id} query-count {count}
Minimum Access Level: **Administrator**
The **configure igmp query-count** determines how many quick query messages will be sent to the subscriber ports in response to a leave message. If no responses are received after this number of messages then it can be assumed that no subscribers want to be in the multicast group. In other products this parameter is also referred to as the robustness value or the number of quick query count. **port_id** – Identifies the IGMP DSL port to be configured. Enter “all” for all ports. **count** - This parameter specifies the number of Quick Queries that will be generated by the IGMP Proxy function in response to an IGMP Leave Message. The default is 2. The range is 1 to 10. **Example**: PDYN# **configure igmp 1 query-count 2**

Configure IGMP Query Wait Timer

configure igmp {port_id} query-wait-timer {time}
Minimum Access Level: **Administrator**
The **configure igmp proxy query-wait-timer** specifies the time to wait for a reply before issuing another Quick Query message. **port_id** – Identifies the IGMP DSL port to be configured. Enter “all” for all ports. **time** - This parameter specifies the time, in tenths of a second, to wait for a reply before issuing another Quick Query message. The default is 10 (1 second). The range is 0 to 25.5 seconds. **Example**: PDYN# **configure igmp 1 query-wait-timer 200**

Configure IGMP Proxy Enable

configure igmp-proxy {enabled | disabled}
Minimum Access Level: **Administrator**
The **configure igmp proxy** command enables the additional function where the unit creates IGMP query messages. **enabled** – The unit will act as an IGMP querier if needed. In addition the proxy function will perform quick query functions that allows a smooth changing of data streams. The IGMP Snooping function must also be enabled for this function to be enabled. **disabled** – The unit will relay all IGMP messages and not perform any proxy functions. **Example**: PDYN# **configure igmp proxy enabled**

Configure IGMP Proxy Report Summary Enable

configure igmp-proxy report-summary {enabled | disabled}
Minimum Access Level: **Administrator**
The **configure igmp proxy report-summary** command enables the unit to summarize all report messages into a single report message. **enabled** – The IGMP proxy agent will summarize all report messages into a single report message. **disabled** – All report messages received by the IGMP Proxy agent will be forwarded upstream towards the active IGMP Querier. **Example**: PDYN# **configure igmp-proxy report-summary disabled**

Configure Interface

This command enters 'configure interface' mode. From this level, any of the following interfaces may be selected.

- console
- dsl
- ethernet

Configure Interface Console Data-Bits

configure interface console data-bits {7 | 8}
Minimum Access Level: **Administrator**
The **configure interface console data-bits** command sets the number of data bits in a byte on the Console port. **data-bits** – Valid choices are 7 and 8. The default is 8. **Example**: PDYN# **configure interface console data-bits 7**

Configure Interface Console Parity

configure interface console parity {even | none | odd}
Minimum Access Level: **Administrator**
The **configure interface console parity** command sets the parity bit type for the Console port. **parity** – Valid choices are none, odd, and even. The default is none. **Example**: PDYN# **configure interface console parity even**

Configure Interface Console Rate

configure interface console rate {9600 | 19200 | 38400 | 57600 | 115200}
Minimum Access Level: **Administrator**
The **configure interface console rate** command sets the rate of the Console port in bps. **rate** – Valid rates are 9600, 19200, 38400, 57600, and 115200. The default is 9600 bps. **Example**: PDYN# **configure interface console rate 57600**

Configure Interface Console Show

configure interface console show
Minimum Access Level: **Administrator**
The **configure interface console show** command displays parameters for the Console port without leaving configuration mode. **Example**: PDYN# **configure interface console show** Output: refer to Show Interface Console.

Configure Interface Console Stop Bits

configure interface console stop-bits {1 | 2}
Minimum Access Level: **Administrator**
The **configure interface console stop-bits** command sets the number of stop bits delimiting a byte on the Console port. **stop-bits** – Valid choices are 1 and 2. The default is 1. **Example**: `PDYN#` **configure interface console stop-bits 1**

Configure Interface DSL

This command enters the configure ADSL interface mode. You can get to this point in the menu tree one command at time (config -> interface -> adsl), or by entering the entire command at once. The user can configure a DSL port name, line code, operational state, VLAN configuration, ATM VC and encapsulation, priority group and queue method, and manipulate ADSL profiles to configure transmission parameters.

The ADSL port transmission parameters are configured using profiles. ADSL Profiles can be created, modified, deleted, and activated. A new ADSL profile is created and activated using the following steps:

1. Allocate a new profile with the **configure interface dsl-profile-line create** command.
2. Configure desired transmission parameters with the following commands:
   - configure interface dsl-profile-line rate-adaptive-mode-downstream
   - configure interface dsl-profile-line rate-adaptive-mode-upstream
   - configure interface dsl-profile-line latency
   - configure interface dsl-profile-line max-interleave-delay-downstream
   - configure interface dsl-profile-line max-interleave-delay-upstream
   - configure interface dsl-profile-line max-speed-downstream
   - configure interface dsl-profile-line max-speed-upstream
   - configure interface dsl-profile-line max-snr-margin-downstream
   - configure interface dsl-profile-line max-snr-margin-upstream
   - configure interface dsl-profile-line max-txpower-downstream
   - configure interface dsl-profile-line max-txpower-upstream
   - configure interface dsl-profile-line min-speed-downstream
   - configure interface dsl-profile-line min-speed-upstream
   - configure interface dsl-profile-line min-snr-margin-downstream
   - configure interface dsl-profile-line min-snr-margin-upstream
   - configure interface dsl-profile-line min-txpower-downstream
   - configure interface dsl-profile-line min-txpower-upstream
   - configure interface dsl-profile-line target-margin-downstream
   - configure interface dsl-profile-line target-margin-upstream
3. Activate the profile with the **configure interface dsl-profile-line activate** command

Configure Interface DSL ATM VC Create

configure interface dsl { port_id:pg} atm vc create { vpi/vci} {atm_profile}
Minimum Access Level: **Administrator**
The **configure interface dsl atm vc create** command defines a Virtual Channel Link (VCL) for the specified port. If the specified Virtual Circuit Identifier (VCI) or Virtual Path identifier (VPI) is unavailable or in use, the command fails. If the resources specified by the Receive Traffic Descriptor or Transmit Traffic Descriptor are not available, the command fails. VCLs created on DSL ports are created on the currently active channel. If no channel is available, VCLs are not created on the interface. **port_id** – Identifies the DSL port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **create** - This creates one of eight (8) possible connections. **vpi/vci** – Valid input is the VPI/VCI for the connection. The allowable ranges for VPI and VCI values are determined by the number of VPI and VCI bits allocated on an ATM interface and by the available address space in the NE's ATM switch used for all VCLs. Interfaces on LT cards support a maximum of four VCLs a with maximum VPI range of 0–15 and VCI range of 32–127. Interfaces on NT cards support a maximum VPI range of 0–255 and a VCI range of 32–65535. A total of 8192 VCLs are supported on the DSLAM. The maximum address space supported by the DSLAM is 250,000. A number of VCLs are created as part of the basic factory defaults. The default VCLs may be changed or overwritten by customer-specific factory defaults. VCLs associated with a slot and port are created when a card is installed. The default for the connection is **0/35**. **Example**: PDYN# **configure interface dsl 1 atm vc create 1/35 atm_profile_up atm_profile_down**

Configure Interface DSL ATM VC Delete

configure interface dsl {port_id:pg} atm vc delete { vpi/vci}
Minimum Access Level: **Administrator**
The **configure interface dsl atm vc delete** command deletes a virtual connection for the specified port. **port_id** – Identifies the ADSL port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **delete** - This deletes the specified vpi/vci from this ADSL port. **vpi/vci** – Valid input is the VPI/VCI for the connection. The valid range for VPI is **0-255**. The valid range for VCI is **16-65535.** **Example**: PDYN# **configure interface dsl1/1 atm vc delete 1/35**

Configure Interface DSL ATM Encapsulation

configure interface dsl {port_id:pg} atm encapsulation {llc-bridged | vcm-bridged}
Minimum Access Level: **Administrator**
The **configure interface dsl atm encapsulation** command specifies whether the port uses Logical Link Control (LLC) or Virtual Channel Multiplexing (VCM) bridged encapsulation. These are defined in RFC 1483. **port_id** – Identifies the port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **atm encapsulation** – Valid choices are: **llc-bridged** – The interface uses LLC bridged encapsulation. This is the default. **vcm-bridged** – The interface uses VCM bridged encapsulation. **Example**: PDYN# **configure interface dsl 1/1 atm encapsulation vcm-bridged**

Configure Interface DSL Line Length – Effective Working Length (ReachDSL Only)

configure interface dsl {port_id} line-length (line-length**)**
Minimum Access Level: **Administrator**
The **configure interface dsl ewl** command specifies the length of the DSL link in units of feet. This parameter is used by the spectrum management function. This command does not apply to ADSL units. **port_id** – Identifies the port to be configured. **line-length** - This is the length of the line. This is also referred to as the effective working length. **Example**: PDYN# **configure interface dsl 1/24 line-length 1000**

Configure Interface DSL Line Length – Loop Length (ReachDSL Only)

configure interface dsl {port_id} line-length {extrashort|short|medium|long}
Minimum Access Level: **Administrator**
The **configure interface dsl line-length** command specifies the length of the DSL link. This command does not apply to ADSL units. **port_id** – Identifies the port to be configured. **line-length** – This is the length of the line. There are four values: extrashort, short, medium and long. These values are valid for certain geographic regions. This will be displayed only on the appropriate models. The default is short. **Example**: PDYN# **configure interface dsl 1/24 line-length medium**

Configure Interface DSL Line Length – Quad (ReachDSL Only)

configure interface dsl {port_id} line-length {same|segupto3km|segabove3km}

Minimum Access Level: **Administrator**

The **configure interface dsl line-length** command specifies the length of the DSL link. This specifies the quad cable configuration and the length of the DSL line. This command does not apply to ADSL units.

port_id – Identifies the port to be configured.

line-length - **same** – Same quad
- **segupto3km** – Segregated Quad up to 3 km (default)
- **segabove3km** – Segregated Quad above 3 km

These values are valid for certain geographic regions. This will be displayed only on the appropriate models.

Example:
`PDYN#` **configure interface dsl 1/24 line-length segupto3km**

Configure Interface DSL Line-Mode (ADSL Only)

configure interface dsl {port_id} **line-mode {ansi | dmt | g.lite | multimode | adsl2 | adsl2plus}**

Minimum Access Level: **Administrator**

The **configure interface dsl line-mode** command specifies the line code for a ADSL port.

port_id – Identifies the port to be configured. .
line-mode – Valid choices are:
- **ansi** – The port uses ANSI T1.413-1998.
- **dmt** – The port uses G.dmt (G.992.3).
- **g.lite** – The port uses G.lite (G.992.4).
- **adsl2** – The port uses ADSL2 (G.992.3).
- **adsl2plus** – The port uses ADSL2+ (G.992.5).
- **multimode** – The port automatically senses the line code in accordance with G.994.1. This is the default.

This command is not available on ReachDSL models, which are always set for Multimode.

Example:
PDYN# **configure interface dsl 1/24 line-mode ansi**

Configure Interface DSL Linkupdown Trap

configure interface dsl {port_id} **linkupdown-trap {disabled | enabled}**
Minimum Access Level: **Administrator**
The **configure interface dsl linkupdown-trap** command specifies whether an SNMP trap should be sent upon link up and link down events. **port_id** – Identifies the port to be configured. **linkupdown-trap** – Valid choices are: – disabled – No traps are sent upon link up and link down events. – enabled – A trap is sent upon a link up or link down event. This is the default. **Example**: PDYN# **configure interface dsl 1/21 linkupdown-trap disabled**

Configure Interface DSL Name

configure interface dsl {port_id} name {port_name}
Minimum Access Level: **Administrator**
The **configure interface dsl name** command specifies a unique name for this port. **port_id** – Identifies the port to be configured. **name** – May be up to 16 printable characters. The name may not include a forward slash (/) or the restricted keywords. See *Reserved Names* in Chapter 1, *System Concepts*. **Example:** PDYN# **configure interface dsl 1/22 name Room_100**

Configure Interface DSL Max-TxPower-Downstream (ReachDSL Only)

configure interface dsl {port-id} max-txpower-downstream {power}
Minimum Access Level: **Administrator**
The **configure interface dsl max-txpower-downstream** command specifies the maximum transmit power, in dB, required for the port. This command does not apply to ADSL units. **port_id** – Identifies the port to be configured. **power** – Valid choices are –14 to 12 dB in 1 dB increments. The default is dependant on the maximum allowable for the geographic location. **Example**: `PDYN#` **configure interface dsl 1/22 max-txpower-downstream 1**

Configure Interface DSL Max-TxPower-Upstream (ReachDSL Only)

configure interface dsl {port-id} max-txpower-upstream {power}
Minimum Access Level: **Administrator**
The **configure interface dsl max-txpower-upstream** command specifies the maximum transmit power of the far end, in dB, required for the port. This command does not apply to ADSL units. **port_id** – Identifies the port to be configured. **power** – Valid choices are –14 to 12 dB in 1 dB increments. The default is dependant on the maximum allowable for the geographic location. **Example**: `PDYN#` **configure interface dsl 1/22 max-txpower-upstream 1**

Configure Interface DSL Pwrmgmt-State (ADSL2 Only)

configure interface dsl {port-id} pwrmgmt-state {enable | disable}
Minimum Access Level: **Administrator**
The **configure interface dsl pwrmgmt-state** command allows the port to enable or disable power management. This command does not apply to the Reach unit. **port_id** – Identifies the port to be configured. **state –** enabled or disabled. **Example**: PDYN# **configure interface dsl 1/22 pwrmgmt-state enable**

Configure Interface DSL Pwrmgmt-Enabling (ADSL2 Only)

configure interface dsl {port-id} pwrmgmt-enabling {none | idle | lowpower | both}
Minimum Access Level: **Administrator**
The **configure interface dsl pwrmgmt-state** command sets the power management state enabling. This command does not apply to the Reach unit. **port_id** – Identifies the port to be configured. **state –** enabled or disabled. **Example**: PDYN# **configure interface dsl 1/22 pwrmgmt-enabling idle**

Configure Interface DSL L0Time (ADSL2 Only)

configure interface dsl {port-id} l0time {time}
Minimum Access Level: **Administrator**
The **configure interface dsl l0time** command sets the L0 time. Valid values are 0 to 255 seconds. This command does not apply to the Reach unit. **port_id** – Identifies the port to be configured. **state –** enabled or disabled. **Example**: PDYN# **configure interface dsl 1/22 l0time 10**

Configure Interface DSL L2Time (ADSL2 Only)

configure interface dsl {port-id} l2time {time}
Minimum Access Level: **Administrator**
The **configure interface dsl l2time** command sets the L2 time. Valid values are 0 to 255 seconds. This command does not apply to the Reach unit. **port_id** – Identifies the port to be configured. **state –** enabled or disabled. **Example**: PDYN# **configure interface dsl 1/22 l2time 10**

Configure Interface DSL Profile Alarm Activate

configure interface dsl-profile-alarm activate {profile_name} {port_id}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm activate** command activates the specified Alarm profile onto the specified port(s). **port_id** – Identifies the port or range of ports in which the profile is to be activated. **profile_name** – Identifies the ADSL Alarm profile to be activated. **Example**: PDYN# **configure interface dsl-profile-alarm activate adsl_alarm_profile1 1/22**

Configure Interface DSL Profile Alarm Create

Configure interface dsl-profile-alarm create {profile_name}

Minimum Access Level: **Administrator**

The **configure interface dsl-profile-alarm create** command creates a new ADSL Alarm Profile.

profile_name – Identifies the ADSL Alarm profile to be created.

Downstream / Near End Alarm Profile

Loss of Frame Seconds – SNMP trap is sent if the number of LOFS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Loss of Power Seconds – SNMP trap is sent if the number of LPRS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Errored Seconds – SNMP trap is are sent if the number of ES events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Severely-Errored Seconds – SNMP trap is sent if the number of SES events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Unavailable Seconds – SNMP trap is sent if the number of UAS Events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Increasing Rate – SNMP rate change trap is sent if the current rate is greater than or equal to the previous rate plus this threshold (065535 kbps, where 0 disables the messages).

Decreasing Rate – SNMP rate change trap is sent if the current rate is less than or equal to the previous rate minus this threshold (065535 kbps, where 0 disables the messages).

Upstream / Far End Alarm Profile

Loss of Frame Seconds – SNMP trap is sent if the number of LOFS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Loss of Power Seconds – SNMP trap is sent if the number of LPRS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Errored Seconds – SNMP trap is sent if the number of ES events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Severely-Errored Seconds – SNMP trap is sent if the number of SES events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Unavailable Seconds – SNMP trap is sent if the number of UAS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).

Increasing Rate – SNMP rate change trap is sent if the current rate is greater than or equal to the previous rate plus this threshold (0–65535 kbps, where 0 disables the messages).

Decreasing Rate – SNMP rate change trap is sent if the current rate is less than or equal to the previous rate minus this threshold (0–65535 kbps, where 0 disables the messages).

Init Failure – Specify whether initialization failure generates InitFailureTrap messages as specified in RFC 2662.

Example:
PDYN# **configure interface dsl-profile-alarm create adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Delete

Configure interface dsl-profile-alarm delete {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm delete** command deletes an ADSL Alarm Profile. **profile_name** – Identifies the ADSL alarm profile to be deleted. **Example**: PDYN# **configure interface dsl-profile-alarm delete adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Decreasing Rate

Configure interface dsl-profile-alarm downstream-dr {dr} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-dr** command modifies the downstream decreasing rate to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **dr -** SNMP rate change trap is sent if the current rate is less than or equal to the previous rate minus this threshold (065535 kbps, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-dr 5000 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Error Seconds

Configure interface dsl-profile-alarm downstream-es {es} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-es** command modifies the downstream errored seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **es -** SNMP trap is sent if the number of errored seconds events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-es 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Increasing Rate

Configure interface dsl-profile-alarm downstream-ir {ir} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-ir** command modifies the downstream increasing rate to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **ir -** SNMP rate change trap is sent if the current rate is greater than or equal to the previous rate plus this threshold (065535 kbps, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-ir 50000 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Loss of Frame Seconds

Configure interface dsl-profile-alarm downstream-lofs {lofs} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-lofs** command modifies the downstream los-of-frame-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **lofs** - if the number of LOFS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-lofs 500 adsl_alarm_prof1**

Configure Interface DSL Profile Alarm Downstream Loss of Link Seconds

Configure interface dsl-profile-alarm downstream-lols {lols} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-lols** command modifies the downstream los-of-link-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **lols -** SNMP trap is sent if the number of LOLS **events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).** **Example**: PDYN# **configure interface dsl-profile-alarm downstream-lols 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Loss of Signal Seconds

Configure interface dsl-profile-alarm downstream-loss {loss} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-loss** command modifies the downstream los-of-signal-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **loss** - if the number of LOSS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-loss 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Severely Error Seconds

Configure interface dsl-profile-alarm downstream-ses {ses} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-ses** command modifies the downstream severely errored seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **ses -** SNMP trap is sent if the number of severely errored seconds **events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).** **Example**: PDYN# **configure interface dsl-profile-alarm downstream-ses 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Downstream Unavailable Seconds

Configure interface dsl-profile-alarm downstream-uas {uas} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm downstream-us** command modifies the downstream unavailable seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **uas -** SNMP trap is sent if the number of UAS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm downstream-uas 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Show

configure interface dsl-profile-alarm show {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm show** command displays the configuration of the specified alarm profile. **profile_name** – Identifies the ADSL alarm profile to be displayed. **Example**: PDYN# **configure interface dsl-profile-alarm show adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Decreasing Rate

configure interface dsl-profile-alarm upstream-dr {dr} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-dr** command modifies the upstream decreasing rate to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **dr -** SNMP rate change trap is sent if the current rate is **greater than or equal to the previous rate plus this threshold (065535 kbps, where 0 disables the messages).** **Example**: PDYN# **configure interface dsl-profile-alarm upstream-dr 5000 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Increasing Rate

configure interface dsl-profile-alarm upstream-ir {ir} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-ir** command modifies the upstream increasing rate to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **ir -** SNMP rate change trap is sent if the current rate is **greater than or equal to the previous rate plus this threshold (065535 kbps, where 0 disables the messages).** **Example**: PDYN# **configure interface dsl-profile-alarm upstream-ir 50000 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Error Seconds

configure interface dsl-profile-alarm upstream-es {es} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-es** command modifies the upstream errored seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **es -** SNMP trap is sent if the number of errored seconds **events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages).** **Example**: PDYN# **configure interface dsl-profile-alarm upstream-es 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Loss of Frame Seconds

configure interface dsl-profile-alarm upstream-lofs {lofs} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-lofs** command modifies the upstream los-of-frame-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **lofs** - if the number of LOFS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl profile-alarm upstream-lofs 500 adsl_alarm_prof1**

Configure Interface DSL Profile Alarm Upstream Loss of Link Seconds

configure interface dsl-profile-alarm upstream-lols {lols} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-lols** command modifies the upstream los-of-link-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **lols -** SNMP trap is sent if the number of LOLS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm upstream-lols 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Loss of Power Seconds

configure interface dsl-profile-alarm upstream-lops {lops} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-lops** command modifies the downstream los-of-power-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **lops** - SNMP trap is sent if the number of LOPS if the number of LOPS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm upstream-lops 500 adsl_alarm_prof1**

Configure Interface DSL Profile Alarm Upstream Loss of Signal Seconds

configure interface dsl-profile-alarm upstream-loss {loss} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-loss** command modifies the upstream los-of-signal-seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **loss** - if the number of LOSS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm upstream-loss 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Severely Errored Seconds

configure interface dsl-profile-alarm upstream-ses {ses} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-ses** command modifies the upstream severely errored seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **ses -** SNMP trap is sent if the number of severely errored seconds events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm upstream-ses 500 adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Init Failure

Configure interface dsl-profile-alarm upstream-init-failure {yes | no} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-decreasing-rate** command modifies the upstream init failure to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **Yes -** Enable Initialization Failure Trap messages as specified in RFC 2662**.** **No** - Disable Initialization Failure Trap messages as specified in RFC 2662. **Example**: PDYN# **configure interface dsl-profile-alarm upstream-init-failure yes adsl_alarm_profile1**

Configure Interface DSL Profile Alarm Upstream Unavailable Seconds

Configure interface dsl-profile-alarm upstream-uas {uas} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-alarm upstream-uas** command modifies the upstream unavailable seconds required to generate an alarm. **profile_name** – Identifies the ADSL Alarm profile to be modified. **uas -** SNMP trap is sent if the number of UAS events in a 15-minute interval meets or exceeds the selected value (0–900 seconds, where 0 disables the messages). **Example**: PDYN# **configure interface dsl-profile-alarm upstream-uas 500 adsl_alarm_profile1**

Configure Interface DSL Profile Line Activate

configure interface dsl-profile-line activate {profile_name } {port_id}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line activate** command activates the specified profile onto the specified port(s). **port_id** – Identifies the port or range of ports in which the profile is to be activated. **profile_name** – Identifies the Adsl-profile to be activated. **Example**: PDYN# **configure interface dsl-profile-line activate adsl_profile1 1/22**

Configure Interface DSL Profile Line Create

Configure interface dsl-profile-line create {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line create** command creates a new ADSL Line Profile. **profile_name** – Identifies the ADSL profile to be created. This profile contains the following line parameters: **Latency -** Select the channel the following rates are effective for: Fast or Interleaved. *Downstream / Near End Profile* ---------- **max-speed-downstream --** maximum rate 0 to 65535. **min-speed-downstream --**Enter a minimum rate from 0 to 65535. **max-interleave-delay-downstream** - Max delay allowed for the interleaved channel, in ms. **max-snr-margin-downstream** - Max Noise Margin Select the maximum noise margin. **min-snr-margin-downstream** - Min Noise Margin Select the maximum noise margin. **target-snr-margin-downstream** - Target noise margin. **rate-adaptive-mode-downstream** - Rate adaptive mode (Manual, Init, Dynamic**)** *Upstream / Far End Profile* ---------- **max-speed-upstream --** maximum rate 0 to 65535. **min-speed-upstream --**Enter a minimum rate from 0 to 65535. **max-interleave-delay-upstream** - Max delay allowed for the interleaved channel, in ms. **max-snr-margin-upstream** - Max Noise Margin Select the maximum noise margin. **min-snr-margin-upstream** - Min Noise Margin Select the maximum noise margin. **target-snr-margin-upstream** - Target noise margin. **rate-adaptive-mode-upstream** - Rate adaptive mode (Manual, Init, Dynamic**)** **Example**: PDYN# **configure interface dsl-profile-line create adsl_profile1**

Configure Interface DSL Profile Line Delete

configure interface dsl-profile-line delete {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile create** command deletes an ADSL Line Profile. **profile_name** – Identifies the ADSL profile to be deleted. **Example**: PDYN# **configure interface dsl-profile-line delete adsl_profile1**

Configure Interface DSL Profile Line Latency (ADSL Only)

configure interface dsl-profile-line latency {fast | interleaved} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line latency** command specifies whether an interleave buffer is used. This command does not apply to ReachDSL units. **profile_name** – Identifies the ADSL profile to be modified. **latency** – Valid choices are: **fast** – No interleave buffer is used. **interleaved** – This port uses an interleave buffer. This is the default. **Example**: PDYN# **configure interface dsl-profile-line latency interleaved adsl_profile1**

Configure Interface DSL Profile Line Max Interleave Delay Downstream (ADSL Only)

configure interface dsl-profile-line max-interleave-delay-downstream {delay} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-interleave-delay-downstream** command specifies the downstream maximum delay in the interleaver/deinterleaver memory allowed when configured for interleave mode. This command does not apply to ReachDSL units. **profile_name** – Identifies the ADSL profile to be modified. **delay** – The delay in milliseconds. The choices are 1, 4, or 16 ms. The default is 16 ms. **Example**: PDYN# **configure interface dsl-profile-line max-interleave-delay-downstream 16 adsl_profile1**

Configure Interface DSL Profile Line Max Interleave Delay Upstream (ADSL Only)

configure interface dsl-profile-line max-interleave-delay-upstream {delay**} {profile_name }**
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-interleave-delay-upstream** command specifies the maximum upstream delay in the interleaver/deinterleaver memory allowed when configured for interleave mode. This command does not apply to ReachDSL units. **profile_name** – Identifies the Adsl profile to be modified. **delay** – The delay in milliseconds. The choices are 1, 4, or 16 ms. The default is 16 ms. **Example**: PDYN# **configure interface dsl-profile-line max-interleave-delay-upstream 16 adsl_profile1**

Configure Interface DSL Profile Line Max-SNR-Margin-Downstream

configure interface dsl-profile-line max-snr-margin-downstream {margin} {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-snr-downstream** command specifies the far end maximum SNR margin, in dB, required for the port. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. The default is 31. **Example**: `PDYN#` **configure interface dsl-profile-line max-snr-margin-downstream 9 adsl_profile1**

Configure Interface DSL Profile Line Max-SNR-Margin-Upstream

configure interface dsl-profile-line max-snr-margin-upstream {margin} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-snr-margin-upstream** command specifies the maximum SNR margin, in dB, required for the port. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. The default is 31. **Example**: `PDYN#` **configure interface dsl-profile-line max-snr-margin-upstream 9 adsl_profile1**

Configure Interface DSL Profile Line Max-Speed-Downstream

configure interface dsl profile-line max-speed-downstream {rate} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-speed-downstream** command specifies the maximum rate, in kbps, available for traffic from the port toward the CPE. If behavior is set to fixed, this is the only downstream rate. **profile_name** – Identifies the ADSL profile to be modified. **rate** – Valid rates are: For G.dmt and ANSI: 64 to 12000 kbps in 32 kbps increments. For G.lite: 64 to 4000 kbps in 32 kbps increments. For ReachDSL: 32 to 2167 kbps in 32 kbps increments. For ADSL2: 64 to 25000 kbps in 32 kbps increments. For ADSL2+: 64 to 25000 kbps in 32 kbps increments. **Example**: PDYN# **configure interface dsl-profile-line max-speed-downstream 2176 adsl_profile1**

Configure Interface DSL Profile Line Max-Speed-Upstream

configure interface dsl max-speed-upstream {rate} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line max-speed-upstream** command specifies the maximum rate, in kbps, available for traffic toward the port from the CPE. If behavior is set to fixed, this is the only upstream rate. **profile_name** – Identifies the ADSL profile to be modified. **rate** – Valid rates are: For G.dmt and ANSI: 32 to 1024 kbps in 32 kbps increments. For G.lite: 32 to 1024 Kbps in 32 kbps increments. For ReachDSL: 32 to 2176 kbps in 32 kbps increments. For ADSL2: 64 to 25000 kbps in 32 kbps increments. For ADSL2+: 64 to 25000 kbps in 32 kbps increments. **Example**: PDYN# **configure interface dsl-profile-line max-speed-upstream 128 adsl_profile1**

Configure Interface DSL Profile Line Min-SNR-Margin-Downstream

Configure interface dsl min-snr-margin-downstream {margin} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line min-snr-downstream** command specifies the far end minimum SNR margin, in dB, required for the port. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. The default is 0. **Example**: PDYN# **configure interface dsl-profile-line min-snr-margin-downstream 9 adsl_profile1**

Configure Interface DSL Profile Line Min-SNR-Margin-Upstream

configure interface dsl-profile-line min-snr-margin-upstream {margin} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line min-snr-margin-upstream** command specifies the minimum SNR margin, in dB, required for the port. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. The default is 0. **Example**: PDYN# **configure interface dsl min-snr-margin-upstream 9 adsl_profile1**

Configure Interface DSL Profile Line Min-Speed-Downstream

configure interface dsl-profile-line min-speed-downstream {rate**} {profile_name}**
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line min-speed-downstream** command specifies the minimum rate, in Kbps, to adapt to for traffic from the port toward the CPE. **profile_name** – Identifies the ADSL profile to be modified. **min-downstream-speed** – Valid rates are: For DMT and ANSI: 64 to 12000 kbps in 32 kbps increments. For ADSL2: 64 to 25000 kbps in 32 kbps increments. For G.lite: 64 to 4000 kbps in 32 kbps increments. For Reach: 32 to 2167 kbps in 32 kbps increments. **Example**: PDYN# **configure interface dsl-profile-line min-speed-downstream 96 adsl_profile1**

Configure Interface DSL Profile Line Min-Speed-Upstream

Configure interface dsl-profile-line min-speed-upstream {rate**} {profile_name}**
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line min-speed-upstream** command specifies the minimum rate, in Kbps, to adapt to for traffic toward the port from the CPE. **profile_name** – Identifies the ADSL profile to be modified. **rate** For DMT and ANSI: 64 to 12000 Kbps in 32 kbps increments. For ADSL2: 64 to 25000 Kbps in 32 kbps increments. For G.lite: 64 to 4000 kbps in 32 kbps increments. For Reach: 32 to 2167 kbps in 32 kbps increments. **Example**: PDYN# **configure interface dsl-profile-line min-speed-upstream 64 adsl_profile1**

Configure Interface DSL Profile Line Rate Adaptive Downstream (ADSL Only)

configure interface dsl-profile-line rate-adaptive-downstream {manual | init | dynamic} {profile_name | all}

Minimum Access Level: **Administrator**

The **configure interface dsl-profile-line behavior downstream** command specifies whether the port will adapt its rate to downstream line conditions. This command does not apply to ReachDSL units.

profile_name – Identifies the ADSL profile to be modified.

rate-adaptive-mode – Valid choices are:
- **manual** - Manually selected at startup
- **init** - Automatically selected at startup
- **dynamic** - Automatically selected at run time

Example:
`PDYN#` **configure interface dsl-profile-line rate-adaptive-downstream init adsl_profile1**

Configure Interface DSL Profile Line Rate Adaptive Upstream (ADSL Only)

configure interface dsl-profile-line rate-adaptive-upstream {manual | init | dynamic} {profile_name}

Minimum Access Level: **Administrator**

The configure interface dsl-profile-line behavior upstream command specifies whether the port will adapt its rate to upstream line conditions.

This command does not apply to ReachDSL units.

profile_name – Identifies the ADSL profile to be modified.

rate-adaptive – Valid choices are:
- **manual** - Manually selected at startup
- **init** - Automatically selected at startup
- **dynamic** - Automatically selected at run time

Example:
`PDYN#` **configure interface dsl-profile-line rate-adaptive-upstream dynamic adsl_profile1**

Configure Interface DSL Profile Line Show

configure interface dsl-profile-line show {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line show** command displays the contents of the specified ADSL Line Profile. **profile_name** – Identifies the ADSL profile to be displayed. **Example**: `PDYN#` **configure interface dsl-profile-line show adsl_profile1**

Configure Interface DSL Profile Line Target-Margin-Downstream

configure interface dsl profile-line target-margin-downstream {margin} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line target-margin-downstream** command specifies the SNR margin, in dB, required at startup for traffic toward the port from the CO/near-end. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. **Example**: `PDYN#` **configure interface dsl-profile-line target-margin-downstream 3 adsl_profile1**

Configure Interface DSL Profile Line Target-Margin-Upstream

configure interface dsl profile-line target-margin-upstream {margin} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-line target-margin-upstream** command specifies the SNR margin, in dB, required at startup for traffic toward the port from the CPE. **profile_name** – Identifies the ADSL profile to be modified. **margin** – Valid choices are 0–31 dB in 1-dB increments. **Example**: PDYN# **configure interface dsl-profile-line target-margin-upstream 3 adsl_profile1**

Configure Interface DSL Profile PSD Create

Configure interface dsl-profile-psd create {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd create** command creates a new ADSL PSD Profile. Only applicable on ADSL2 units. **profile_name** – Identifies the ADSL profile to be created. This profile contains the following line parameters: **Atuc-max-psd –** Enter the ATU-C max nominal PSD from –60.0 to –38.0 dBm/Hz**.** **Atur-max-psd –** Enter the ATU-R max nominal PSD from –60.0 to –38.0 dBm/Hz. **Atuc-max-tx-pwr** – Enter the ATU-C max aggregate transmit power from 0 to 25.5 dBm. **Atur-max-tx-pwr –** Enter the ATU-R max aggregate transmit power from 0 to 25.5 dBm. **Atuc-max-rx-pwr –** Enter the ATU-C max receive power from 0 to 25.5 dBm or 2048. **Example**: PDYN# **configure interface dsl-profile-psd create adsl_profile1**

Configure Interface DSL Profile PSD Delete

configure interface dsl-profile-psd delete {profile_name }
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd delete** command deletes an ADSL PSD Profile. Only applicable on ADSL2 units. **profile_name** – Identifies the ADSL profile to be deleted. **Example**: PDYN# **configure interface dsl-profile-psd delete adsl_profile1**

Configure Interface DSL Profile PSD Show

configure interface dsl-profile-psd show {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd show** command displays the contents of the specified ADSL PSD Profile. Only applicable on ADSL2 units. **profile_name** – Identifies the ADSL profile to be displayed. **Example**: PDYN# **configure interface dsl-profile-psd show adsl_profile1**

Configure Interface DSL Profile PSD Activate

configure interface dsl-profile-psd activate {profile_name } [adsl2 | adsl2plus] {port_id}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd activate** command activates the specified profile onto the specified port(s). Only applicable to ADSL units. **adsl2 or adsl2plus** – Identifies the ADSL2 or ADSL2+ PSD profile to activate. **profile_name** – Identifies the profile to be activated. **port_id** – Identifies the port or range of ports in which the profile is to be activated. **Example**: PDYN# **configure interface dsl-profile-psd activate adsl_profile1 1/22**

Configure Interface DSL Profile PSD Atuc-Max-PSD

configure interface dsl-profile-psd atuc-max-psd {psd} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd atuc-max-psd** command specifies the ATUC max nominal PSD, in dBm/Hz. Only applicable to ADSL units. **profile_name** – Identifies the ADSL profile to be modified. **psd** – Valid choices are –60.0 to –38.0 dBm/Hz in 0.1-dBm/Hz increments. **Example**: PDYN# **configure interface dsl-profile-psd atuc-max-psd -40.0 adsl_profile1**

Configure Interface DSL Profile PSD Atur-Max-PSD

configure interface dsl-profile-psd atur-max-psd {psd} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd atur-max-psd** command specifies the ATU-R max nominal PSD, in dBm/Hz. Only applicable to ADSL units. **profile_name** – Identifies the ADSL profile to be modified. **psd** – Valid choices are –60.0 to –38.0 dBm/Hz, in 0.1-dBm/Hz increments. **Example**: PDYN# **configure interface dsl-profile-psd atur-max-psd –40.0 adsl_profile1**

Configure Interface DSL Profile PSD Atuc-Max-Tx-Pwr

configure interface dsl-profile-psd atuc-max-tx-pwr {tx_pwr} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd atuc-max-tx-pwr** command specifies the ATUC max nominal Aggregate Transmit Power, in dBm. Only applicable to ADSL units. **profile_name** – Identifies the ADSL profile to be modified. **tx_pwr** – Valid choices are 0 to 25.5 dBm, in 0.1-dBm increments. **Example**: PDYN# **configure interface dsl-profile-psd atuc-max-tx-pwr 25.5 adsl_profile1**

Configure Interface DSL Profile PSD Atur-Max-Tx-Pwr

configure interface dsl-profile-psd atur-max-tx-pwr {tx_pwr} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd atur-max-tx-pwr** command specifies the ATU-R max nominal Aggregate Transmit Power, in dBm. Only applicable to ADSL units. **profile_name** – Identifies the ADSL profile to be modified. **tx_pwr** – Valid choices are 0 to 25.5 dBm, in 0.1-dBm increments. **Example**: `PDYN#` **configure interface dsl-profile-psd atur-max-tx-pwr 25.5 adsl_profile1**

Configure Interface DSL Profile PSD Atuc-Max-Rx-Pwr

configure interface dsl-profile-psd atuc-max-rx-pwr {rx_pwr} {profile_name}
Minimum Access Level: **Administrator**
The **configure interface dsl-profile-psd atuc-max-rx-pwr** command specifies the ATU-C max Receive Power, in dBm. Only applicable to ADSL units. **profile_name** – Identifies the ADSL profile to be modified. **rx_pwr** – Valid choices are 0 to 25.5 dBm, in .1 increments. 2048 indicates that no maximum receive power limit is to be applied. **Example**: `PDYN#` **configure interface dsl-profile-psd atuc-max-rx-pwr 25.5 adsl_profile1**

Configure Interface DSL Queue

configure interface dsl {port_id:pg} **queue {fifo | 802.1p}**
Minimum Access Level: **Administrator**
The **configure interface dsl queue** command assigns queuing method to be used on the ADSL port when there is more than one VLAN assigned to the priority group . **fifo** – The selected priority group will use a first in first out queuing method **801.2p** - The selected priority group will use the priority bits in the VLAN tag as the queuing method. **Example**: PDYN# **configure interface dsl 1/1:2 queue fifo**

Configure Interface DSL Show

configure interface dsl [port_id] **show**
Minimum Access Level: **Administrator**
The **configure interface dsl show** command displays parameters for a ADSL port without leaving the configuration mode. **port_id** – Identifies the port whose configuration is to be displayed. If no port is specified, the port currently in configuration mode, if any, is displayed. **Example**: PDYN# **configure interface dsl 1/7 show** **Output**: The output from this command is identical to the **show interface dsl** command.

Configure Interface DSL State

configure interface dsl {port_id**} state {disabled | enabled | reset}**
Minimum Access Level: **Administrator**
The **configure interface dsl state** command specifies the availability of a ADSL port. **port_id** – Identifies the port to be configured. **state** – Specifies the availability of the port. Valid choices are disabled, enabled or reset. The default is enabled. **Example**: PDYN# **configure interface dsl 1/24 state enabled**

Configure Interface DSL VLAN PVID

configure interface dsl {port_id:pg**} vlan pvid {**pvid**}**
Minimum Access Level: **Administrator**
The **configure interface dsl vlan pvid** assigns the VLAN ID to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. **port_id:pg** - This specifies the ADSL port number and the priority group on that port. **pvid** - The VLAN tag. Valid values are 1 through 4095. The default is 1. **Example**: PDYN# **configure interface dsl 1/1 vlan pvid 1**

Configure Interface DSL VLAN Priority

configure interface dsl {port_id:pg**} vlan priority {**priority**}**
Minimum Access Level: **Administrator**
The **configure interface dsl vlan priority** assigns the VLAN priority to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. This value is also used if priority remapping is enabled. **port_id:pg** - This specifies the ADSL port and the priority group on that port. **priority** - The VLAN priority. Valid values are 1 through 8. The default is 1. **Example**: `PDYN#` **configure interface dsl 1/1 vlan priority 1**

Configure Interface DSL VLAN Acceptable-Frame-Type

configure interface dsl {port_id:pg**} vlan acceptable-frame-type {all | tagged}**
Minimum Access Level: **Administrator**
The **configure interface dsl vlan acceptable-frame-type** command determines if tagged frames will be accepted on a port. **port_id:pg** - This specifies the DSL port and the priority group on that port. **tagged –** With this value set, the device will discard untagged or priority-tagged frames received on this port. **all –** With this value set, the device will accept all frame types including untagged frames. Untagged frames or priority-tagged frames will be assigned the PVID associated with this port. **Example**: `PDYN#` **configure interface dsl 1 vlan acceptable-frame-type all**

Configure Interface DSL VLAN Ingress-Filtering

configure interface dsl {port_id:pg**} vlan ingress-filtering {disabled | enabled}**
Minimum Access Level: **Administrator**
The **configure interface dsl vlan ingress-filtering** command will discard incoming tagged frames that are not members of this port. **port_id:pg** - This specifies the DSL port and the priority group on that port. **disabled –** The port will accept all incoming frames. **enabled –** The port will discard incoming frames for VLANS which do not include this port in its Member set. **Example**: `PDYN#` **configure interface dsl 1 vlan ingress-filtering enabled**

Configure Interface SHDSL

This command enters the configure SHDSL interface mode. The user can get to this point in the menu tree, one command at a time (config -> interface -> shdsl) or by entering the entire command at once. The user can configure a DSL port name, operational state, VLAN configuration, ATM VC and encapsulation, priority group and queue method, and manipulate SHDSL profiles to configure transmission parameters.

The SHDSL port transmission parameters are configured using profiles. SHDSL Profiles can be created, modified, deleted, and activated. A new SHDSL line profile is created and activated using the following steps:

1. Allocate a new profile with the **configure interface shdsl-profile-line create** command.
2. Configure desired transmission parameters with the following commands:
   - configure interface shdsl-profile-line max-rate
   - configure interface shdsl-profile-line min-rate
   - configure interface shdsl-profile-line mode
   - configure interface shdsl remote-management
   - configure interface shdsl reference-clock
   - configure interface shdsl target-margin
3. Activate the profile with the **configure interface shdsl-profile-line activate** command

Configure Interface SHDSL ATM VC Create

configure interface shdsl {port_id:pg**} atm vc create {**vpi/vci**} {**atm_profile**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl atm vc create** command defines a Virtual Connection Link (VCL) for the specified port. If the specified Virtual Circuit Identifier or Virtual Path identifier is unavailable or in use, the command fails. If the resources specified by the Receive Traffic Descriptor or Transmit Traffic Descriptor are not available, the command fails. VCLs created on DSL ports will be created on the currently active channel. If no channel is available, VCLs will not be created on the interface. **port_id** – Identifies the SHDSL port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **create** - This creates one of eight (8) possible connections. **vpi/vci** – Valid input is the VPI/VCI for the connection. The allowable ranges for VPI and VCI values are determined by the number of VPI and VCI bits allocated on an ATM interface and by the available address space in the NE's ATM switch used for all VCLs. Interfaces on LT cards support a maximum of four VCLs a with maximum VPI range of 0–15 and VCI range of 32–127. Interfaces on NT cards support a maximum VPI range of 0–255 and a VCI range of 32–65535. A total of 8192 VCLs are supported on the DSLAM. The maximum address space supported by the DSLAM is 250,000. A number of VCLs are created as part of the basic factory defaults. The default VCLs may be changed or overwritten by customer-specific factory defaults. VCLs associated with a slot and port are created when a card is installed. The default for the connection is **0/35**. **atm_profile –** Name of ATM profile to be assigned to the VCL. **Example**: PDYN# **configure interface shdsl 1 atm vc create 1/35 PACKET**

Configure Interface SHDSL ATM VC Delete

configure interface shdsl {port_id:pg**} atm vc delete {**vpi/vci**}**
Minimum Access Level: **Administrator**
The **configure interface dsl atm vc delete** command deletes a virtual connection for the specified port. **port_id** – Identifies the SHDSL port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **delete** - This deletes the specified vpi/vci from this SHDSL port. **vpi/vci** – Valid input is the VPI/VCI for the connection. The valid range for VPI is **0–255**. The valid range for VCI is **16–65535.** **Example**: PDYN# **configure interface shdsl 1 atm vc delete 1/35**

Configure Interface SHDSL ATM Encapsulation

configure interface shdsl {port_id:pg**} atm encapsulation {**llc-bridged | vcm-bridged**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl atm encapsulation** command specifies whether the port uses Logical Link Control (LLC) or Virtual Channel Multiplexing (VCM) bridged encapsulation. These are defined in RFC 1483. **port_id** – Identifies the port to be configured. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **atm encapsulation** – Valid choices are: **llc-bridged** – The interface uses LLC bridged encapsulation. This is the default. **vcm-bridged** – The interface uses VCM bridged encapsulation. **Example**: PDYN# **configure interface shdsl 1 atm encapsulation vcm-bridged**

Configure Interface SHDSL Equipment Mode

configure interface shdsl {port_id**} equip-mode {**co-mode	cpe-mode**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl equip-mode** command configures the specified port to operate as a CO device or a CPD device for the stu-c unit. **port_id** – Identifies the port to be configured. **co-mode - ** Port in the central office unit operates in CO mode. **cpe-mode** - Port in the cental office unit operates in CPE mode. **Example**: `PDYN#` **configure interface shdsl 24 equip-mode co-mode**

Configure Interface SDSL Line Length - Effective Working Length (EWL)

configure interface shdsl {port_id**} line-length {**line-length**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl line-length** for EWL command specifies the length of the SHDSL link in units of ft. This parameter is used by the spectrum management function.. **port_id** – Identifies the port to be configured. **line-length - ** This is the length of the line. This is also referred to as the effective working length. **Example**: `PDYN#` **configure interface shdsl 24 line-length 1000**

Configure Interface SDSL Line Length - Loop Length

configure interface shdsl {port_id**} line-length {**extrashort	short	medium	long**}**
Minimum Access Level: **Administrator**
The **configure interface dsl line-length** command specifies the length of the SHDSL link. **port_id** – Identifies the port to be configured. **line-length -** This is the length of the line. There are four values **extrashort**, **short**, **medium** and **long**. These values are valid for certain geographic regions. The default is short. **Example**: PDYN# **configure interface shdsl 24 line-length medium**

Configure Interface SHDSL Linkupdown-Trap

configure interface shdsl {port_id**} linkupdown-trap {**disabled	enabled**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl linkupdown-trap** command specifies whether an SNMP trap should be sent upon link up and link down events. **port_id** – Identifies the port to be configured. **linkupdown-trap** – Valid choices are: **disabled** – No traps are sent upon link up and link down events. **enabled** – A trap is sent upon a link up or link down event. This is the default. **Example**: PDYN# **configure interface shdsl 2/21 linkupdown-trap disabled**

Configure Interface SHDSL Name

configure interface shdsl {port_id**} name {**port_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl name** command assigns a line circuit name to the specified port. **port_id** – Identifies the port to assign the line circuit name. **name** – Enter a name from 1 to 255 characters long to indicate to whom the port is assigned. The following values are reserved and cannot be used: AVAILABLE (port is not assigned), and FAULTY (port is faulty and can not be assigned). **Example**: PDYN# **configure interface shdsl 22 name paradyne_video_server**

Configure Interface SHDSL Number of Repeaters

configure interface shdsl {port_id**} nbr-repeaters {**number**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl nbr-repeaters** command allows the number of repeaters on a line to be assigned. **port_id** – Identifies the port to assign the line circuit name. **number** – Enter the number of repeaters from 1 to 8. **Example**: PDYN# **configure interface shdsl 22 nbr-repeaters 4**

Configure Interface SHDSL Queue

configure interface shdsl {port_id:pg**} queue {**fifo	802.1p**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl queue** command assigns queuing method to be used on the SHDSL port when there is more than one VLAN assigned to the priority group . **fifo** – The selected priority group will use a first-in, first-out queuing method. **801.2p** - The selected priority group will use the priority bits in the VLAN tag as the queuing method. **Example**: PDYN# **configure interface shdsl 22 queue fifo**

Configure Interface SHDSL Segment Alarm

configure interface shdsl- {port_id**} segment-alarm {**stu-c | stu-r | rep-1 | rep-2 | rep-3 | rep-4 | rep-5 | rep-6 | rep-7 | rep-8**} {**cust | net**} {**pair-1 | pair-2 | pair-3 | pair-4**} {**profile_name**}**

Minimum Access Level: **Administrator**

The **configure interface shdsl segment alarm** command activates the specified SHDSL Alarm profile onto the specified unit, unit side, and wire pair for a particular interface.

port_id – Identifies the port or range of ports in which the profile is to be activated.

Unit to apply the alarm profile to:
- **stu-c** – SHDSL centeral site terminal unit.
- **stu-r** – SHDSL remote site terminal unit.
- **rep-1... rep-8** – SHDSL regenerator/repeater unit.

The side of the device to apply the alarm profile to:
- **cust** – The side of the unit facing the customer terminal equipment
- **net** – The side of the unit facing the central office

The wire pair to apply the alarm profile to:
- **pair-1 –** First wire pair
- **pair-2 –** Second wire pair
- **pair-3 –** Third wire pair
- **pair-4 –** Fourth wire pair

profile_name – Identifies the SHDSL Alarm profile to be activated.

Example:
PDYN# **configure interface shdsl 22 segment alarm rep-2 net pair-2 shdsl_alarm profile1**

Configure Interface SHDSL Show

configure interface shdsl {port_id**} show**
Minimum Access Level: **Administrator**
The **configure interface shdsl show** command displays parameters for a SHDSL port without leaving the configuration mode. **port_id** – Identifies the port whose configuration is to be displayed. If no port is specified, the port currently in configuration mode, if any, is displayed. **Example**: PDYN# **configure interface shdsl 2/7 show** PDYN(configure-interface-adsl-7)#**show** **Output**: The output from this command is identical to the **show interface shdsl** command.

Configure Interface SHDSL State

configure interface shdsl {port_id**} state {**enable | disable | reset**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl state** command modifies the specified port state as requested. **port_id** – Identifies the port to assign the equivalent working length. **enable** – state of this port is enabled **disable** – state of this port is disabled **reset** – state of this port is out of service **Example**: PDYN# **configure interface shdsl state 22 enable**

Configure Interface SHDSL VLAN PVID

configure interface shdsl {port_id:pg**} vlan pvid {**pvid**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl vlan pvid** assigns the VLAN ID to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. **port_id:pg** - This specifies the SHDSL port number and the priority group on that port. **pvid** - The VLAN tag. Valid values are 1 through 4095. The default is 1. **Example**: PDYN# **configure interface shdsl 1 vlan pvid 1**

Configure Interface SHDSL VLAN Priority

configure interface shdsl {port_id:pg**} vlan priority {**priority**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl vlan priority** assigns the VLAN priority to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. This value is also used if priority remapping is enabled. **port_id:pg** - This specifies the SHDSL port and the priority group on that port. **priority** - The VLAN priority. Valid values are 0 through 7. The default is 0. **Example**: PDYN# **configure interface shdsl 1 vlan priority 1**

Configure Interface SHDSL VLAN Acceptable-Frame-Type

configure interface shdsl {port_id:pg**} vlan acceptable-frame-type {**all	tagged**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl vlan acceptable-frame-type** command determines if tagged frames will be accepted on a port. **port_id:pg** - This specifies the SHDSL port and the priority group on that port. **tagged –** With this value set, the device will accept only tagged frames. **all –** With this value set, the device will accept all tagged and untagged frames. Untagged frames or priority-tagged frames will be assigned the PVID associated with this port. **Example**: `PDYN#` **configure interface shdsl 1 vlan acceptable-frame-type all**

Configure Interface SHDSL VLAN Ingress-Filtering

configure interface shdsl {port_id:pg**} vlan ingress-filtering {**disabled	enabled**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl vlan ingress-filtering** command will discard incoming tagged frames that are not members of this port. **port_id:pg** - This specifies the SHDSL port and the priority group on that port. **disabled –** The port will accept all incoming frames. **enabled –** The port will discard incoming frames for VLANS which do not include this port in its Member set. **Example**: `PDYN#` **configure interface shdsl 1 vlan ingress-filtering enabled**

Configure Interface SHDSL Profile Alarm Activate-Port

configure interface shdsl-profile-alarm activate-port {profile_name**} {**port_id**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm activate** command activates the specified SHDSL Alarm profile onto the specified port(s). **port_id** – Identifies the port or range of ports in which the profile is to be activated. **profile_name** – Identifies the SHDSL Alarm profile to be activated. **Example**: PDYN# **configure interface shdsl-profile-alarm activate-port shdsl_alarm_profile1 22**

Configure Interface SHDSL Profile Alarm-Code-Violation-Threshold

configure interface shdsl-profile-alarm code-violation-threshold {cvt**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm code-violation-threshold** command modifies the code violation threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **cv** – Specify a Code Violations threshold of 0–900 seconds. An SNMP code violations trap message may be sent if the number of Code Violations in a 15-minute interval equals or exceeds this threshold. At most one SNMP will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm code-violation-threshold 700 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Create

Configure interface shdsl-profile-alarm create {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm create** command creates a new SHDSL Alarm Profile. **profile_name** – Identifies the SHDSL Alarm profile to be created. Following are the parameters that comprise the SHDSL Alarm Profile. **Loop Attenuation –** Specify a loop attenuation alarm threshold of 0–127 dB. An SNMP **Loop** Attenuation crossing trap message may be sent if the current loop attenuation reaches or exceeds this threshold. A Loop Attenuation alarm will also be declared when the current Loop Attenuation exceeds this value. A value of 0 disables event notifications for the condition. **SNR Margin** – Specify an SNR Margin alarm threshold of 0–15 dB. An SNMP Margin crossing trap message may be sent if the current SNR Margin reaches or drops below this threshold. A SNR Margin alarm will also be declared when the current SNR Margin has dropped below this value. A value of 0 disables event notifications for the condition. **Errored Seconds** – Specify an ES threshold of 0–900 seconds. An SNMP ES trap message may be sent if the number of ES events in a 15-minute interval equals or exceeds the selected value. At most one SNMP will be sent per interval per device. A value of 0 disables event notifications for the condition. **Severely-Errored Seconds** – Specify an SES threshold of 0–900 seconds. An SNMP SES trap message may be sent if the number of SES events in a 15-minute interval equals or exceeds the selected value. At most one SNMP notification will be sent per interval per device. A value of 0 disables event notifications for the condition. **Code Violations –** Specify a Code Violations threshold of 0–900 seconds. An SNMP code violations trap message may be sent if the number of Code Violations in a 15-minute interval equals or exceeds this threshold. At most one SNMP will be sent per interval per device. A value of 0 disables event notifications for the condition. **Loss of Sync Word Seconds** – Specify a Loss of Sync Word Seconds threshold of 0–900 seconds. An SNMP LOSWS trap message may be sent if the number of LOSWS in a 15-minute interval equals or exceeds this threshold. At most one SNMP will be sent per interval per device. A value of 0 disables event notifications for the condition. **Unavailable Seconds** – Specify an Unavailable Seconds threshold of 0–900 seconds. An SNMP UAS trap message may be sent if the number of UAS events in a 15-minute interval equals or exceeds the selected value. At most one SNMP and will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm create shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Delete

Configure interface shdsl-profile-alarm delete {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm delete** command deletes an SHDSL Alarm Profile. **profile_name** – Identifies the SHDSL alarm profile to be deleted. **Example**: PDYN# **configure interface shdsl-profile-alarm delete adsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Errored-Seconds Threshold

Configure interface shdsl-profile-alarm es-threshold {es**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm es-threshold** command modifies the error seconds threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **es** – Specify an Errored Second threshold of 0–900 seconds. An SNMP Errored Second trap message may be sent if the number of Errored Second events in a 15-minute interval equals or exceeds the selected value. At most one SNMP notification will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm es-threshold 500 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Loop Attenuation Threshold

Configure interface shdsl-profile-alarm loop-attenuation-threshold {atten**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm loop-attenuation-threshold** command modifies the loop attenuation threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **atten** – Specify loop attenuation threshold of 0 to 27 dB. An SNMP loop attenuation crossing trap message may be sent if the theshold in a 15-minute interval equals or exceeds the selected value. At most one SNMP notification will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm loop-attenuation-threshold 5 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Loss-Of-Sync-Word-Seconds Threshold

Configure interface shdsl-profile-alarm losws-threshold {losws**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm losws-threshold** command modifies the Loss Of Sync Word Seconds Threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **losws** – Specify a Loss of Sync Word Seconds threshold of 0–900 seconds. An SNMP LOSWS trap message may be sent if the number of LOSWS in a 15-minute interval equals or exceeds this threshold. At most one SNMP will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm losws-threshold 700 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Severely-Errored-Seconds Threshold

Configure interface shdsl-profile-alarm ses-threshold {ses**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm ses-threshold** command modifies the severely errored seconds threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **ses** – Specify an SES threshold of 0-900 seconds. An SNMP SES trap message may be sent if the number of SES events in a 15-minute interval equals or exceeds the selected value. At most one SNMP notification will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm ses-threshold 700 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Show

configure interface shdsl-profile-alarm show {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm show** command displays the configuration of the specified alarm profile. **profile_name** – Identifies the SHDSL alarm profile to be displayed. **Example**: PDYN# **configure interface shdsl-profile-alarm show shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm SNR-Margin Threshold

Configure interface shdsl-profile-alarm snr-margin-threshold {snr**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm snr-margin-threshold** command modifies the SNR margin threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **snr** – Specify an SNR Margin alarm threshold of 0–15 dB. An SNMP Margin crossing trap message may be sent if the current SNR Margin reaches or drops below this threshold. A SNR Margin alarm will also be declared when the current SNR Margin has dropped below this value. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm snr-margin-threshold 12 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Alarm Unavailable-Seconds Threshold

Configure interface shdsl-profile-alarm uas-threshold {uas**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-alarm ses-threshold** command modifies the unavailable seconds threshold required to generate an alarm. **profile_name** – Identifies the SHDSL Alarm profile to be modified. **uas** – Specify an Unavailable Seconds threshold of 0–900 seconds. An SNMP UAS trap message may be sent if the number of UAS events in a 15-minute interval equals or exceeds the selected value. At most one SNMP and will be sent per interval per device. A value of 0 disables event notifications for the condition. **Example**: PDYN# **configure interface shdsl-profile-alarm uas-threshold 700 shdsl_alarm_profile1**

Configure Interface SHDSL Profile Line Activate

configure interface shdsl-profile-line activate {profile_name**} {**port_id**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line activate** command activates the specified SHDSL line profile onto the specified port(s). **port_id** – Identifies the port or range of ports in which the profile is to be activated. **profile_name** – Identifies the SHDSL line profile to be activated. **Example**: PDYN# **configure interface shdsl-profile-line activate shdsl_line profile1 22**

Configure Interface SHDSL Profile Line Create

Configure interface shdsl-profile-line create {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line create** command creates a new SHDSL Line Profile. **profile_name** – Identifies the SHDSL line profile to be created. Following are the parameters that comprise the SHDSL Line Profile: **Line Probe** – Enables or disables support for line probing to find the best possible rate. **Max Rate** – Enter a maximum rate from 0 to 4112 kbps. **Min Rate –** Enter a minimum rate from 0 to 4112 kbps. **Line Mode –** Select the regional setting supported, as specified by ITU-T G.991.2: **Annex A**, **Annex B**, or **Both** (the port trains to the Mode setting of the endpoint) **Power Feeding –** Enables or disables support for power feeding the SDSL line. **Power Spectral Density** – Select Symmetric or Asymmetric to determine whether the SHDSL transceiver uses a symmetric or an asymmetric power spectral density mask, as specified in G.992.1 Annex A or Annex B. This is one of the options used to determine the allowable line rates on a SHDSL port. **Reference Clock** – Select the timing source: **System** – Clocking is provided by the backplane. **Local** – Clocking is provided by an onboard oscillator. **Remote Management** – Select Enable or Disable to determine whether remote management is supported for the network element this profile is assigned to. **Target Margin –** Enter a desired SNR margin for both the upstream and downstream direction from 2–15 dBm, or None. **Wire Interface –** Selects two-wire or four-wire operation for SHDSL lines. **Example**: PDYN# **configure interface shdsl-profile-line create shdsl_line_profile1**

Configure Interface SHDSL Profile Line Delete

Configure interface shdsl-profile-line delete {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line delete** command deletes an SHDSL Line Profile. **profile_name** – Identifies the SHDSL line profile to be deleted. **Example**: PDYN# **configure interface shdsl-profile-line delete adsl_line_profile1**

Configure Interface SHDSL Profile Line Line-Probe

Configure interface shdsl-profile-line line-probe {enable	disable**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line line-probe** command modifies support for Line Probe for the specified profile. **profile_name** – Identifies the SHDSL line profile to be modified. **enable** - Unit probes the line to find the best possible rate. **disable** – Unit does not probe line to find the best possible rate. **Example**: PDYN# **configure interface shdsl-profile-line line-probe enable shdsl_line_profile1**

Configure Interface SHDSL Profile Line Max-Rate

Configure interface shdsl-profile-line max-rate {rate**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line max-rate** command modifies the maximum rate for the specified profile. **profile_name** – Identifies the SHDSL line profile to be modified. **rate** – Enter a maximum rate from 0 to 4112 kbps. **Example**: PDYN# **configure interface shdsl-profile-line max-rate 2312 shdsl_line_profile1**

Configure Interface SHDSL Profile Line Min-Rate

configure interface shdsl-profile-line min-rate {rate**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line min-rate** command modifies the minimum rate for the specified profile. **profile_name** – Identifies the SHDSL line profile to be modified. **rate** – Enter a minimum rate from 0 to 4112 kbps. **Example**: PDYN# **configure interface shdsl-profile-line min-rate 1000 shdsl_line_profile1**

Configure Interface SHDSL Profile Line Mode

Configure interface shdsl-profile-line mode {annex-a | annex-b | both**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line mode** command modifies the SHDSL mode as specified by ITU-T G.991.2 for the specified profile. **profile_name** – Identifies the SHDSL line profile to be modified. **annex-b** – The port trains to Annex A regional setting as specified by ITU-T G.991.2. **annex-b** – The port trains to Annex B regional setting as specified by ITU-T G.991.2. **both** – The port trains to the mode setting of the endpoint. **Example**: PDYN# **configure interface shdsl-profile-line mode both shdsl_line_profile1**

Configure Interface SHDSL Profile Line Power-Feeding

Configure interface shdsl-profile-line power-feeding {no-power	power-feed	wetting-current**}** **{**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line power-feeding** command enables or disables support for power feeding the SHDSL line **profile_name** – Identifies the SHDSL line profile to be modified. **no-power-feed** – No power is fed in the line. **power-feed** – Power is fed on the line. **wetting-current** – Only wetting current is fed on the line. **Example**: PDYN# **configure interface shdsl-profile-line power-feeding power-feed shdsl_line_profile1**

Configure Interface SHDSL Profile Line Power-Spectral-Density

Configure interface shdsl-profile-line psd {symmetric	asymmetric**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line psd** command modifies the Power Spectral Density setting for SHDSL line **profile_name** – Identifies the SHDSL line profile to be modified. **symmetric** – Symmetric PSD is supported. **asymmetric** – Asymmetric PSD is supported. **Example**: PDYN# **configure interface shdsl-profile-line psd symmetric shdsl_line_profile1**

Configure Interface SHDSL Profile Line Reference-Clock

configure interface shdsl-profile-line reference-clock {local	system**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line remote-management** command specifies the clock source to be used. **profile_name** – Identifies the SHDSL line profile to be modified. **system** – Clocking is provided by the backplane. **local** – Clocking is provided by an onboard oscillator. **Example**: PDYN# **configure interface shdsl-profile-line reference-clock local shdsl_line_profile1**

Configure Interface SHDSL Profile Line Remote-Management

Configure interface shdsl-profile-line remote-management {enable	disable**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line remote-management** command enables or disables remote management as requested. **profile_name** – Identifies the SHDSL line profile to be modified. **enable** – enable remote management **disable** – disable remote management **Example**: PDYN# **configure interface shdsl-profile-line remote-management enable shdsl_line_profile1**

Configure Interface SHDSL Profile Line Show

configure interface shdsl-profile-line show {profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line show** command displays the configuration of the specified line profile. **profile_name** – Identifies the SHDSL line profile to be displayed. **Example**: PDYN# **configure interface shdsl-profile-line show shdsl_alarm_profile1**

Configure Interface SHDSL Profile Line Target-Margin

Configure interface shdsl-profile-line target-margin {margin**} {**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line target-margin** command specifies the target margin to be used. **profile_name** – Identifies the SHDSL line profile to be modified. **margin** – Enter a target noise margin from 2–15 dBm. **Example**: PDYN# **configure interface shdsl-profile-line target-margin 8 shdsl_line_profile1**

Configure Interface SHDSL Profile Line Wire-Interface

Configure interface shdsl-profile-line wire-interface {two-wire | four-wire | six-wire | eight-wire**}** **{**profile_name**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-profile-line wire-interface** command specifies the number of wires that will be in operation. **profile_name** – Identifies the SHDSL line profile to be modified. **two-wire** – Two-wire operation. **four-wire** – Four-wire operation. **six-wire** – Six-wire operation. **eight-wire** – Eight-wire operation. **Example**: PDYN# **configure interface shdsl-profile-line wire-interface two-wire shdsl_line_profile1**

Configure Interface SHDSL Spectrum Management Region

Configure interface shdsl-spectrum-management region {anfp-nd1602 | ansi-t1.417 | none**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-spectrum-management region** command specifies the region or standard of spectrum management compliance for all SHDSL cards. **anfp-nd1602** – ND 1602 compliance. **ansi-t1.417** – T1.417 compliance. **none** – No compliance scheme is specified. **Example**: PDYN# **configure interface shdsl-spectrum-management region ansi-t1.417**

Configure Interface SHDSL Spectrum Management Selection

Configure interface shdsl-spectrum-management selection {enable	disable**}**
Minimum Access Level: **Administrator**
The **configure interface shdsl-spectrum-management selection** command enables or disables spectrum management for all SHDSL cards. **enable** – Enables spectrum management. **disable** – Disables spectrum management.. **Example**: PDYN# **configure interface shdsl-spectrum-management selection enabled**

Configure Interface Ethernet Connector

configure interface ethernet {port_id**} connector {rj45	fiber}**
Minimum Access Level: **Administrator**
The **configure interface ethernet connector** command specifies the physical interface to be used when both interfaces are active at the same time. Ordinarily the product uses the fiber optic port if an SFP transceiver is detected. This command provides a way to force the use of the 8-position modular jack even if a transceiver is installed. **port_id** – Identifies the Ethernet port to be configured. The possible forms of the identifier are described in *Ethernet Port ID* in Chapter 1, *System Concepts*. **connector** – Valid choices are: **rj45** – The unit uses the 8-position modular jack for the port_id interface. **fiber** – The unit uses the fiber optic port for the port_id interface. **Example**: PDYN# **configure interface ethernet eth3 connector rj45**

Configure Interface Ethernet Flow Control

configure interface ethernet {port_id} **flow-control {enabled | disabled}**
Minimum Access Level: **Administrator**
The **configure interface ethernet flow-control** command specifies whether flow control should be used on the port. **port_id** – Identifies the Ethernet port to be configured. The possible forms of the identifier are described in *Ethernet Port ID* in Chapter 1, *System Concepts*. **flow-control** – Valid choices are disabled and enabled. **Example**: PDYN# **configure interface ethernet eth2 flow-control enabled**

Configure Interface Ethernet Mode

configure interface ethernet {port_id} **mode {auto | manual}**
Minimum Access Level: **Administrator**
The **configure interface ethernet mode** command specifies whether the duplex mode and rate are automatically set, and the crossover type automatically sensed. **port_id** – Identifies the Ethernet port to be configured. The possible forms of the identifier are described in *Ethernet Port ID* in Chapter 1, *System Concepts*. **mode** – Valid choices are: **auto** – The unit automatically senses the rate and duplex mode. This is the default. **manual** – The administrator must set the rate and duplex mode. **Example**: PDYN# **configure interface ethernet eth1 mode manual**

Configure Interface Ethernet Rate

configure interface ethernet {port_id} **rate {10full | 10half | 100full | 100half | 1000full | 1000half}**
Minimum Access Level: **Administrator**
The **configure interface ethernet rate** command specifies the duplex mode and rate if mode is set to manual. **port_id** – Identifies the Ethernet port to be configured. The possible forms of the identifier are described in *Ethernet Port ID* in Chapter 1, *System Concepts*. **rate** – Valid choices are: **10full** – 10 Mbps and full duplex **10half** – 10 Mbps and half duplex **100full** – 100 Mbps and full duplex **100half** – 100 Mbps and half duplex **1000full** – 1000 Mbps and full duplex **1000half** – 1000 Mbps and half duplex **Example**: PDYN# **configure interface ethernet eth2 rate 100full** **Notes**: There are some restrictions on the various combinations of settings. See *Ethernet Rate Restrictions* on page 3-86. Although all the rates will be presented to the user, only the valid entries will be allowed. For example, the GigE port will not accept any of the 10/100 settings.

Ethernet Rate Restrictions

There are some restrictions on the various combinations of settings. The tables below summarize the selections for each mode setting.

For the GigE copper (RJ45) port the following settings apply. Note that for the RJ45 interface there is no way to manually set the rate to 1000.

Mode	Rate	Duplex Mode	Crossover
Auto	Auto	Auto	Auto
Manual	10	Full or Half	mdi or mdix
Manual	100	Full or Half	mdi or mdix

For the GigE fiber interface the following settings apply:

Mode	Rate	Duplex Mode	Crossover
Auto	Auto	Auto	N/A
Manual	1000	Full or Half	N/A

The fiber interface is always GigE (1000). The only reason for the manual mode is for older equipment that does not support the auto protocol.

Configure Interface Ethernet Show

configure interface ethernet [port_id**] show**
Minimum Access Level: **Administrator**
The **configure interface ethernet show** command displays parameters for an Ethernet port without leaving configuration mode. **port_id** – Identifies the port whose configuration is to be displayed. If no port is specified, the port currently in configuration mode, if any, is displayed. **Example**: PDYN(configure-interface-ethernet-eth1)#**show** PDYN# **configure interface ethernet eth1 show** The output from this command is identical to the **show interface ethernet** command.

Configure Interface Ethernet Xover

configure interface ethernet {port_id**} xover {mdi | mdix}**
Minimum Access Level: **Administrator**
The **configure interface ethernet xover** command specifies the crossover type when mode is set to manual. **port_id** – Identifies the Ethernet port to be configured. **xover** – Valid choices are: **mdi** – The port is connected to a Network Interface Card (NIC). **mdix** – The port is connected to a hub. **Example**: PDYN# **configure interface ethernet eth1 xover mdi**

Configure Interface Ethernet VLAN PVID

configure interface ethernet {port_id**} vlan pvid {**pvid**}**
Minimum Access Level: **Administrator**
The **configure interface ethernet vlan pvid** assigns the VLAN ID to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. **port_id** – Identifies the Ethernet port to be configured. **pvid** - The VLAN tag. Valid values are 1 through 4095. The default is 1. **Example**: PDYN# **configure interface ethernet eth1 vlan pvid 1**

Configure Interface Ethernet VLAN Priority

configure interface ethernet {port_id**} vlan priority {**priority**}**
Minimum Access Level: **Administrator**
The **configure interface ethernet vlan priority** assigns the VLAN priority to be assigned to untagged frames or Priority-Tagged frames received on the ingress of this port. This value is also used if priority remapping is enabled. **port_id** – Identifies the Ethernet port to be configured. **priority** - The VLAN priority. Valid values are 0 through 7. The default is 0. **Example**: PDYN# **configure interface ethernet eth2 vlan priority 1**

Configure Interface Ethernet VLAN Acceptable-Frame-Type

configure interface ethernet {port_id**} vlan acceptable-frame-type {all | tagged}**
Minimum Access Level: **Administrator**
The **configure interface ethernet vlan acceptable-frame-type** command determines if tagged frames will be accepted on a port. **port_id** – Identifies the Ethernet port to be configured. **tagged –** With this value set, the device will discard untagged or priority-tagged frames received on this port. **all –** With this value set, the device will accept all frame types including untagged frames. Untagged frames or priority-tagged frames will be assigned the PVID associated with this port. **Example**: `PDYN#` **configure interface ethernet eth3 vlan priority-remapping enabled**

Configure Interface Ethernet VLAN Ingress-Filtering

configure interface ethernet {port_id**} vlan ingress-filtering {disabled | enabled}**
Minimum Access Level: **Administrator**
The **configure interface ethernet vlan ingress filtering** command will discard incoming tagged frames that are not members of this port. **port_id** – Identifies the Ethernet port to be configured. **disabled –** The port will accept all incoming frames. **enabled –** The port will discard incoming frames for VLANS which do not include this port in its Member set. **Example**: PDYN# **configure interface ethernet eth1 vlan ingress-filtering enabled**

Configure Management

The following set of commands are used to configure all of the management functions in the unit.

Configure Management Default Gateway Address

This command is used to configure the management IP address, subnet mask and gateway address. These IP addresses are in the management domain, not the user domain.

configure management default-gateway {ip_address**}**
Minimum Access Level: **Administrator**
The **configure management default gateway** command specifies the IP address of the next hop router for the management traffic. **ip_address** – Specifies the IP address of the default gateway for the management ports.. **Example**: `PDYN#` **configure management default-gateway 137.90.127.1**

Configure Management InBand Address

This command is used to configure the inband management IP address, subnet mask and gateway address. These IP addresses are in the management domain, not the user domain. The inband management traffic is received on the same uplink port as user traffic.

configure management inband address {ip_address**} {** subnet_mask**}**
Minimum Access Level: **Administrator**
The **configure management inband address** command specifies the IP address of the unit. **ip_address** – Specifies the management IP address. Default is 0.0.0.0 (disabled) **subnet_mask** – Specifies the subnet mask to be applied to the IP address. The default mask is 255.255.255.0. **Example**: PDYN# **configure management inband address 137.90.127.3 255.255.255.0**

Configure Management Out-of-Band Address

This command is used to configure the management IP address, subnet mask and gateway address. These IP addresses are in the management domain, not the user domain.

configure management out-of-band address {bootp l **{{**ip_address**} {** subnet_mask**} }**
Minimum Access Level: **Administrator**
The **configure management out-of-band address** command specifies the IP address of the unit that will accept management traffic on the out-of-band management port. **bootp** – Specifies that a BOOTP server will determine the management IP address. **ip_address** – Specifies the management IP address. The default address is 10.10.10.10. **subnet_mask** – Specifies the subnet mask to be applied to the IP address. The default mask is 255.255.255.0. **Example:** PDYN# **configure management out-of-band address bootp** PDYN# **configure management out-of-band address 137.90.127.3 255.255.255.0**

Configure Management Route Add \

configure management route add {ip_address} {subnet_mask} {gateway}
Minimum Access Level: **Administrator**
The **configure management route add** command defines an explicit route for management destinations, that cannot be reached through the management default gateway. **ip_address** – Specifies the destination IP address. **subnet_mask** – Specifies the subnet mask to be applied to the IP address. **gateway** – Specifies the gateway IP address to be used to reach the specified IP destination. **Example**: PDYN# **configure management route add 137.90.127.3 255.255.255.0 137.90.0.1**

Configure Management Route Delete

configure management route delete {ip_address}
Minimum Access Level: **Administrator**
The **configure management route delete** command deletes an explicit route based on the specified destinations. To modify an existing route, the administrator will first need to delete the route and then add a new route. **ip_address** – Specifies the destination IP address. **Example**: PDYN# **configure management route delete 137.90.127.3**

Configure Management Route Show

configure management route show
Minimum Access Level: **Administrator**
The **configure management route show** command displays all of the management routes that have been configured. **Example**: PDYN# **configure management route show** Destination Mask Gateway 137.90.127.3 255.255.255.0 137.90.0.1 137.90.128.1 255.255.255.0 137.90.0.1 PDYN# _

Configure Management SNMP Access Validation

configure management snmp access-validation {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure management snmp access-validation** command specifies whether the unit validates the IP address of incoming SNMP (Simple Network Management Protocol) messages. **disabled** – No access validation occurs. This is the default. **enabled** – If the IP address of an SNMP packet is not one of those specified using the **configure management snmp nms-address** command, the packet is discarded. **Example**: `PDYN#` **configure management snmp access-validation enabled**

Configure Management SNMP NMS Address

configure management snmp nms-address { nms_address1**}... [** nms_address8**]**
Minimum Access Level: **Administrator**
The **configure management snmp nms-address** command specifies the IP addresses of up to eight NMS (Network Management System) workstations allowed to access the unit. If SNMP Access Validation is disabled, these addresses have no effect. **nms_address1... nms_address8** – Specifies one to eight IP addresses of NMS workstations. **Example**: PDYN# **configure management snmp nms-address 135.76.90.90 135.76.91.1**

Configure Management SNMP NMS Trap Address

configure management snmp nms-traps { traps_address1**}... [** traps_address8**]**
Minimum Access Level: **Administrator**
The **configure management snmp nms-traps** command specifies the IP addresses of up to eight trap managers to which traps are sent. **traps_address1... traps_address8** – Specifies one to eight IP addresses of traps managers. **Example**: PDYN# **configure management snmp nms-traps 135.76.90.90 135.76.91.1** The product sends all traps in SNMPV1 format. It is assumed that all SNMPv2 and V3 Mangers will accept V1 traps.

Configure Management SNMP Read/Write Community String

configure management snmp private-string { private_community_string}
Minimum Access Level: **Administrator**
The **configure management snmp private-string** command specifies the community string for read-write access. **private_community_string** – Specifies the string used for read-write access. It may be up to 32 printable characters. The default is private. **Example**: PDYN# **configure management snmp private-string topsecret**

Configure Management SNMP Read Only Community String

configure management snmp public-string { public_community_string}
Minimum Access Level: **Administrator**
The **configure management snmp public-string** command specifies the community string for read-only access. **public_community_string** – Specifies the string used for read-only access. It may be up to 32 printable characters. The default is public. **Example**: PDYN# **configure management snmp private-string topsecret**

Configure Management SNMP State

configure management snmp state {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure management snmp state** command specifies the availability of the SNMP agent. **state** – Valid choices are disabled and enabled. The default is disabled. **Example**: PDYN# **configure management snmp state disabled**

Configure Proxy ARP NHR

configure proxy-arp nhr {ip_address}
Minimum Access Level: **Administrator**
The **configure proxy-arp nhr** command determines the default Next-Hop Router (NHR) address for all subscriber ports in the system. This value is used by the proxy-arp function. **ip_address** – Specifies the IP address of the next-hop router for subscriber ports. . **Example**: PDYN# **configure proxy-arp nhr 135.75.90.112**

Scheduled Configuration Backups

This command sets parameters for automatic configuration backup. This feature allows the administrator to automatically back up the configuration of the unit on a scheduled basis. When enabled, auto backup uploads the configuration of each device according to a schedule selected.

Configure Scheduled Backup Enable

configure scheduled-backup {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure scheduled-backup** command determines whether automatic configuration backup occurs. **disabled** – Specifies automatic configuration backup will not occur. This is the default. **enabled** – Specifies that automatic configuration backup will occur. **Example**: PDYN# **configure scheduled-backup enabled**

Configure Scheduled Backup Dynamic

configure scheduled-backup dynamic [hh:mm**]**
Minimum Access Level: **Administrator**
The **configure scheduled-backup dynamic** command specifies that automatic configuration backup will occur after each configuration change. **hh:mm** – Specifies the amount of time after a configuration change that a configuration backup will automatically occur. Time is specified in hours (1–24) and minutes (0–59) separated by a colon. The default and minimum is 00:30 (30 minutes). **Example**: PDYN# **configure scheduled-backup dynamic 24:00**

Configure Scheduled Backup Fixed

configure scheduled-backup fixed {daily | monday | tuesday | wednesday | thursday | friday | saturday | sunday} { hh:mm**}**
Minimum Access Level: **Administrator**
The **configure scheduled-backup fixed** command specifies the fixed times at which configuration backups will occur. **day_of_week** – Specifies the day of the week backups will occur. If daily is selected, a backup occurs every day. **hh:mm** – Specifies the time of day the backup will occur. Time is specified in hours (00–23) and minutes (00–59) separated by a colon. **Example**: PDYN# **configure scheduled-backup sunday 00:00**

Configure Scheduled Backup FTP

configure scheduled-backup ftp {ip_address**} {**user_name**} {**password**} {**filename**}**
Minimum Access Level: **Administrator**
The **configure scheduled-backup ftp** command defines the FTP (File Transfer Protocol) server used for automatic configuration backup. **ip_address** – Specifies the network address of the FTP server. **user_name** – Specifies a user name accepted by the FTP server. **password** – Specifies the password associated with the user name. **filename** – Specifies the file containing the configuration backup. **Example**: PDYN# **configure scheduled-backup ftp 135.27.90.98 admin admnpass iac2_bkup**

Configure Scheduled Backup Time Stamp

configure scheduled-backup ftp timestamp {append | none}
Minimum Access Level: **Administrator**
The **configure scheduled-backup ftp timestamp** command determines whether a timestamp is added to filenames to distinguish them from each other and prevent overwriting existing files. **append** – Date and time are added to the filename. **none** – The filename is used as entered. This is the default. **Example**: PDYN# **configure scheduled-backup ftp timestamp append**

Configure Security

This command is used to limits the number of active IP addresses on a port. The Administrator can set the limit of the number of IP addresses that are allowed on the port. The limit can range from 1 to 20.

The Administrator may configure a static IP address so that it is always part of the table of authorized IP addresses. The number of learned addresses is reduced by each static entry.

The IP addresses are the most recently learned addresses. For example, assume that the administrator sets the limit to one, and the system has learned an IP address. When a second DHCP acknowledge message is received, the first IP address is deleted, and the new IP address is allowed.

Configure Security IP (Host Address Limiting) Enable

configure security ip {port_id} {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure security ip** command determines whether there is a limit on the number of IP addresses associated with a DSL port. **port_id** – Identifies the DSL port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **disabled** – Specifies that there are no restrictions on the number of IP addresses on the specified port. This is the default. **enabled** – Specifies that there are restrictions on the number of IP addresses allowed on the specified port. **Example**: PDYN# **configure security ip 3 enabled**

Configure Security IP Add Static Address

configure security ip {port_id} **add** {ip_address} {nhr_address}
Minimum Access Level: **Administrator**
The **configure security ip add** command specifies an IP address allowed to be active on a particular DSL port. **port_id** – Identifies the DSL port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **ip_address** – Specifies an IP address allowed to be active on the port. If the table of allowed IP addresses already has the number of addresses specified by the **configure security IP max-ip** command, the following error message is displayed: Command not allowed: Too many static entries **nhr_address** – Specifies the address of the Next Hop Router for this port. It overrides the default address. message is displayed: **Example**: PDYN# **configure security ip 23 add 135.27.90.2 135.27.90.21**

Configure Security IP Delete Static Address

configure security ip {port_id} **delete** {ip_address}
Minimum Access Level: **Administrator**
The **configure security ip delete** command deletes an IP address in the table of addresses allowed to be active on a particular DSL port. **port_id** – Identifies the port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **ip_address** – Specifies an IP address to be deleted. The address must exist in the table of addresses for this port. You can display the table using the **configure security ip show** command. **Example**: PDYN# **configure security ip 21 delete 135.27.90.2**

Configure Security IP Max Addresses

configure security ip {port_id} **max-ip** {max_ip}
Minimum Access Level: **Administrator**
The **configure security ip max-ip** command specifies the number of IP addresses allowed to be active on a particular DSL port. **port_id** – Identifies the port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **max_ip** – Specifies the maximum number of IP addresses allowed on the port. The valid range is 1–20. The default is 1. **Example**: PDYN# **configure security ip 12 max-ip 2**

Configure Security IP Show

configure security ip {port_id} **show**
Minimum Access Level: **Administrator**
The **configure security ip show** command displays the table of addresses allowed for a particular DSL port. **port_id** – Identifies the port whose table is to be displayed. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **Example**: PDYN# **configure security ip 12 show** The output of this command is identical to the output from the show security ip command.

Configure Security MAC Add

configure security mac { port_id} add {mac_address} vlan
Minimum Access Level: **Administrator**
The **configure security mac add** command is used to limit access to the system based on the MAC address and VLAN of the inbound traffic on the DSL ports. The system monitors the MAC addresses and VLAN on a port. If this feature is enabled, then only the MAC addresses and VLANs that have been entered by the administrator are allowed on the selected port. Traffic with any other MAC address will be dropped. Up to 20 addresses are allowed. **port_id** – Identifies the port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **mac_address** – Specifies a MAC address allowed to send data to the port. Traffic from any other MAC address is dropped. Adding an address automatically enables the MAC address filtering feature for the port. The address must be in the form xx-xx-xx-xx-xx-xx, where each x is a hexadecimal digit 0–f. **vlan** – Specifies a VLAN allowed to send data to the port. Traffic from any other VLAN is dropped. **Example**: PDYN# **configure security mac 12 add 00-01-d2-e4-d3-c1**

Configure Security MAC Delete

configure security mac {port_id} **delete {mac_address | all} vlan**
Minimum Access Level: **Administrator**
The **configure security mac delete** command deletes a MAC address in the table of addresses allowed to send data to a particular DSL port. **port_id** – Identifies the port to be affected. The possible forms of the identifier are described in Chapter 2, Terminology and Conventions. **mac_address** – Specifies a MAC address to be deleted. The address must exist in the table of addresses for this port. You can display the table using the configure security mac show command. The address must be in the form xx-xx-xx-xx-xx-xx, where each x is a hexadecimal digit 0–f. **vlan** – Specifies a vlan allowed to send data to the port. Traffic from any other vlan is dropped. **all** – Specifies that all MAC addresses defined for the port are to be deleted. The MAC address filtering feature is disabled for the port. **Example**: PDYN# **configure security mac 12 delete 00-01-d2-e4-d3-c1 10**

Configure Security MAC Show

configure security mac { port_id} show
Minimum Access Level: **Administrator**
The **configure security mac show** command displays the table of MAC addresses allowed for a particular DSL port. **port_id** – Identifies the port whose table is to be displayed. **mac_address** – MAC address allowed to send data to the port. **vlan** –Vlan allowed to send data to the port. Traffic from any other vlan is dropped. **Example**: PDYN# **configure security mac show**

Configure SNTP

This command is used to configure the Simple Network Time Protocol client.

Configure SNTP Enable

configure sntp {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure sntp** command determines whether the unit makes SNTP requests. **disabled** – The unit does not make SNTP requests. Date and time must be set manually. **enabled** – The unit updates the date and time periodically by sending requests to an SNTP server. **Example**: PDYN# **configure sntp disable**

Configure SNTP Server Address

configure sntp address {ip_address**}**
Minimum Access Level: **Administrator**
The **configure sntp address** command specifies the IP address of an SNTP server. **ip_address** – The address of an SNTP server. The default is 192.5.41.40. **Example**: PDYN# **configure sntp address 137.90.127.40**

Configure SNTP Interval

configure sntp interval {interval}
Minimum Access Level: **Administrator**
The **configure sntp interval** command specifies the frequency that the unit should make SNTP requests to update the date and time. The units makes a time request whenever it powers on, then it makes periodic requests based in the interval specified. **interval** – The period, in hours, between SNTP requests. Valid values are 1–24. The default is 24 hours. **Example**: PDYN# **configure sntp interval 12**

Configure Syslog

This command configures the Syslog threshold and rate limiting.

Configure Syslog Rate Limiting

configure syslog rate-limiting {disabled | enabled}
Minimum Access Level: **Administrator**
The **configure syslog rate-limiting** command determines whether duplicate messages are written to the system log. **disabled** – All messages (satisfying the syslog threshold setting) are written to the system log. This is the default. **enabled** – Consecutive duplicate messages are written to the system log only if they are received more than five minutes apart. Example: `PDYN#` configure syslog rate-limiting disabled

Configure Syslog Threshold

configure syslog threshold {emergency | alert | information | debug}
Minimum Access Level: **Administrator**
The **configure syslog threshold** command specifies the levels of messages that are written to the system log. **emergency** – Emergency and higher priority messages are written to the system log. **alert** – Alert and higher priority messages are written to the system log. This is the default. **information** – Informational and higher priority messages are written to the system log. **debug** – Debug and higher priority messages are written to the system log. **Example**: PDYN# **configure syslog threshold information**

Configure Syslog Remote Enable

When remote syslog is enabled, the system will send the syslog message to the local syslog file as well as to the remote syslog server that has been configured.

configure syslog remote {enabled | disabled}
Minimum Access Level: **Administrator**
The **configure syslog remote enable** command enables or disables the remote syslog feature. **disabled** – No messages get sent to a remote syslog server. This is the default. **enabled** – Syslog messages will be sent to a remote server if one has been defined. **Example**: PDYN# **configure syslog remote enabled**

Configure Syslog Remote Create

configure syslog remote create {ip_address**} [udp_port]**
Minimum Access Level: **Administrator**
The **configure syslog remote create** command specifies the IP address to send syslog messages. **ip_address** – The address of a remote Syslog server. The default is 0.0.0.0 The system only supports one remote Syslog server. To change the IP address of the server, the user enters a new IP address using the **configure syslog remote create** command. The new IP address will overwrite the previous address. **udp_port** This value specifies the UDP port to be used for sending remote syslog messages. If no value is specified then the default value will be used. The default port is 514 as specified in RFC 3164. **Example**: PDYN# **configure syslog remote create 135.90.2.1**

Configure System Location

configure system information system-location { location**}**
Minimum Access Level: **Administrator**
The **configure system information system-location** command stores the location of the system. **location** – Up to 36 printable characters. No spaces are allowed. **Example**: PDYN# **configure system information system-location Building_C_First_Floor**

Configure System Name

configure system information system-name { name**}**
Minimum Access Level: **Administrator**
The **configure system information system-name** command stores a name identifying the system. **name** – Up to 36 printable characters. No spaces are allowed. **Example**: PDYN# **configure system information system-name Paradyne_IAC_8**

Configure System Contact

configure system information system-contact {contact**}**
Minimum Access Level: **Administrator**
The **configure system information system-contact** command usually stores the name of a person to contact if the system has a problem. **name** – Up to 36 printable characters. No spaces are allowed. **Example**: PDYN# **configure system information system-contact Toby**

Configure System Options Date Display Format

configure system options date-display-format {dd/mm/yy | mm/dd/yy}
Minimum Access Level: **Administrator**
The **configure system options date-display-format** command determines the date format displayed and accepted by the system. **dd/mm/yy** – The date display format is in the order day, month, year. **mm/dd/yy** – The date display format is in the order month, day, year. This is the default. **Example**: PDYN# **configure system options date-display-format dd/mm/yy**

Configure System Options Inactivity Time Out

configure system options inactivity-timeout {time}
Minimum Access Level: **Administrator**
The **configure system options inactivity-timeout** command specifies how long a Telnet session can exist with no activity before it is terminated by the system. **time** – Specifies the amount of time in minutes an inactive Telnet session can exist before it is terminated. The valid range is 1–20. The default is 5 minutes. A value of 0 (zero) disables the inactivity timeout. **Example**: PDYN# **configure system options inactivity-timeout 10** Note: This inactivity timer applies to the CLI whether it is from a Telnet session or a local connection on the console port.

Configure System Options Spectrum Management

configure system options spectrum-management {enabled | disabled}
Minimum Access Level: **Administrator**
The **configure system options spectrum management** command specifies whether the system enables the spectrum management capability. **Example**: PDYN# **configure system options spectrum-management enabled**

Configure System Options Alarm Threshold Temperature High

configure system options alarm-threshold temp-high {threshold}
Minimum Access Level: **Administrator**
The **configure system options alarm-threshold temp-high** command specifies the high alarm threshold for the intake temperature sensor. **Example**: PDYN# **configure system options alarm-threshold temp-high 120**

Configure System Options Alarm Threshold Temperature Intake Low

configure system options threshold temperature-intake-high {threshold}
Minimum Access Level: **Administrator**
The **configure system options alarm-threshold temp-low** command specifies the low alarm threshold for the intake temperature sensor. **Example**: PDYN# **configure system options alarm-threshold temp-low 0**

Configure System Options Test Timeout

configure system options test-timeout {time**}**
Minimum Access Level: **Administrator**
The **configure system options test-timeout** command specifies the maximum amount of time a disruptive test is allowed to run. **time** – Specifies the amount of time in minutes a disruptive test can run before it is terminated. The valid range is 1–30. The default is 5 minutes. **Example**: PDYN# **configure system options test-timeout 2** Note that currently there are no disruptive tests defined for this product.

Configure Uplink

configure uplink {eth2 |eth3}
Minimum Access Level: **Administrator**
The **configure uplink** command specifies which Ethernet port is the designated uplink. When the unit is configured for mux forwarding or secure VLANs, all traffic is forwarded to the designated uplink. **eth2** – This selects Ethernet port 2 as the uplink. **eth3** – This selects Ethernet port 3 as the uplink. This is the factory default. Note that Ethernet port 1 is always used as the out of band management port. **Example**: PDYN# **configure uplink eth2**

Configure Uplink Show

configure uplink show
Minimum Access Level: **Administrator**
The **configure uplink show** command displays which port has been designated as the uplink port. **Example**: PDYN# **configure uplink show** uplink eth3 PDYN# _

Configure Uplink-Tag

This command is used to configure the unit for Uplink Tagging. In the Uplink tagging mode, the data from each DSL port is assigned a unique VLAN tag. These commands set the base VLAN tag, and an index. With just these two commands, the VLAN tag for every DSL port in the unit is defined. The factory default is 16 for the base and an index of 1.

Configure Uplink Tagging Base

configure uplink-tag base {base**}**
Minimum Access Level: **Administrator**
The **configure uplink-tag base** command determines the base value to be used for setting VLAN tags for the DSL ports. **base** – Specifies the base value used in setting the range of VLAN tags. The valid values are: 16, 256, 512, 768, 1024, 1280, 1536, 1792, 2048, 2304, 2560, 2816, 3072, 3328, 3584, 3840. The default is 16. **Example**: PDYN# **configure uplink-tag base 1024**

Configure Uplink Tagging Index

configure uplink-tag index {index**}**
Minimum Access Level: **Administrator**
The **configure uplink-tag index** command determines the index value to be used for setting VLAN tags for the DSL ports. **index** – Specifies the index value used in setting the range of VLAN tags. Valid values are 1–10. The default is 1. Example: `PDYN#` configure uplink-tag index 2

The following tables summarizes the range of VLAN tags for a unit based on the base and index.

Base VLAN Tag	Index 1 ULT Tags	Index 2 ULT Tags	Index 3 ULT Tags	Index 4 ULT Tags	Index 5 ULT Tags
16 (x'0010')	16 – 39	40 - 63	64 - 87	88 - 111	112 - 135
256 (x'0100')	256 – 279	280 – 303	304 – 327	328 – 351	352 – 375
512 (x'0200')	512 – 535	536 – 559	560 – 583	584 – 607	608 – 631
768 (x'0300')	768 – 791	792 – 815	816 – 839	840 – 863	864 – 887
1024 (x'0400')	1024 –1047	1048 – 1071	1072 – 1095	1096 – 1119	1120 – 1143
1280 (x'0500')	1280 – 1303	1304 – 1327	1328 – 1351	1352 – 1375	1376 – 1399
1536 (x'0600')	1536 –1559	1560 – 1583	1584 – 1607	1608 – 1631	1632 – 1655
1792 (x'0700')	1792 – 1815	1816 – 1839	1840 – 1863	1864 – 1887	1888 – 1911
2048 (x'0800')	2048 – 2071	2072 – 2095	2096 – 2119	2120 – 2143	2144 – 2167
2304 (x'0900')	2304 – 2327	2328 – 2351	2352 – 2375	2376 – 2399	2400 – 2423
2560 (x'0A00')	2560 – 2583	2584 – 2607	2608 – 2631	2632 – 2655	2656 – 2679
2816 (x'0B00')	2816 – 2839	2840 – 2863	2864 – 2887	2888 – 2911	2912 – 2935
3072 (x'0C00')	3072 – 3095	3096 – 3119	3120 – 3143	3144 – 3167	3168 – 3191
3328 (x'0D00')	3328 – 3351	3352 – 3375	3376 – 3399	3400 –3423	3424 – 3447
3584 (x'0E00')	3584 – 3607	3608 – 3631	3632 – 3655	3656 – 3679	3680 – 3703
3840 (x'0F00')	3840 - 3863	3864 – 3887	3888 – 3911	3912 – 3935	3936 – 3959

Base VLAN Tag	Index 6 ULT Tags	Index 7 ULT Tags	Index 8 ULT Tags	Index 9 ULT Tags	Index 10 ULT Tags
16 (x'0010')	136 - 159	160 – 183	184 -207	208 - 231	232 – 255
256 (x'0100')	376 – 399	400 – 423	424 - 447	448 – 471	472 – 495
512 (x'0200')	632 – 655	656 – 679	680 - 703	704 - 727	728 – 751
768 (x'0300')	888 – 911	912 – 935	936 - 959	960 – 983	984 - 1007
1024 (x'0400')	1144 – 1167	1168 –1191	1192 - 1215	1216 - 1239	1240 – 1263
1280 (x'0500')	1400 – 1423	1424 – 1447	1448 - 1471	1472 - 1495	1496 - 1519
1536 (x'0600')	1656 – 1679	1680 – 1703	1704 - 1727	1728 - 1751	1752 – 1775
1792 (x'0700')	1912 – 1935	1936 – 1959	1960 - 1983	1984 - 2007	2008 – 2031
2048 (x'0800')	2168 – 2191	2192 – 2215	2216 - 2239	2240 - 2263	2264 – 2287
2304 (x'0900')	2424 – 2447	2448 – 2471	2472 - 2495	2496 - 2519	2520 – 2543
2560 (x'0A00')	2680 – 2703	2704 – 2727	2728 - 2751	2752 - 2775	2776 – 2799
2816 (x'0B00')	2936 – 2959	2960 – 2983	2984 - 3007	3008 - 3033	3034 – 3057
3072 (x'0C00')	3192 – 3215	3216 – 3239	3240 -3263	3264 -3287	3288 –3311
3328 (x'0D00')	3448 – 3471	3472 – 3495	3496 - 3519	3520 - 3543	3544 – 3567
3584 (x'0E00')	3704 – 3727	3728 – 3751	3752 - 3775	3776 - 3799	3800 – 3823
3840 (x'0F00')	3960 – 3983	3984 – 4007	4008 - 4031	4032 - 4055	4056 - 4079

Configure User-Accounts

This command is used to configure users of the system. Maximum number of users is 20. Only a user with Administrator privilege can create or delete users.

When an Administrator creates a user account they also determine the privilege level by the number of passwords they give the user – the *privilege_password* that gives a user admin privilege is optional.

Any administrator can delete any other administrator or user. The system will not allow all use accounts to be deleted. There must always be at least one administrator defined.

The system will not allow Admins to delete themselves. To ‘modify’ user’s or administrator’s options (user_name, login_password, or privilege_passrword) the Administrator has to create existing user or administrator with new login_password or privilege_password. The create command is used to "over-write" or "modify" an existing account.

Configure User-Accounts

configure user-accounts create { user**} {** login_password} **[** privilege_password**]**
Minimum Access Level: **Administrator**
The **configure user-accounts create** command creates a user account and defines passwords for it. It also can be used to change passwords. **user** – Specifies a user name of 1–15 printable characters. Spaces are not allowed. If the user already exists, the command modifies the password or passwords for the user. **login_password** – Specifies a password of 1–15 printable characters. Spaces are not allowed. A login password is required of all users. **privilege_password** – Specifies a password of 1–15 printable characters. Spaces are not allowed. The optional second password allows users to enter privileged mode to configure the system. The privilege password must be different than the login password. **Example**: PDYN# **configure user-accounts create clerk sesame** PDYN# **configure user-accounts create admin2 sesame newpass**

Configure User-Accounts Delete

configure user-accounts delete {user**}**
Minimum Access Level: **Administrator**
The **configure user-accounts delete** command deletes a user account. **user** – Specifies the user account to be deleted. **Example**: PDYN# **configure user-accounts delete tempacct**

Configure VLAN

This command is used to configure the parameters related to the VLAN table.

Configure VLAN Create

configure vlan create {vlan_id**}**
Minimum Access Level: **Administrator**
The **configure vlan create** command is used to define a unique VLAN for the system. **vlan_id** - This value specifies the VLAN tag value for this VLAN. The range is 1 to 4095. The value must be unique and not a vlan_id that is already in use. **Example**: PDYN# **configure vlan create 3**

Configure VLAN Delete

configure vlan delete {vlan_id | vlan_name**}**
Minimum Access Level: **Administrator**
The **configure vlan delete** command is used to delete a unique VLAN for the system. **vlan_id** - This value specifies the VLAN to be deleted. **vlan_name** - This value uses the assigned VLAN name to identify the VLAN to be deleted. **Example**: PDYN# **configure vlan delete 12**

Configure VLAN Modify Name

configure vlan modify {vlan_id	vlan_name**} name {**vlan_name**}**
Minimum Access Level: **Administrator**
The **configure vlan modify name** command is used to define a unique VLAN for the system. **vlan_id** - This value specifies the VLAN to be modified. **vlan_name** - This value uses the assigned VLAN name to identify the VLAN to be modified. In this case the VLAN would be renamed to the new value entered. **Example**: PDYN# **configure vlan modify room12 room11**

Configure VLAN Modify Next Hop Router

configure vlan modify {vlan_id	vlan_name**} nhr {**ip_address**}**
Minimum Access Level: **Administrator**
The **configure vlan modify nhr** command is used to define the next hop router address for the subscribers on this vlan. **vlan_id** - This value specifies the VLAN to be modified. **ip_address** - This value is the IP address of the next hop router for the subscribers on this VLAN. **Example**: PDYN# **configure vlan 77 modify nhr 135.90.1.1**

Configure VLAN Modify Ports

configure vlan modify {vlan_id	vlan_name**} ports {tagged	untagged } {delete	port-id:pg	port-list}**
Minimum Access Level: **Administrator**
The **configure vlan modify ports** command is used to define the ports that are members of this vlan. **vlan_id** - This value specifies the VLAN to be modified. **vlan_name** - This value uses the assigned VLAN name to identify the VLAN to be modified. **port-id** - This value specifies the port to be included in this vlan. **pg** - Identifies the priority group on this port. If the priority group is not entered, it will be assumed to be group 1. **port-list** - This value is a range of ports to be included in this vlan. Valid values are 1-24,eth1,eth2, and eth3. Enter **delete** to delete all ports. **tagged** - This parameter specifies that the ports listed in this command are tagged members of the vlan. **untagged** - This parameter specifies that the ports listed in this command are untagged members of the vlan. **Example**: PDYN# **configure vlan modify 1 ports untagged eth1,eth2,eth3,1-24**

Configure VLAN Modify Proxy-ARP

configure vlan modify {vlan_id	vlan_name**} proxy-arp (enabled	disabled}**
Minimum Access Level: **Administrator**
The **configure vlan modify proxy-arp** command specifies if the proxy-arp function will be used on the selected VLAN. **vlan_id** - This value specifies the VLAN to be modified. **vlan_name** - This value uses the assigned VLAN name to identify the VLAN to be modified. **enabled** – The proxy ARP function will be enabled for the selected VLAN. This is the factory default. **disabled** - The proxy ARP function will be disabled for the selected VLAN. **Example**: PDYN# **configure vlan modify 1 proxy-arp disabled**

Configure VLAN Modify Secure VLAN

configure vlan modify {vlan_id	vlan_name**} secure (enabled	disabled}**
Minimum Access Level: **Administrator**
The **configure vlan modify secure** command specifies if the vlan will be in secure mode. When a VLAN is in secure mode, all the traffic from the DSL port is routed to the designated uplink port. **vlan_id** - This value specifies the VLAN to be modified. **vlan_name** - This value uses the assigned VLAN name to identify the VLAN to be modified. **enabled** – The secure VLAN function will be enabled for the selected VLAN. This is the factory default. **disabled** - The secure VLAN function will be disabled for the selected VLAN. **Example**: PDYN# **configure vlan modify 1 secure disabled**

Configure VLAN Reserved Block Start

configure vlan reserved-block-start vlan_id
Minimum Access Level: **Administrator**
The **configure vlan reserved-block-start** command is used to configure the reserved block of vlans. The vlan id is the first reserved vlan in the contiguous reserved block of 16. **vlan_id** - This value specifies the first reserved vlan in the reserved block of 16. The default is 4080. **Example**: PDYN# **configure vlan reserved-block-start 4080**

Configure VLAN Show

configure vlan show {vlan_id | vlan_name**}**
Minimum Access Level: **Administrator**
The **configure vlan show** command displays all the configuration parameters for the selected VLAN. This command is identical to the **show vlan configuration** command. **Example**: PDYN# **configure vlan show**

Copy (Configuration)

The copy function is used for saving and restoring configurations. The command is designed so that a file is copied **from the** first specified configuration **to** the second specified configuration or FTP (meaning FTP server file system).

The prototype for the command is:

copy {source}[options]{destination}[options]

There is a restriction when FTP is used as either the source or the destination. In this case the other parameter must be "startup-config". **All FTP transfers are to/from the configuration file in nonvolatile memory.** In order to download a configuration and make it active, the Administrator must execute two copy commands. The first command does an FTP transfer to the startup configuration file. The second command copies the startup configuration to the running configuration.

Copy From FTP Server to Startup Configuration (Download Configuration)

copy ftp {ip_address**} {** user_name**} {** password**} {** filename**} startup-config**
Minimum Access Level: **Administrator**
The **copy** ftp command downloads a configuration file to the start up configuration which is in non-volatile memory. **ftp** – Specifies that destination file is on an FTP server. The ftp keyword must be followed in order by: **ip_address** – The IP address of the FTP server **user_name** – A user name allowed on the FTP server **password** – The password associated with the user name **filename** – The name of the source or destination file **startup-config** – Specifies that the destination file is the configuration in non-volatile memory. **Example**: `PDYN#` **copy ftp 135.90.28.28 ftpuser ftppw save.config startup-config**

Copy Running Configuration to Startup Configuration (Save)

copy running-config startup-config
Minimum Access Level: **Administrator**
The **copy running-config startup-config** command copies the configuration of the volatile running configuration to the non-volatile start-up configuration. This is the same function as the **save** command. **running-config** - Specifies the running configuration (volatile memory) is the source file. **startup-config** – Specifies that the destination file is the configuration in non-volatile memory. **Example**: PDYN# **copy running-config startup-config**

Copy Running Configuration to Startup Configuration (Backup)

copy startup-config ftp {ip_address**} {**user_name**} {**password**} {**filename**}**
Minimum Access Level: **Administrator**
The **copy startup-config ftp** command saves the startup configuration file to the file specified on the ftp server. **ftp** – Specifies that destination file is on an FTP server. The ftp keyword must be followed in order by: **ip_address** – The IP address of the FTP server **user_name** – A user name allowed on the FTP server **password** – The password associated with the user name **filename** – The name of the source or destination file **startup-config** – Specifies that the destination file is the configuration in non-volatile memory. **Example**: PDYN# **copy startup-config ftp 135.90.28.28 ftpuser ftppw save.config**

Copy Startup Configuration to Running Configuration (Reload)

copy startup-config running-config
Minimum Access Level: **Administrator**
The **copy startup-config running-config** command loads the startup configuration file to running configuration. **startup-config** – Specifies that the source file is the configuration in non-volatile memory. **running-config** - Specifies the running configuration (volatile memory) is the source file. **Example**: PDYN# **copy startup-config running-config**

End

end
Minimum Access Level: **User**
The **end** command terminates a privileged mode session and continues the session in standard mode. If the end command is executed by a user not in privileged mode, it places the user at the top of the command tree like one or more **back** commands. **Example**: PDYN# **end** You are ending your privilege mode session PDYN>_

Exit

exit
Minimum Access Level: **User**
The **exit** command terminates the CLI session. If the CLI session is by telnet, the connection is dropped. **Example**: PDYN# **exit**

Firmware

To download or apply new firmware to the product.

Firmware Download

firmware download {ip_address**} {**user_name**} {**password**} {**filename**} [**no** | **yes]**
Minimum Access Level: **Administrator**
The **firmware download** command downloads new firmware to the BitStorm 4800, and optionally applies it immediately. **ip_address** – Specifies the network address of the FTP server containing the FW file. **user_name** – Specifies a user name accepted by the FTP server. **password** – Specifies the password associated with the user name. **filename** – Specifies the file containing the operational firmware. **no** – The file is downloaded to the alternate firmware area, but not applied or executed. **yes** – The file is downloaded and applied immediately. The unit is also reset. **Example**: PDYN# **firmware download 135.27.90.98 admin admnpass firm0302.bin no**

Firmware Download Status

firmware download-status
Minimum Access Level: **Administrator**
The **firmware download-status** command displays the status of the active or last firmware download. **Example**: PDYN# **firmware download-status** File name: sample_filename FTP Server Address xxx.xxx.xxx.xxx Bytes Transferred xxxxxxxxxx Transfer Status: Download in Progress PDYN# _ The following status is reported: Completed successfully Download in progress Transfer failed

Firmware Revision

firmware revision
Minimum Access Level: **Administrator**
The **firmware revision** command displays the revision numbers of the firmware currently running and alternate firmware maintained in memory. **Example**: PDYN# **firmware revision** Running version 01.01.20 Alternate version 01.01.16 PDYN#

Firmware Switch

firmware switch
Minimum Access Level: **Administrator**
The **firmware switch** command loads and executes the alternative firmware file. This also resets the unit. **Example**: PDYN# **firmware switch** Switch from firmware revision 01.02.03 to firmware revision 01.02.04? (yes/no) **yes** Firmware switched, system rebooting PDYN#

Paging

paging {disabled | enabled}
Minimum Access Level: **User**
The **paging** command determines how a full screen of output is displayed. The selection affects only the user who enters the command. **disabled** – Specifies that output is sent to the screen without interruption. **enabled** – Specifies that when 23 lines of output have been sent to the screen, a **More** prompt is displayed on line 24. When **More** is displayed, you can: Press the space bar to view the next screen of output Press the Enter key to view the next line of output Press the “q” key to return to the command line. **Example**: PDYN>**paging enabled**

Password

This command allows a user to change the login password. If this command is executed while in the privilege mode, it will change the privilege password. If the command is executed while in the user mode, it will change only the user password.

password
Minimum Access Level: **User**
The **password** command changes the user or administrator (privilege) password, depending on which level is active. **Example**: PDYN# **password** enter old admin level password: **** enter new admin level password: ****** enter new admin level password again: ****** password changed PDYN# **Operational Notes**: This command is interactive. The user is prompted for the information to be entered. The user first is asked for the password that was used to login. Then the user is asked for the new password. The new password must be entered twice. The second password is used to verify that the new password was entered correctly. If the old password is incorrect, the command is ignored, and an error message is displayed. The password can have a maximum of 15 alphanumeric characters, and a minimum of 0 (zero) characters.

Ping

ping {ip_address**}**
Minimum Access Level: **User**
The **ping command** sends a ICMP echo message to the selected IP address. **Example**: PDYN>**ping 135.90.1.2** 135.90.1.2 is alive PDYN> PDYN>**ping 135.90.1.2** no response from 135.90.1.2 PDYN>

Privilege

privilege
Minimum Access Level: **User**
The **privilege** command causes the user to be prompted for an administrator password. When the password is entered correctly, the user is placed in Administrator (privileged) mode. The Administrator can then change configuration parameters. **Example**: PDYN>**privilege** Password: ****** PDYN# _ PDYN>**privilege** Password: ****** Incorrect password try again. Password: ****** Incorrect password try again. Password: ****** Incorrect password try again. PDYN>_ **Operational Note:** If the password is typed in incorrectly the CLI responds with the following: "**Incorrect password: Try again.**" After three attempts to gain access to privilege mode with the wrong password, the administrator is returned to the user mode prompt.

Restart

restart
Minimum Access Level: **Administrator**
The **restart** command restarts the unit, causing it to reload the startup configuration and retrain the DSL ports. **Example**: PDYN# **restart**

Save

save
Minimum Access Level: **Administrator**
The **save** command copies the running configuration, which is in volatile memory, to the startup configuration file, which is in nonvolatile memory. The **PDYN#** prompt changes to **PDYN# !** when the configuration has been changed and has not yet been saved. It returns to **PDYN#** after the **save** command is executed. **Example**: PDYN# !**save** PDYN# _

Show

The **show** commands display configuration and statistical information about the system.

Show Bridge

show bridge [port_id**]**

Minimum Access Level: **Administrator**

The **show bridge** command displays the MAC table.

port_id – Specifies that the display should be limited to entries for a single port.

Example:

PDYN# **show bridge**

```
Mode:        Mux
Total Entries:7

Port-id      mac address           status    vlan         name
4            00-90-f2-ce-44-00     learned   001          default
4            00-90-f2-ce-44-00     learned   002          alcatel
24           00-00-0c-42-27-f7     learned   003          paradyne
24           00-00-0c-42-27-f7     learned   004          management
1            00-90-f2-ce-44-00     learned   005          abdo
2            00-90-f2-ce-44-00     learned   006          inband
eth1         00-90-f2-ce-44-00     learned   006          outofband
```

Display results:
Mode – Displays the last mode command that was used to configure the bridge:
- **switched** – Switched mode. The system acts as a transparent learning bridge.
- **mux** – The system treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port.
- **sms** – The system treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port.
- **uplink-tagging** – The system treats each DSL port as if it were a private network connected to the uplink, and never forwards data on another DSL port. This is accomplished by assigning a VLAN tag to each DSL port. The values of the tags are predefined by the system.

Total Entries – The number of entries currently in the table.

hardware address – The MAC address of the table entry.
port-id – The port ID of the entry.

status – The status of the entry:
- **invalid** – This learned entry has timed out but has not yet been deleted.
- **learned** – This entry was learned.
- **management** – This entry has a matching static address.
- **other** – None of the other statuses apply to this entry.
- **self** – This entry is the unit.

Show Bridge Timeout

This command will display bridge table entry timeout value in seconds. The timeout is a value in seconds that specifies the time interval after which entry in bridge table will be removed.

show bridge timeout
Minimum Access Level: **User**
The **show bridge timeout** command displays the bridge table entry timeout value in seconds. **Example**: PDYN# **show bridge timeout** 300 sec PDYN# **Display results:** **timeout** – The bridge table entry timeout value.

Show Date

To display the current date and time configured on the Speedway product. The date will be displayed in dd/mm/yy or mm/dd/yy format depending on users preference as configured with the **configure system date-display-format** command.

show date
Minimum Access Level: **User**
The **show date** command displays the system date, time, and time zone. **Example**: PDYN# **show date** dd/mm/yy hh/mm/ss timezone 01/06/05 21:22:38 -5 OR mm/dd/yy hh/mm/ss timezone 06/01/05 21:22:38 -5

Show Filter

show filter [filter_name**]**

Minimum Access Level: **User**

The **show filter** command displays configured data filters.

filter_name – Specifies that the display should be limited to a single filter.

Example:

```
PDYN>show filter

   rule1         discard
   rule-name     type      action        frame              rule
   rule1         ether     discard       dix                AAE

   rule2         forward
   rule-name     type     action        frame             rule
   rule2         ether    discard       dix               660



PDYN>show filter rule1

   rule1          discard
   rule-name      type     action     frame                rule
   rule1          ether    forward    dix                  aae
```

Display results:
filter-name – The name of the filter.
action – The action to be performed:
forward – Specifies that a packet is to be forwarded to the user when none of the conditions specified in the rule or rules are matched.
discard – Specifies that a packet is to be discarded when none of the conditions specified in the rule or rules are matched.

rule-name – The name assigned to the rule or rules associated with this filter.

type – The rule type:
ether – The rule is based on Ethertypes.

action – The action to perform if the rule is satisfied:
forward – The packet is forwarded.
discard – The packet is discarded.

frame – DIX or SNAP ether frame type.

rule – The rule criteria:
The Ethertypes the rule affects.

Show Filter-Binding

show filter-binding [filter [filter_name**]] | [port [** port_id**]]**

Minimum Access Level: **User**

The **show filter-binding** command displays the bindings of filters to interfaces.

filter – Specifies that output is sorted by filter name.

filter_name – Specifies that the display should be limited to a single filter.

port – Specifies that output is sorted by port number.

port_id – Specifies that the display should be limited to a single port.

Example:

```
PDYN>show filter-binding
            port      filter name          direction
            2         ethernetFilter       Inbound
            3         anotherFilter        Inbound
            18        ethernetFilter       Inbound
            19        ethernetFilter       Inbound


PDYN>show filter-binding filter ethernetFilter

           ethernetFilter Inbound   18
                     Inbound                 19
                     Inbound                  2

PDYN>show filter-binding port 3

              3 anotherFilter Inbound
```

Display results:
port-id – The port the rule is bound to.

filter-name – The name of the filter.

direction – The direction of the data stream affected by this binding:
inbound – Traffic toward the port is affected.
outbound – Traffic from the port is affected.

Show Filter-Proto-Specific

show filter-proto-specific
Minimum Access Level: **User**
The **show filter-proto-specific** command displays the settings for all protocol-specific filters
Example: PDYN>**show filter-proto-specific** **NetBIOS denied (dropped).** PDYN>**show filter-proto-specific** **NetBIOS permitted (forwarded).**

Show Filter-Rule

show filter-rule [rule_name**]**
Minimum Access Level: **User**
The **show filter-rule** command displays configured filter rules. **filter_name** – Specifies that the display should be limited to a single filter. **Example**: PDYN>**show filter-rule rule1** **rule-name type action frame rule** **rule1 ether forward dix 000AAD** **Display results:** **rule-name** – The name assigned to the rule. **type** – The rule type: – ether – The rule is based on Ethertypes. – ether-snap – The rule applies to Layer 2 SubNetwork Access Protocol (SNAP) traffic. **action** – The action to perform if the rule is satisfied: – forward – The packet is forwarded. – discard – The packet is discarded. **rule** – The rule criteria: The Ethertypes the rule affects. **frame** – DIX or SNAP ether frame type.

Show IGMP Configuration

show igmp {port_id} configuration
Minimum Access Level: **User**

The **show igmp configuration** command displays the configuration of the parameters related to the IGMP snooping and proxy functions.
 	
port_id – Specifies that the display should be limited to this specified port. If **all** is specified, all ports configurations are displayed.
 	
Example:
`PDYN>show igmp 1 configuration`
 	
`Port 1 IGMP Configuration:`
 	
`snooping enabled`
`leave-delay 300 msec`
`leave-join-delay 300 msec`
`query-count 3`
`query-wait-timer 1000 msec`
`proxy disabled`
`report-summary disabled`
 	
`PDYN>`

Show Interface Console

show interface console
Minimum Access Level: **User**

The **show interface console** command displays the configuration of the Console port on the unit.
 	
Example:
`PDYN# show interface console`
`rate 9600`
`data-bits8`
`stop-bits1`
`paritynone`
`PDYN# _`

Show Interface DSL Configuration

show interface dsl {port_id} configuration

Minimum Access Level: **User**

The **show interface dsl configuration** command displays information about all ADSL ports or a specified ADSL port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all ports.

configuration – Specifies that the port's configuration should be displayed.

Example:

```
PDYN# show interface dsl 1/1 configuration
      name    room_101
      state    enabled
      line length (kft)                          10
      transmission mode    multimode
      latency    interleaved
      linkupdown-trap    enabled
      pwrmgmt-state                      enabled
      pwrmgmt-enabling                   idle
      l0-time                                  10
      l2-time                                  10
      Line Profile Name            ADSL_LINE_PROFILE
      Alarm Profile Name           ALARM_PROFILE
      ADSL2 PSD Profile Name       Profile1
      ADSL2 Plus PSD Profile Name  Profile2

                                        Upstream                 Downstream
      behavior    adaptive              adaptive
      max-speed (kb/s)                  1000                      12000
      min-speed (kb/s)                  64                          256
      target-margin (dB)                3                            15
      min-snr-margin (dB)               0                             0
      max-snr-margin (dB)               6                             6
      max transmit power (dBm)          1                             1
      max interleave delay (ms)         16                            16

   P-G   VCC     Encap    VLAN
    1    0/35    llc-bridged  0001,0002, 0003,0004, 0005, 0006, 0007, 0008
    3    1/92    llc-bridged  0092
    4    0/40    llc-bridged  0140

    Priority Group          1         2         3         4
     queuing method         fifo      fifo      fifo      fifo
     pvid                   001       001       001       001
     priority               0           0         0         0
     acceptable-frame-type  all       all       all       all
     ingress-filtering      disabled  disabled  disabled  disabled
```

Show Interface DSL Far End

show interface dsl {port_id**} far-end**
Minimum Access Level: **User**
The **show interface dsl far-end** command displays endpoint information for the designated port. **port_id** – ADSL port id **Example**: PDYN# **show interface dsl 1/2 far-end** PDYN> **Vendor ID 0255** **Firmware Revision 01.00.12** **Serial Number 1234567**

Show Interface DSL Profile Alarm

Show interface dsl-profile-alarm {profile_name }
Minimum Access Level: **Administrator**
The **show interface dsl-profile-alarm** command displays the configuration of the specified alarm profile. **profile_name** – Identifies the ADSL alarm profile to be displayed. **Example**: PDYN# **show interface dsl-profile-alarm adsl_alarm_profile1**

Show Interface DSL Profile Line

show interface dsl-profile-line {profile_name }
Minimum Access Level: **Administrator**
The **show interface dsl-profile-line** command displays the configuration of the specified ADSL line profile. **profile_name** – Identifies the ADSL line profile to be displayed. **Example**: PDYN# **show interface dsl-profile-line adsl_line_profile1**

Show Interface DSL Profile PSD

show interface dsl-profile-psd {profile_name }
Minimum Access Level: **Administrator**
The **show interface dsl-profile-psd** command displays the configuration of the specified ADSL PSD profile. **profile_name** – Identifies the ADSL PSD profile to be displayed. **Example**: PDYN# **show interface dsl-profile-psd adsl_psd_profile1**

Show Interface DSL Performance

show interface dsl all performance

Minimum Access Level: **User**

The **show interface dsl performance** command displays performance information for all ADSL ports.

all – This is the port id. All ports for a slot are displayed. The only valid choice is “all”.

performance – Specifies that performance statistics for the specified port should be displayed.

Example:
PDYN# **show interface dsl all performance**

```
ADSL  ports              1    2    3    4    5    6    7    8
   Status                    UP   DN   UP   UP   UP   UP   UP   UP
   Line Rate Up8000 8000 8000 8000 8000 8000 8000 8000
   Line Rate Down8000 8000 8000 8000 8000 8000 8000 8000
   Margin UP           15   15   15   15   15   15   15   15
   Margin Down  15   15   15   15   15   15   15   15
   AttainableRate Up8000 8000 8000 8000 8000 8000 8000 8000
   AttainableRate Down8000 8000 8000 8000 8000 8000 8000 8000
   Attenuation Up  10   10   10   10   10   10   10   10
   Attenuation Down  10   10   10   10   10   10   10   10

   TX Power       8    8    8    8    8    8    8    8
   RX Level            -4   -4   -4   -3   -3   -2   -1   -5

 ADSL  ports              9   10   11   12   13   14   15   16
   Status                    UP   DN   UP   UP   UP   UP   UP   UP
   Line Rate Up8000 8000 8000 8000 8000 8000 8000 8000
   Line Rate Down8000 8000 8000 8000 8000 8000 8000 8000
   Margin UP           15   15   15   15   15   15   15   15
   Margin Down  15   15   15   15   15   15   15   15
   AttainableRate Up8000 8000 8000 8000 8000 8000 8000 8000
   AttainableRate Down8000 8000 8000 8000 8000 8000 8000 8000
   Attenuation Up  10   10   10   10   10   10   10   10
   Attenuation Down  10   10   10   10   10   10   10   10
   TX Power       8    8    8    8    8    8    8    8

 ADSL  ports             17   18   19   20   21   22   23   24
   Status                    UP   DN   UP   UP   UP   UP   UP   UP
   Line Rate Up8000 8000 8000 8000 8000 8000 8000 8000
   Line Rate Down8000 8000 8000 8000 8000 8000 8000 8000
   Margin UP           15   15   15   15   15   15   15   15
   Margin Down  15   15   15   15   15   15   15   15
   AttainableRate Up8000 8000 8000 8000 8000 8000 8000 8000
   AttainableRate Down8000 8000 8000 8000 8000 8000 8000 8000
   Attenuation Up  10   10   10   10   10   10   10   10
   Attenuation Down  10   10   10   10   10   10   10   10
   TX Power       8    8    8    8    8    8    8    8
```

Show Interface DSL Rates

show interface dsl {port_id**} rates**

Minimum Access Level: **User**

The **show interface dsl rates** command displays the data rate for all ADSL ports.

port_id – Must be all **all.**

rate – Specifies that the current rate of the specified port should be displayed.

Example:

PDYN# **show interface dsl all rates**

PORT	UP	DOWN	PORT	UP	DOWN
1	1000	12000	13	1000	12000
2	1000	12000	14	1000	12000
3	1000	12000	15	1000	12000
4	1000	12000	16	1000	12000
5	1000	12000	17	1000	12000
6	1000	12000	18	1000	12000
7	1000	12000	19	1000	12000
8	1000	12000	20	1000	12000
9	1000	12000	21	1000	12000
10	1000	12000	22	1000	12000
11	1000	12000	23	down	down
12	1000	12000	24	down	down

PDYN>_

Display results:

Line Rate Up – The upstream data rate of the link is up.
If the link is down, one of the following will be displayed:
– Dsbl – The port is administratively disabled.
– Down – The link is down.

Line Rate Down – The downstream data rate.
If the link is down, one of the following will be displayed:
– Dsbl – The port is administratively disabled.
– Down – The link is down.

Show Interface DSL Statistics ATM

Show interface dsl {port_id**} statistics-atm [bucket_number]**

Minimum Access Level: **User**

The **show interface dsl statistics-atm** command displays ATM statistics for the specified ADSL port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all ports.

bucket_number – Optional parameter to specify which statistic interval (1..96) to display. If no bucket number is specified then all intervals are displayed.

Example:
PDYN# show interface dsl 1/2 statistics-atm

```
                                ATM STATISTICS

Interval         Rx-Cells        Tx Cells        HEC             OCD
current         xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  1             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  2             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  3             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  .             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  .             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  .             xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx
  96            xxxxxxxx       xxxxxxxx       xxxxxxxx      xxxxxxxx

                              ATM PVC Performance

VCC                           0/35
  total cells sent            xxxxxx
  total cells received        xxxxxx

VCC                           0/40
  total cells sent            xxxxxx
  total cells received        xxxxxx
```

Display results:

ATM Statistics (Up and Down denote values for the upstream and downstream directions):
- **total cells rx –** Total number of ATM cells received.
- **total cells tx –** Total number of ATM cells sent.
- **total HEC** – Number of cells from the CPE whose headers were corrected.
- **total OCD** – Number of Out of Cell Delineation events on the link from the CPE.

ATM PVC Performance
- **total cells sent** – Number of ATM PVC Cells sent by the port.
- **total cells received** – Number of ATM PVC cells received on the port.

Show Interface DSL Statistics Line Far End

Show interface dsl {port_id**} statistics-line-far-end [bucket_number]**

Minimum Access Level: **User**

The **show interface dsl statistics-line** command displays statistics for the specified ADSL port.

port_id – Specifies that the display should be limited to this specified port.

bucket_number – Optional parameter to specify the maximum interval (1..96) to display. If no bucket number is specified then all intervals are displayed. If bucket_number is entered, then all buckets up to the specified bucket are displayed. The current interval is always displayed.

Example:
PDYN# show interface dsl 1/2 statistics-line-far-end

```
                    FAR END ADSL STATISTICS

Interval  LOFS      LOSS     LPRS     ES        SES       UAS
 current  xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  1       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  2       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  3       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  .       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  .       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  .       xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  95      xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
  96      xxxxxxxx  xxxxxxxx xxxxxxxx xxxxxxxx  xxxxxxxx  xxxxxxxx
```

Display results:

ES (errored seconds) – Seconds during which an error occurred.

SES (severely errored seconds) – Seconds during which there was a major error such as an out of frame condition, or a bit error density greater than 10^{-2}.

LOFS (loss of frame seconds) - Counts accrued after loss of frame detected

LOSS (loss of signal seconds) – Counts accrued after loss of signal detected

LPRS (loss of power) - Counts accrued after loss of power detected

US (unavailable seconds) - Counts of unavailable seconds.

Show Interface DSL Statistics Line Near End

Show interface dsl {port_id**} statistics-line-near-end [bucket_number]**

Minimum Access Level: **User**

The **show interface dsl statistics-line** command displays statistics for the specified ADSL port.

port_id – Specifies that the display should be limited to this specified port.

bucket_number – Optional parameter to specify the maximum interval (1–96) to display. If no bucket number is specified then all intervals are displayed. If bucket_number is entered, then all buckets up to the specified bucket are displayed. The current interval is always displayed.

Example:
PDYN# show interface dsl 1/2 statistics-line-near-end

```
                    NEAR END ADSL STATISTICS

Interval   LOFS       LOSS      LOLS      ES         SES          UAS
current    xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  1        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  2        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  3        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  .        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  .        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  .        xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  95       xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
  96       xxxxxxxx   xxxxxxxx  xxxxxxxx  xxxxxxxx   xxxxxxxx     xxxxxxxx
```

Display results:

ES (errored seconds) – Seconds during which an error occurred.
SES (severely errored seconds) – Seconds during which there was a major error such as an out of frame condition, or a bit error density greater than 10^{-2}.
LOFS (loss of frame seconds) - Counts accrued after loss of frame detected
LOSS (loss of signal seconds) – Counts accrued after loss of signal detected
LOLS (loss of link) - Counts accrued after loss of link detected
UAS (unavailable seconds) – Counts of unavailable seconds.

Show Interface DSL Status

show interface dsl {port_id**} status**
Minimum Access Level: **User**
The **show interface dsl status** command displays the status for the specified ADSL port. **port_id** – Specifies that the display should be limited to this specified port. **Example**: PDYN# show interface dsl 1/2 status **link status Up** **link up time ddd hh:mm:ss** **transmission mode dmt** **latency interleaved** **near end alarm state OK** **far end alarm state OK** **ADSL status: Near End Far End** **rate (Kbps) xxxxx xxxxx** **attainable rate (Kbps) xxxxx xxxxx** **previous rate xxxxxx xxxxxx** **margin (dB) xx xx** **attenuation (dB) xx xx** **current transmit power (dB) xx xx** **ADSL line init attempts xxx**

show interface dsl status, *continued*

Display results:
link status – The status of the link:
– dormant – The link has not yet trained up.
– down – The link is down.
– notConnected – The link is training.
– unknown – The link's status cannot be determined.
– up – The link is enabled and ready to send packets.
link up time – The number of days, hours, minutes, and seconds the interface has been active.
transmission mode – The line code used on the port: DMT, ANSI, or G.lite.
latency – The buffer setting for the port: fast or interleaved.
near end alarm state – shows any alarms detected on the DSL Line. Multiple alarms may be displayed.
OK – No Alarm
LOF – Loss of Frame
LOS – Loss of Signal
LOL – Loss of Link
LOSQ – Loss of Signal quality

far end alarm state – shows any alarms detected on the far end (CPE) . Multiple alarms may be displayed.
OK – No Alarm
LOF – Loss of Frame
LOL – Loss of Link
LOP – Loss of Power
LOSQ – Loss of Signal quality

ADSL Status (Up and Down denote values for the upstream and downstream directions):
margin – The amount of noise margin that can be tolerated, in dB.
rate – The data rate.
attainable rate – An estimate of the maximum attainable rate.
attenuation – The decrease of intensity of the signal across the link, in dB.
previous rate – Previous Rate.
margin (dB) – Margin.
current transmit power (dB) – Transmit Power.
ADSL line init attempts – ADSL Line init attempts.

Show Interface SHDSL Configuration

show interface shdsl {port_id**} configuration**

Minimum Access Level: **User**

The **show interface shdsl configuration** command displays information about all SHDSL ports or a specified SHDSL port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all ports.

configuration – Specifies that the port's configuration should be displayed.

Example:
PDYN# **show interface shdsl 1 configuration**

```
SHDSL Port 1 Configuration:

    Name                          room_101
    State                         up
    Line mode                     co
    line length (kft)             10
    linkupdown-trap               enabled
    line profile name             shdsl_line_profile_1
    alarm profile name            shdsl_alarm_profile_1
    repeaters configured          3
    repeaters discovered          1

    P-G      VCC      Encap          VLAN
    1        0/35     llc-bridged    0001,0002, 0003,0004, 0005, 0006
    3        1/92     llc-bridged    0092
    4        0/40     llc-bridged    0140

    Priority Group             1         2         3         4
      queuing method           fifo      fifo      fifo      fifo
      pvid                     001       001       001       001
      priority                 0         0         0         0
      acceptable-frame-type    all       all       all       all
      ingress-filtering        disabled  disabled  disabled  disabled

    Priority Group             5         6         7         8
      queuing method           fifo      fifo      fifo      fifo
      pvid                     001       001       001       001
      priority                 0         0         0         0
      acceptable-frame-type    all       all       all       all
     ingress-filtering         disabled  disabled  disabled  disabled
```

Show Interface SHDSL Performance

show interface shdsl {all} performance

Minimum Access Level: **User**

The **show interface shdsl performance** command displays performance information for all SHDSL ports.

all – This is the port id. All ports are displayed. The only valid choice is “all”.

performance – Specifies that performance statistics for the specified port should be displayed.

Example:
PDYN# **show interface shdsl all performance**

```
SHDSL Performance

   SHDSL Ports                      1     2     3     4     5     6     7     8
      Status                       UP     -    UP    UP    UP    UP    UP    UP
      Line Rate          (kbps)  2312     - 2312 2312 2312 2312 2312 2312
      Attainable Rate    (kbps)  4112     - 4112 4112 4112 4112 4112 4112
      Relative Capacity  (%)       56     -    56    56    56    56    56    56
      SNR Margin 1       (dB)      15     -    15    15    15    15    15    15
      SNR Margin 2       (dB)      15     -    15    15    15    15    15    15
      Loop Attenuation 1 (dB)      10     -    10    10    10    10    10    10
      Loop Attenuation 2 (dB)      10     -    10    10    10    10    10    10

   SHDSL Ports                      9    10    11    12    13    14    15    16
      Status                       UP    UP    UP    UP    UP    UP    UP    UP
      Line Rate          (kbps)  2312  2312  2312  2312  2312  2312  2312  2312
      Attainable Rate    (kbps)  4112  4112  4112  4112  4112  4112  4112  4112
      Relative Capacity  (%)       56    56    56    56    56    56    56    56
      SNR Margin 1       (dB)      15    15    15    15    15    15    15    15
      SNR Margin 2       (dB)      15    15    15    15    15    15    15    15
      Loop Attenuation 1 (dB)      10    10    10    10    10    10    10    10
      Loop Attenuation 2 (dB)      10    10    10    10    10    10    10    10

   SHDSL Ports                     17    18    19    20    21    22    23    24
      Status                       UP    DN    UP    UP    UP    UP    UP    UP
      Line Rate          (kbps)  2312  2312  2312  2312  2312  2312  2312  2312
      Attainable Rate    (kbps)  4112  4112  4112  4112  4112  4112  4112  4112
      Relative Capacity  (%)       56    56    56    56    56    56    56    56
      SNR Margin 1       (dB)      15    15    15    15    15    15    15    15
      SNR Margin 2       (dB)      15    15    15    15    15    15    15    15
      Loop Attenuation 1 (dB)      10    10    10    10    10    10    10    10
      Loop Attenuation 2 (dB)      10    10    10    10    10    10    10    10
```

Note: “-“ indicates that the port doesn’t exist as it one of the wire pairs and not the first wire pair.

Show Interface SHDSL Rates

show interface shdsl {port_id**} rates**

Minimum Access Level: **User**

The **show interface shdsl rates** command displays the data rate for all SHDSL ports.

port_id – Must be all **all.**

rate – Specifies that the current rate of the specified port should be displayed.

Example:

PDYN# **show interface shdsl all rates**

```
SHDSL Rates (kbps)

      PORT   RATE       PORT   RATE
      1      2312       13     2312
      2      ----       14     2312
      3      2313       15     2312
      4      2312       16     2312
      5      2312       17     2312
      6      2312       18     2312
      7      2312       19     2312
      8      2312       20     2312
      9      2312       21     2312
      10     2312       22     2312
      11     2312       23     Down
      12     2312       24     Dsbl
```

Note: "-" indicates that the port doesn't exist as it one of the wire pairs and not the first wire pair.

Display results:

Rate – The data rate of the link.
If the link is down, one of the following will be displayed:
– Dsbl – The port is administratively disabled.
– Down – The link is down.

Show Interface SHDSL Segment Alarm

show interface shdsl {port_id**} segment-alarm {**stu-c | stu-r | rep-1 | rep-2 | rep-3 | rep-4 | rep-5 | rep-6 | rep-7 | rep-8**} {**cust | net**} {**pair-1 | pair-2 | pair-3 | pair-4**}**

Minimum Access Level: **User**

The **show interface shdsl segment-alarm** command displays the name of the alarm profile associated with the unit, unit side, and wire pair for a specified SHDSL port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all ports.

Unit:

- **stu-c** – SHDSL centeral site terminal unit.
- **stu-r** – SHDSL remote site terminal unit.
- **rep-1 ... rep-8** – SHDSL regenerator/repeater unit.

The side of the unit:

- **cust** – The side of the unit facing the customer terminal equipment
- **net** – The side of the unit facing the central office

The wire pair:

- **pair-1 –** First wire pair
- **pair-2 –** Second wire pair
- **pair-3 –** Third wire pair
- **pair-4 –** Fourth wire pair

Example:

PDYN# **show interface shdsl 1 segment-alarm rep-1 cust pair-1**

```
SHDSL Port 1 Segment Alarm
    Rep-1, cust, pair-1: red_alarm_profile
```

Show Interface SHDSL Statistics-ATM

Show interface shdsl {port_id**} statistics-atm [**bucket_number**]**

Minimum Access Level: **User**

The **show interface shdsl statistics-atm** command displays ATM statistics for the specified SHDSL port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all ports.

bucket_number – Optional parameter to specify the maximum interval (1–96) to display. If no bucket number is specified then all intervals are displayed. If bucket_number is entered, then all buckets up to the specified bucket are displayed. The current interval is always displayed.

Example:
PDYN# show interface shdsl 2 statistics-atm

```
ATM STATISTICS – Port 2

  Interval     Rx-Cells    Tx Cells    HEC         OCD
  current      xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  1            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  2            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  3            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  .            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  .            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  .            xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx
  96           xxxxxxxx    xxxxxxxx    xxxxxxxx    xxxxxxxx

 ATM PVC STATISTICS – Port 2

  VCC                          0 / 35
  total cells sent             xxxxxx
  total cells received         xxxxxx

  VCC                          0 / 40
  total cells sent             xxxxxx
  total cells received         xxxxxx
```

Display results:

ATM Statistics (Up and Down denote values for the upstream and downstream directions):
- **total cells rx –** Total number of ATM cells received.
- **total cells tx –** Total number of ATM cells sent.
- **total HEC** – Number of cells from the CPE whose headers were corrected.
- **total OCD** – Number of Out of Cell Delineation events on the link from the CPE.

ATM PVC Performance
- **total cells sent** – Number of ATM PVC Cells sent by the port.
- **total cells received** – Number of ATM PVC cells received on the port.

Show Interface SHDSL Statistics Line

Show interface shdsl {port_id**} statistics-line {**stu-c | stu-r | rep-1 | rep-2 | rep-3 | rep-4 | rep-5 | rep-6 | rep-7 | rep-8**} {**cust | net**} {**pair-1 | pair-2 | pair-3 **|** pair-4**} [**bucket_number**]**

Minimum Access Level: **User**

The **show interface shdsl statistics-line** command displays statistics for the specified SHDSL port.
port_id – Specifies that the display should be limited to this specified port.

Unit:

- **stu-c** – SHDSL centeral site terminal unit.
- **stu-r** – SHDSL remote site terminal unit.
- **rep-1 ... rep-8** – SHDSL regenerator/repeater unit.

The side of the unit:

- **cust** – The side of the unit facing the customer terminal equipment
- **net** – The side of the unit facing the central office

The wire pair:

- **pair-1 –** First wire pair
- **pair-2 –** Second wire pair
- **pair-3 –** Third wire pair
- **pair-4 –** Fourth wire pair

bucket_number – Optional parameter to specify the maximum interval (1–96) to display. If no bucket number is specified then all intervals are displayed. If bucket_number is entered, then all buckets up to the specified bucket are displayed. The current interval is always displayed.

Example:
PDYN# show interface shdsl 2 statistics-line-rep-1 net pair-1

```
SHDSL Port 2 rep-1 net pair-1 STATISTICS

   Interval   ES          SES         CV          LOSWS       UAS
   current    xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   1          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   2          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   3          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   .          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   .          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   .          xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   95         xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
   96         xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx  xxxxxxxxxx
```

Display results:

ES (errored seconds) – Count of Errored Seconds.

SES (severely errored seconds) – Count of Severely Errored Seconds during which there was a major error such as an out of frame condition, or a bit error density greater than 10^{-2}.

CV (code violation seconds) – Count of seconds during which there was a CRC anomaly.

LOSWS (loss of sync word seconds) – Count of Loss of Sync Word seconds.

UAS (unavailable seconds) – Count of Unavailable Seconds

Show Interface SHDSL Status

Show interface shdsl {port_id**} status {**stu-c	stu-r	rep-1	rep-2	rep-3	rep-4	rep-5	rep-6	rep-7	rep-8**} {**cust	net**}**
Minimum Access Level: **User**
The **show interface** shdsl **status** command displays the status for the specified unit, unit side, and SHDSL port. **port_id** – Specifies that the display should be limited to this specified port. **Unit:** — **stu-c** – SHDSL centeral site terminal unit. — **stu-r** – SHDSL remote site terminal unit. — **rep-1 ... rep-8** – SHDSL regenerator/repeater unit. **The side of the unit:** — **cust** – The side of the unit facing the customer terminal equipment — **net** – The side of the unit facing the central office

show interface dsl status, *continued*

Example:
PDYN# show interface SHDSL 2 status stu-c cust

```
SHDSL Port 2 stu-c cust Status:

    link status                    up
    link up time                   ddd hh:mm:ss
    alarm state 1                  OK
    alarm state 2                  OK
    rate                (Kbps)     xxxxx
    attainable rate     (Kbps)     xxxxx
    snr margin 1        (dB)       xx
    snr margin 2        (dB)       xx
    loop attenuation 1  (dB)       xx
    loop attenuation 2  (dB)       xx
```

Note that the port at the central site for port 2 is configured for a four-wire interface. As a result, there is an SNR margin and a loop attenuation associated with each wire pair.

Display results:
link status – The status of the link:
- up – The link is enabled and ready to send packets.
- down – The link is down.
- testing – The link is under a test such as loopback.
- unknown – The link's status cannot be determined.
- dormant – The link has not yet trained up.
- not present – The link doesn't exist. It might be part of an adjacent wire pair.

link up time – The number of days, hours, minutes, and seconds the interface has been active.
near end alarm state – shows any alarms detected on the DSL Line. Multiple alarms may be displayed.

OK	– No Alarm
DC	– DC Continuity Fault
SNR	– SNR Margin threshold exceeded
ATTEN	– Loop Attenuation threshold exceeded
LOSW	– Indicates a forward LOSW alarm
PROTO	– Indicates an endpoint failure during initialization due t imcompatible protocol used by the paired endpoint.
NO NEIGH	– Indicates an endpoint failure during initialization due to no activation sequence detected from the paired endpoint
LB	– Loopback active

far end alarm state – shows any alarms detected on the far end (CPE) . Multiple alarms may be displayed. Alarms are the same as those for near end alarm state

SHDSL Status (Up and Down denote values for the upstream and downstream directions):
rate – The data rate.
attainable rate – An estimate of the maximum attainable rate.
Snr margin – The amount of noise margin that can be tolerated, in dB.
Loop attenuation – The decrease of intensity of the signal across the link, in dB.

Show Interface SHDSL Unit Inventory

show interface shdsl {port_id**} unit-inventory {**stu-c | stu-r | rep-1 | rep-2 | rep-3 | rep-4 | rep-5 | rep-6 | rep-7 | rep-8**}**

Minimum Access Level: **User**

The **show interface shdsl unit-inventory** command displays inventory information for the designated unit.

port_id – SHDSL port id

Unit's information to display inventory information:

- **stu-c** – SHDSL centeral site terminal unit.
- **stu-r** – SHDSL remote site terminal unit.
- rep-1 ... rep-8 – SHDSL regenerator/repeater unit.

Example:

```
PDYN# show interface shdsl 2 unit-inventory rep-1

SHDSL Port 2 rep-1 Unit Inventory:

    Vendor ID             PRDN
    Firmware Revision     01.00.12
    Serial Number         1234567
```

Show Interface SHDSL Profile-Alarm

Show interface shdsl-profile-alarm {profile_name**}**

Minimum Access Level: **Administrator**

The **show interface shdsl-profile-alarm** command displays the configuration of the specified alarm profile.

profile_name – Identifies the SHDSL alarm profile to be displayed.

Example:
PDYN# **show interface shdsl-profile-alarm shdsl_alarm_profile1**

Show Interface SHDSL Profile-Line

show interface shdsl-profile-line {profile_name**}**
Minimum Access Level: **Administrator**
The **show interface shdsl-profile-line** command displays the configuration of the specified SHDSL line profile. **profile_name** – Identifies the SHDSL line profile to be displayed. **Example**: PDYN# **show interface shdsl-profile-line shdsl_line_profile1**

Show Interface Ethernet Clear Statistics

show interface ethernet {port_id**} clear-statistics**
Minimum Access Level: **User**
The **show interface ethernet clear-statistics** command resets statistics for all Ethernet ports or a specified port. **port_id** – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all Ethernet ports. **clear-statistics** – Resets to zero the statistics for this session. This affects only the statistics displayed using the **show** command during this session. All statistics continue to be maintained. **Example**: PDYN# **show interface ethernet eth1 clear-statistics**

Show Interface Ethernet Configuration

show interface ethernet {port_id**} configuration**
Minimum Access Level: **User**
The **show interface ethernet configuration** command displays configuration information for all Ethernet ports or a specified port. **port_id** – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all Ethernet ports. **configuration** – Specifies that the port's configuration should be displayed. **Example**: PDYN# **show interface ethernet eth3 configuration** **flow-controlenabled** **mode manual** **rate 10fulldup** **xover mdi** **pvid 125** **priority 1** **acceptable-frame-type all** **ingress-filtering enabled**

Show Interface Ethernet Statistics

show interface ethernet {port_id} **statistics**

Minimum Access Level: **User**

The **show interface ethernet statistics** command displays statistics for all Ethernet ports or a specified port.

port_id – Specifies that the display should be limited to this specified port. If **all** is specified, information is displayed for all Ethernet ports.

statistics – Specifies that the error statistics for the specified port should be displayed.

Example:

```
PDYN# show interface ethernet eth1 statistics
   ethernet link            up
   current link up time     ddd hh:mm:ss
   rate              100 Mb/s
   mode              auto
   connector type    rj45

   Ethernet statistics:
   total bytes Rx              xxxxxx
   total bytes Tx              xxxxxx
   total frames Rx             xxxxxx
   total frames Tx             xxxxxx
   total broadcast Rx          xxxxxx
   total multicast Rx          xxxxxx
   total frames discarded:     xxxxxx
PDYN#
```

ethernet link – The status of the link:
- dormant – The link has no device attached.
- down – The link is down.
- unknown – The link's status cannot be determined.
- up – The link is enabled and ready to send packets.

current link up time – The number of days, hours, minutes, and seconds the interface has been active.
rate – The data rate of the port.
mode – The duplex mode: full duplex or half duplex.
connector type – The connector used for the link: rj45 or fiber.
total bytes rx – Number of bytes received on the port.
total bytes tx – Number of bytes transmitted by the port.
total frames rx – Number of bytes received on the port.
total frames tx – Number of bytes transmitted by the port.
total frames discarded – Number of frames discarded by the port.

Show Proxy ARP NHR

show proxy-arp nhr
Minimum Access Level: **User**
The **show proxy-arp nhr** command displays the address of the default Next Hop Router in the user data domain. **Example**: PDYN# **show proxy-arp nhr** **nhr address 10.10.11.1** PDYN#_ Display results: **nhr address** – The IP address of the default Next Hop Router in the user data domain.

Show Management ARP Table

show management arp
Minimum Access Level: **User**
The **show management arp** command displays the arp table for the management processor. **Example**: PDYN# **show management arp** **ip address mac address type** **135.90.1.1 11-22-33-44-55-66-77-88 dynamic** PDYN#_

Show Management Default Gateway Address

show management default-gateway
Minimum Access Level: **User**
The **show management default-gateway** command displays the IP address of the next hop router for the management traffic. **ip_address** – Specifies the IP address of the default gateway for the management ports.. **Example**: PDYN# **show management default-gateway** **Management default-gateway is 137.90.127.1** PDYN#_

Show Management Inband

show management inband
Minimum Access Level: **User**
The **show management inband** address command displays the settings for the inband management. **Example**: PDYN# **show management inband** **ip address 10.10.11.2** **subnet mask 255.255.255.0** PDYN#_ Display results: **ip address** – The IP address of the inband management channel **subnet mask** – The subnet mask for the IP address of the inband management channel.

Show Management Out of Band

show management out-of-band
Minimum Access Level: **User**
The **show management out-of-band** address command displays the settings for the out of band management port. **Example**: PDYN# **show management out-of-band** **ip address 10.10.11.2** **subnet mask 255.255.255.0** PDYN#_ Display results: **ip address** – The IP address of the out-of-band management channel **subnet mask address** – The subnet mask for the IP address of the out of band management channel

Show Management Route

show management route
Minimum Access Level: **User**
The **show management route** command displays all of the management routes that have been configured. **Example**: PDYN# **configure management route show** **Destination Mask Gateway** **137.90.127.3 255.255.255.0 137.90.0.1** **137.90.128.1 255.255.255.0 137.90.0.1** PDYN#_

Show Management SNMP Configuration

show management snmp configuration

Minimum Access Level: **Administrator**

The **show management snmp configuration** command displays the settings for SNMP access.

Example:

```
PDYN# show management snmp configuration
   state              enabled
   access-validation  enabled
   public-string      someaccess
   private-string     mostaccess
   nms-address 10.10.10.1 10.10.2.2
   nms-traps   10.10.2.2  10.10.10.1   135.90.1.1
PDYN#_
```

Display results:
state – The availability of SNMP access (disabled or enabled).
access-validation – Whether access validation is in force (disabled or enabled).
public-string – The community string for read-only access.
private-string – The community string for read-write access.
nms-address – The addresses of NMS workstations permitted access if access validation is enabled.
nms-traps – The addresses to which traps are sent.

Show Management SNMP Statistics

show management snmp statistics

Minimum Access Level: **User**

The **show management snmp statistics** command displays the settings for SNMP access.

Example:

```
PDYN# show management snmp statistics

Total Packets received:    xxxxxx
Get Requests:              xxxxxx
Get Next Requests:         xxxxxx
Set Requests:              xxxxxx
Get Responses:             xxxxxx

Bad Versions:              xxxxxx
Bad Community Names:       xxxxxx
Bad Community Users:       xxxxxx
ASN.1 Parse Errors:        xxxxxx
PDYN#_
```

Show Multicast

show multicast statistics

Minimum Access Level: **User**

The **show multicast statistics** command displays various IGMP statistics for each port. The purpose of this command is to show that the multicast stream is being sent to the host on the DSL port.

Example:

PDYN>show multicast statistics

```
   Multicast        DSL         Multicast       IGMP          IGMP          IGMP
   IP Address      Port         Packets Sent    Leaves        Reports       Queries
    224.0.0.5        1          xxxxxxxxxx     xxxxxxx       xxxxxxx       xxxxxxx
    224.0.0.5        2          xxxxxxxxxx     xxxxxxx       xxxxxxx       xxxxxxx
    224.0.0.7       10          xxxxxxxxxx     xxxxxxx       xxxxxxx       xxxxxxx
PDYN>
```

Display results:

Multicast IP Address - IP address of the multicast group
DSL Port - DSL port that is a member of the multicast group.
Multicast Packets - Total number of Multicast packet sent on the DSL port.
Leaves - Total number of leave messages sent or received on the DSL port.
Reports - Total number of report messages sent or received on the DSL port.
Queries - Total number of query messages sent or received on the DSL port.

Show Scheduled Backup

show scheduled backup
Minimum Access Level: **User**
The **show scheduled backup** command displays the settings for the automatic (scheduled) backup. **Example**: PDYN# **show scheduled backup** **state enabled** **server xxx.xxx.xxx.xxx** **filename file name** **mode fixed** **time Monday 3 am** PDYN# Display results: **state** – The availability of the scheduler (disabled or enabled). **server** – The address of the FTP server used for automatic configuration backup. **filename** – The file containing the backup. **mode** – The type of backup: – dynamic – Backup occurs upon any configuration change. – fixed – Backup occurs at a specified day and time. **time** – For fixed mode, the day and time backups occur.

Show Security IP

show security ip [port_id**]**

Minimum Access Level: **User**

The **show security ip** command displays the settings for IP address security.

port_id – Specifies the port to be displayed. The possible forms of the identifier are described in System Terminology in Chapter 2, Terminology and Conventions. If **all** is specified or the parameter is omitted, information for all ports is displayed.

Example:
PDYN# **show security ip 17**

```
       Port 17
          State: Enabled
          Maximum IP addresses: 5

          IP Address              NHR        Type
             135.90.28.10    135.90.28.1     static
             135.90.28.11    135.90.28.1      dynamic
             135.90.28.12    135.90.28.1     dynamic
PDYN#
```

Display results:
State – Whether IP security is in effect (disabled or enabled).
Maximum IP addresses – Maximum number of IP addresses allowed on the port.
Port – DSL port ID.
IP Address – IP address allowed on the port.
NHR – Next Hop Router for the port.
Type – The source of the address:
– dynamic – The address was learned.
– static – The address was added to the table of allowed addresses by the administrator.

Show Security MAC

show security mac [port_id**]**
Minimum Access Level: **User**
The **show security mac** command shows the settings for MAC address security feature. **port_id** – Specifies the port to be displayed. The possible forms of the identifier are described in System Terminology in Chapter 2, Terminology and Conventions. If **all** is specified or the parameter is omitted, information for all ports is displayed. **Example**: PDYN# **show security mac 22-24** **State: Enabled** **Port MAC Address vlan** **22 11-22-33-44-55-66 10** **23 20** **24 77-88-99-00-11-22 30** PDYN# Display results: **State** – Whether the MAC security feature is in effect (disabled or enabled). **Port** – DSL port ID. **MAC Address** – MAC address allowed to send data to the port.

Show SNTP

show sntp
Minimum Access Level: **User**
The **show sntp** command displays the configuration parameters for SNTP. Example: PDYN>show sntp **state enabled** **ip address xxx.xxx.xxx.xxx** **interval 24 hours** PDYN> **Display results:** **state** – Whether the unit makes SNTP requests: – disable – The unit does not make SNTP requests. – enable – The unit updates the date and time periodically by sending requests to an SNTP server. **ip address** – The address defined for the SNTP server. **interval** – The number of hours between SNTP requests.

Show Syslog

show syslog
Minimum Access Level: **User**
The **show syslog** command displays the configuration and contents of the system log. **Example**: PDYN> **show syslog** **threshold: information** **rate-limiting: disabled** **Priority Date and Time Message** **information Aug 7, 19:45:11 FTP download completed** **alert Aug 7, 19:50:30 Link reset on port 49** **alert Aug 9, 10:30:45 Link reset on port 49** PDYN> **Display results:** **Threshold** – The level of messages written to the log: – emergency – Only emergency messages are written to the system log. – alert – Emergency and alert messages are written to the system log. This is the default. – information – Emergency, alert, and informational messages are written to the system log. – debug – Emergency, alert, informational, and debugging messages are written to the system log. **Rate-limiting** – Whether rate limiting (suppression of duplicate messages) is in effect (disabled or enabled). **Priority** – The level of the message. **Date and Time** – The date and time the message was written. **Message** – The message text.

Show Syslog-Remote

show syslog-remote
Minimum Access Level: **User**

The **show syslog-remote** command displays the configuration of the remote system log.
 	
Example:
`PDYN> show syslog-remote`
`  state          enabled`
`  ip address     135.90.1.1`
`  udp port       153`
`PDYN>_`
 	
Display results:
state - Shows if the syslog-remote feature is enabled.
IP Address – The IP address of the syslog-remote syslog server.
UDP port – The UDP port of the syslog-remote syslog server.

Show System Information

show system information
Minimum Access Level: **User**
The **show system information** command shows the system administrative information. **Example**: PDYN> **show system information** **System Name Paradyne_demo_system** **System Location main_building_basement** **System Contact MiguelA** **FW Revision 1.0.0** **Model 2611-A1-420** **Serial Number 1234567** **MAC Address 11-22-33-44-55-66** **Main card** **HW rev: 5275-81E** **PLD Rev: 1.0.0** **MAUI card** **HW rev: 5276-81A** **PLD Rev: 1.0.0** **POTS Card** **HW rev: 5278-81A** PDYN>

Show System Options

show system options
Minimum Access Level: **User**
The **show system options** command shows the system configuration. **Example**: PDYN> show system options **test-time-out 5 minutes** **date-display-format dd/mm/yy** **inactivity-time-out 5 minutes** **alarm threshold temperature high 120 C** **alarm threshold temperature low 10 C** **spectrum management enabled** PDYN> Display results: **test-time-out** – The amount of time a disruptive test is allowed to run. **date-display-format** – The format of dates displayed and accepted by the system: – dd/mm/yy – Day, month, year. – mm/dd/yy – Month, day, year. **inactivity-time-out** – The amount of time before an inactive CLI session is terminated. **spectrum management** – Tells if the DSL line is using spectrum management. **alarm threshold temperature high** - High alarm threshold for temperature sensor **alarm threshold temperature low** – Low alarm threshold for temperature sensor

Show System Self-Test

show system self-test
Minimum Access Level: **User**
The **show system self-test** command shows the self-test results for the unit.

Example:

```
PDYN> show system self-test

 Unit                  Pass

 CPU                   Pass
 Real Time Clock       Pass
 Fan and Temp Control  Pass
 I2C Bus               Pass
 Serial Eeprom         Pass
 Heater                Pass

 ethernet 1            Pass
 ethernet 2            Pass
 ethernet 2            Pass

 DSL ports   1  2  3  4  5  6  7  8  9 10 11 12
      Status P  P  P  P  P  P  P  P  P  P  P  P

 DSL ports  13 14 15 16 17 18 19 20 21 22 23 24
     Status  P  P  P  P  P  P  P  P  P  P  P  P

PDYN>
```

Show System Status

show system status
Minimum Access Level: **User**
The **show system status** command shows the state of alarms throughout the system. **Example**: PDYN>show system status **Status Up** **Name xxxxxxxxxxx** **Location xxxxxxxxxxxxxxxx** **Contact xxxxxxxxxxxxxxxxxx** **Up Time ddd:hh:mm** **selftest pass** **fan 1 alarm** **fan 2 alarm** **intake temperature alarm (70 C)** **internal temperature alarm (99 C)** **input relay open** **Ethernet Ports eth1 eth2 eth3** **up up up** **DSL Links 1 2 3 4 5 6 7 8 9 10 11 12** **Status D . U . U U U U . D D D** **13 14 15 16 17 18 19 20 21 22 23 24** **U U U U U U U U U U U U** Display results: **selftest** – The result of the power-on self-test (fail or pass). **uplink** – The state of the uplink (blank or alarm). **fan n** – The state of the fans 1-2 (blank or alarm). **temperature** – The system intake and internal temperature, in Centigrade. If there are multiple sensors, this will be the temperature sensor that is most out of range. Under DSL port numbers 1–24 is one of the following: **– D**: Port is down. **– U**: Port is up. **– .** (period): Port is disabled.

Show Technical-Support

show technical-support
Minimum Access Level: **User**
The **show technical-support** command shows contact information similar to that in Warranty, Sales, Service, and Training Information at the beginning of the user's manual. Example: PDYN> show technical-support **Warranty, Sales, Service, and Training Information** **Contact your local sales representative, service representative,** **or distributor directly for any help needed.** **For additional information concerning warranty, sales, service,** **repair, installation, documentation, training, distributor locations,** **or Paradyne worldwide office locations, use one of the following methods:** **Internet: Visit the Paradyne World Wide Web site at www.paradyne.com.** **(Be sure to register your warranty at www.paradyne.com/warranty.)** **– Telephone: Call our automated system to receive current information by fax or to speak with a company representative.** **– Within the U.S.A., call 1-800-870-2221** **Outside the U.S.A., call 1-727-530-2340** **---Via Email: techsupport@paradyne.com**

Show Uplink

show uplink
Minimum Access Level: **user**
The **show uplink** command displays which port has been designated as the uplink port. **Example**: PDYN# **show uplink** **uplink eth3** PDYN#_

Show Uplink-Tag

show uplink-tag
Minimum Access Level: **User**

The **show uplink-tag** command shows the VLAN tag associated with each DSL port if uplink tagging is used.
 	
Example:
`PDYN> show uplink-tag`
`Base vlan tag number  16`
`Index  1`
 	
`PORT  VLAN  PORT  VLAN`
`1  16  13  28`
`2  17  14  29`
`3  18  15  30`
`4  19  16  31`
`5  20  17  32`
`6  21  18  33`
`7  22  19  34`
`8  23  20  35`
`9  24  21  36`
`10  25  22  37`
`11  26  23  38`
`12  27  24  39`
 	
`PDYN>`
 	
Display results:
Base vlan tag number – The base value used to set VLANs.
Index – The index value used to set VLANs.
PORT and **VLAN** – Port numbers 1–24 are listed followed by their unique VLAN tag numbers.

Show User Accounts

show user-account
Minimum Access Level: **Administrator**
The **show user-accounts** command shows user names configured in the system. Example: PDYN# **show user-accounts** **User Name Privilege Level** **admin admin** **user1 user** **user2 user** PDYN#_ **Display results**: **User Name** – The name used for logging in. Passwords are not displayed. **Privilege Level** – The access level assigned to this user name: – admin – The user name has administrator privileges. – user – The user name has user privileges.

Show Users

show users
Minimum Access Level: **Administrator**

The **show users** command shows users currently logged on the system.
 	
Example:
 	
`PDYN# show user-accounts`
 	
`User Port Location`
`admin console`
`user1 telnet 135.90.1.1.`
`user2 web 135.90.1.1`
 	
`PDYN#_`
 	
Display results:
 	
User – User name.
Port – Mode of access:
– console – Console port.
– telnet – Telnet session.
– web – Web interface.
Location – For Telnet and Web interface sessions, the IP address of the user. For the Console port, n/a (Not Applicable).

Show VLAN Configuration

show vlan configuration [vlan_id l **all**]
Minimum Access Level: **Administrator**
The **show vlans** command shows all the configuration parameters for all the VLANs in the system. **vlan_id** – this field specifies the vlan id or the vlan name **all** - this selection will display all the vlans in the system. `PDYN#_show vlans all` **VLAN 1** **Name Default** **Tagged Members** **Untagged Members 1-24,eth1,eth2** **ProxyARP disabled** **Secure Mode disabled** **Proxy Arp NHR 135.26.20.254** **VLAN 4080** **Name OutofBand VLAN** **Tagged Members** **Untagged Members eth1** **ProxyARP disabled** **Secure Mode disabled** **Proxy Arp NHR 10.1.49.254**

Show VLAN Reserved Block Start

Show vlan reserved-block-start vlan_id
Minimum Access Level: **Administrator**
The **show vlan reserved-block-start** command is used to display the reserved block of vlans. The displayed vlan id is the first reserved vlan in the contiguous reserved block of 16. **vlan_id** - This value specifies the first reserved vlan in the reserved block of 16. The default is 4080. **Example**: PDYN# **show vlan reserved-block-start**

Test

Test LEDs Start

test leds start
Minimum Access Level: **User**
The **test leds start** command causes all Light-Emitting Diodes (LEDs) on the front panel of the unit to turn on. See the Installation Guide for the locations of all LEDs. Verify that all LEDs are lit. If an LED does not light up during the LED test, notify your service representative. Example: `PDYN#` test leds start

Test LEDs Stop

test leds stop
Minimum Access Level: **User**
The **test leds stop** command causes stops the led test. Example: `PDYN#` test leds stop

Test SHDSL Loopback Start

test shdsl loopback start {stu-c | stu-r | repeater-1 | repeater-2 | repeater-3 | repeater-4 | repeater-5 | repeater-6 | repeater-7 | repeater-8**} {**customer-side | network-side**} {**timeout**} {**port_id**}**

Minimum Access Level: **user**

The **test shdsl loopback start** command causes dsl loopback test to start. The test will run until it time outs or the user can manually terminate the test.

Unit to apply the loopback to:

- **stu-c** – SHDSL centeral site terminal unit.
- **stu-r** – SHDSL remote site terminal unit.
- **repeater-1 ... repeater-8** – SHDSL regenerator/repeater unit.

The side of the device to loopback on:

- **customer-side** – The side of the unit facing the customer terminal equipment
- **network-side** – The side of the unit facing the central office

port_id – Specifies the SHDSL port to be tested.

time-out – Enter a timeout value in minutes.

Example:

```
PDYN# test shdsl loopback start stu-r network-side 22
```

Test SHDSL Loopback Stop

test shdsl loopback stop {stu-c | stu-r | repeater-1 | repeater-2 | repeater-3 | repeater-4 | repeater-5 | repeater-6 | repeater-7 | repeater-8} {customer-side | network-side} {port_id}
Minimum Access Level: **user**
The **test shdsl loopback stop** command causes dsl loopback test to stop on the specified port. **Unit to stop the loopback on:** • **stu-c** – SHDSL centeral site terminal unit. • **stu-r** – SHDSL remote site terminal unit. • **repeater-1 ... repeater-8** – SHDSL regenerator/repeater unit. **The side of the device to stop the loopback on:** • **customer-side** – The side of the unit facing the customer terminal equipment • **network-side** – The side of the unit facing the central office **port_id** - Specifies the SHDSL port to stop loopback test. Example: `PDYN#` **test shdsl loopback stop stu-r network-side 22**

Reference Tables

A

Time Zones

The following values are used by the **configure date-timezone** command.

Table A-1. Time Zone Offsets from UTC (1 of 3)

Time Zone Name	Offset and Description
gmt	Greenwich Mean Time (UTC), No Daylight Savings Time
us-eastern	UTC – 5, Subject to U.S. Daylight Savings Time Rules
us-indiana	UTC – 6, No Daylight Savings Time
us-central	UTC – 6, Subject to U.S. Daylight Savings Time Rules
us-mountain	UTC – 7, Subject to U.S. Daylight Savings Time Rules
us-arizona	UTC – 7, No Daylight Savings Time
us-pacific	UTC – 8, Subject to U.S. Daylight Savings Time Rules
us-alaska	UTC – 9, Subject to U.S. Daylight Savings Time Rules
us-aleutian	UTC – 10, Subject to U.S. Daylight Savings Time Rules
us-hawaii	UTC – 10, No Daylight Savings Time
us-samoa	UTC – 11, No Daylight Savings Time
canada-newfoundland	UTC – 3.5, Subject to Canadian Daylight Savings Time Rules
canada-atlantic	UTC – 4, Subject to Canadian Daylight Savings Time Rules
canada-eastern	UTC – 5, Subject to Canadian Daylight Savings Time Rules
canada-central	UTC – 6, Subject to Canadian Daylight Savings Time Rules
canada-east-saskatchewan	UTC – 6, No Daylight Savings Time
canada-mountain	UTC – 7, Subject to Canadian Daylight Savings Time Rules

Table A-1. Time Zone Offsets from UTC (2 of 3)

Time Zone Name	Offset and Description
canada-pacific	UTC – 8, Subject to Canadian Daylight Savings Time Rules
canada-yukon	UTC – 9, Subject to Canadian Daylight Savings Time Rules
mexico-bajanorte	UTC – 8, Subject to U.S. Daylight Savings Time Rules
mexico-bajasur	UTC – 7, No Daylight Savings Time
mexico-general	UTC – 6, No Daylight Savings Time
brazil-denoronha	UTC – 2, Subject to Brazilian Daylight Savings Time Rules
brazil-east	UTC – 3, Subject to Brazilian Daylight Savings Time Rules
brazil-west	UTC – 4, Subject to Brazilian Daylight Savings Time Rules
brazil-acre	UTC – 5, Subject to Brazilian Daylight Savings Time Rules
chile-continental	UTC – 4, Subject to Chilean Daylight Savings Time Rules
chile-easterisland	UTC – 6, Subject to Chilean Daylight Savings Time Rules
cuba	UTC – 5, Subject to Cuban Daylight Savings Time Rules
gb-erie	UTC, Subject to British Daylight Savings Time Rules
europe-western	UTC, Subject to Western European Daylight Savings Time Rules
europe-central	UTC + 1, Subject to Central European Daylight Savings Time Rules
europe-eastern	UTC + 2, Subject to Eastern European Daylight Savings Time Rules
australia-nsw	UTC + 10, Subject to Australian New South Wales Daylight Savings Time Rules
australia-yancowinna	UTC + 9.5, Subject to Australian New South Wales Daylight Savings Time Rules
australia-tasmania	UTC + 10, Subject to Tasmanian Daylight Savings Time Rules
australia-victoria	UTC + 10, Subject to Australian New South Wales Daylight Savings Time Rules
australia-queensland	UTC + 10, No Daylight Savings Time
australia-north	UTC + 9.5, No Daylight Savings Time
australia-west	UTC + 8, No Daylight Savings Time
australia-south	UTC + 9.5, Subject to Southern Australian Daylight Savings Time Rules
new-zealand	UTC + 12, Subject to New Zealand Daylight Savings Time Rules
israel	UTC + 3, Subject to Israeli Daylight Savings Time Rules

Table A-1. Time Zone Offsets from UTC (3 of 3)

Time Zone Name	Offset and Description
turkey	UTC + 3, Subject to Turkish Daylight Savings Time Rules
egypt	UTC + 2, Subject to Egyptian Daylight Savings Time Rules
iran	UTC + 3.5, Subject to Iranian Daylight Savings Time Rules
libya	UTC + 2, Subject to Libyan Daylight Savings Time Rules
japan	UTC + 9, No Daylight Savings Time
korea	UTC + 9, Subject to Korean Daylight Savings Time Rules
singapore	UTC + 8, No Daylight Savings Time
china-prc	UTC + 8, Subject to Chinese Daylight Savings Time Rules
china-roc	UTC + 8, No Daylight Savings Time
china-hongkong	UTC + 8, No Daylight Savings Time

Ether Types

The following values are used by the **configure filter-rule** command.

Table A-2. Ether Types (1 of 6)

Ether Type	Description
0000-05DC	IEEE 802.3 Length Field
0101-01FF	Experimental
0200	XEROX PUP (see 0A00)
0201	PUP Addr Trans (see 0A01)
0400	Nixdorf
0600	XEROX NS IDP
0660	DLOG
0661	DLOG
0800	Internet IP (IPv4)
0801	X.75 Internet
0802	NBS Internet
0803	ECMA Internet
0804	Chaosnet
0805	X.25 Level 3
0806	ARP
0807	XNS Compatibility
081C	Symbolics Private
0888-088A	Xyplex
0900	Ungermann-Bass net debugr
0A00	Xerox IEEE802.3 PUP
0A01	PUP Addr Trans
0BAD	Banyan Systems
1000	Berkeley Trailer nego
1001-100F	Berkeley Trailer encap/IP
1600	Valid Systems
4242	PCS Basic Block Protocol
5208	BBN Simnet
6000	DEC Unassigned (Exp.)
6001	DEC MOP Dump/Load

Table A-2. Ether Types (2 of 6)

Ether Type	Description
6002	DEC MOP Remote Console
6003	DEC DECNET Phase IV Route
6004	DEC LAT
6005	DEC Diagnostic Protocol
6006	DEC Customer Protocol
6007	DEC LAVC, SCA
6008-6009	DEC Unassigned
6010-6014	3Com Corporation
7000	Ungermann-Bass download
7002	Ungermann-Bass dia/loop
7020-7029	LRT
7030	Proteon
7034	Cabletron
8003	Cronus VLN
8004	Cronus Direct
8005	HP Probe
8006	Nestar
8008	AT&T
8010	Excelan
8013	SGI diagnostics
8014	SGI network games
8015	SGI reserved
8016	SGI bounce server
8019	Apollo Computers
802E	Tymshare
802F	Tigan, Inc.
8035	Reverse ARP
8036	Aeonic Systems
8038	DEC LANBridge
8039-803C	DEC Unassigned
803D	DEC Ethernet Encryption
803E	DEC Unassigned

Table A-2. Ether Types (3 of 6)

Ether Type	Description
803F	DEC LAN Traffic Monitor
8040-8042	DEC Unassigned
8044	Planning Research Corp.
8046	AT&T
8047	AT&T
8049	ExperData
805B	Stanford V Kernel exp.
805C	Stanford V Kernel prod.
805D	Evans & Sutherland
8060	Little Machines
8062	Counterpoint Computers
8065	Univ. of Mass. @ Amherst
8066	Univ. of Mass. @ Amherst
8067	Veeco Integrated Auto.
8068	General Dynamics
8069	AT&T
806A	Autophon
806C	ComDesign
806D	Computgraphic Corp.
806E-8077	Landmark Graphics Corp.
807A	Matra
807B	Dansk Data Elektronik
807C	Merit Internodal
807D-807F	Vitalink Communications
8080	Vitalink TransLAN III
8081-8083	Counterpoint Computers
809B	Appletalk
809C-809E	Datability
809F	Spider Systems Ltd.
80A3	Nixdorf Computers
80A4-80B3	Siemens Gammasonics Inc.
80C0-80C3	DCA Data Exchange Cluster

Table A-2. Ether Types (4 of 6)

Ether Type	Description
80C4	Banyan Systems
80C5	Banyan Systems
80C6	Pacer Software
80C7	Applitek Corporation
80C8-80CC	Intergraph Corporation
80CD-80CE	Harris Corporation
80CF-80D2	Taylor Instrument
80D3-80D4	Rosemount Corporation
80D5	IBM SNA Service on Ether
80DD	Varian Associates
80DE-80DF	Integrated Solutions TRFS
80E0-80E3	Allen-Bradley
80E4-80F0	Datability
80F2	Retix
80F3	AppleTalk AARP (Kinetics)
80F4-80F5	Kinetics
80F7	Apollo Computer
80FF-8103	Wellfleet Communications
8107-8109	Symbolics Private
8130	Hayes Microcomputers
8131	VG Laboratory Systems
8132-8136	Bridge Communications
8137-8138	Novell, Inc.
8139-813D	KTI
8148	Logicraft
8149	Network Computing Devices
814A	Alpha Micro
814C	SNMP
814D	BIIN
814E	BIIN
814F	Technically Elite Concept
8150	Rational Corp

Table A-2. Ether Types (5 of 6)

Ether Type	Description
8151-8153	Qualcomm
815C-815E	Computer Protocol Pty Ltd
8164-8166	Charles River Data System
817D-818C	Protocol Engines
818D	Motorola Computer
819A-81A3	Qualcomm
81A4	ARAI Bunkichi
81A5-81AE	RAD Network Devices
81B7-81B9	Xyplex
81CC-81D5	Apricot Computers
81D6-81DD	Artisoft
81E6-81EF	Polygon
81F0-81F2	Comsat Labs
81F3-81F5	SAIC
81F6-81F8	VG Analytical
8203-8205	Quantum Software
8221-8222	Ascom Banking Systems
823E-8240	Advanced Encryption Syste
827F-8282	Athena Programming
8263-826A	Charles River Data System
829A-829B	Inst Ind Info Tech
829C-82AB	Taurus Controls
82AC-8693	Walker Richer & Quinn
8694-869D	Idea Courier
869E-86A1	Computer Network Tech
86A3-86AC	Gateway Communications
86DB	SECTRA
86DE	Delta Controls
86DF	ATOMIC
86E0-86EF	Landis & Gyr Powers
8700-8710	Motorola
8863	PPPoE Discovery

Table A-2. Ether Types (6 of 6)

Ether Type	Description
8864	PPPoE Session
8A96-8A97	Invisible Software
9000	Loopback
9001	3Com(Bridge) XNS Sys Mgmt
9002	3Com(Bridge) TCP-IP Sys
9003	3Com(Bridge) loop detect
FF00	BBN VITAL-LanBridge cache
FF00-FF0F	ISC Bunker Ramo

Command Summary

B

Commands

clear bridge

clear management snmp nms-address {ip-address_1**} ... [**ip-address_8**]**

clear management snmp nms-traps {ip-address_1**} ... [**ip-address_8**]**

clear syslog

configure bridge clear

configure bridge mode {mux | switch | sms | uplink-tag}

configure bridge timeout {time**}**

configure date [mm/dd/yy **|** dd/mm/yy**] [** hh:mm**]**

configure date-timezone {time-zone**}**

configure factory

configure filter create filter_name **{forward | discard} [** rule_name_1**]... [** rule_name_16**]**

configure filter delete filter_name

configure filter modify filter_name **{forward | discard}** [**rule_name_1**]... [**rule_name_16**]

configure filter proto-specific {netbios} {deny | permit}

configure filter-binding create filter_name **{outbound | inbound | both}** port_id

configure filter-binding delete filter_name **{outbound | inbound | both}** port_id

configure filter-rule create { rule_name**} {forward | discard} {ether | ether-snap} [** ethertypes**]**

configure filter-rule delete { rule_name**}**

configure filter-rule modify { rule_name**} {forward | discard} {ether | ether-snap} [ethertypes]**

configure igmp {port_id**} query-count {count}**

configure igmp {port_id**} snooping leave-delay {**delay**}**

configure igmp {port_id**} snooping leave-join-delay {**delay**}**

configure igmp-proxy {enabled | disabled}

configure igmp-snooping {enabled | disabled}

configure igmp-snooping querier-auto-detect {enabled | disabled}

configure igmp-snooping querier-interface {port_id}

configure igmp-snooping query-interval {interval}

configure interface console data-bits {7 | 8}

configure interface console parity {even | none | odd}

configure interface console rate {9600 | 19200 | 38400 | 57600 | 115200}

configure interface console show

configure interface console stop-bits {1 | 2}

configure interface dsl {port_id} **atm encapsulation {llc-bridged | vcm-bridged}**

configure interface dsl {port_id} **atm vc create {** vpi/vci}

configure interface dsl {port_id} **atm vc delete { vpi/vci}**

configure interface dsl {port_id} **behavior {adaptive | dynamic | fixed}**

configure interface dsl {port_id} **interleave-delay** {delay}

configure interface dsl {port_id} **latency {fast | interleaved}**

configure interface dsl {port_id} **line-code {ansi | dmt | g.lite | multimode}**

configure interface dsl {port_id} **line-length {short | medium | long | same | segupto3km | segabove3km | <length> }**

configure interface dsl {port_id} **linkupdown-trap {disabled | enabled}**

configure interface dsl {port_id} **max-snr-margin-downstream {** margin}

configure interface dsl {port_id} **max-snr-margin-upstream {** margin}

configure interface dsl {port_id} **max-speed-downstream** {rate}

configure interface dsl {port_id} **max-speed-upstream-** {rate}

configure interface dsl {port_id} **max-txpower-downstream** {rate}

configure interface dsl {port_id} **max-txpower-upstream** {rate}

configure interface dsl {port_id} **min-snr-margin-downstream {** margin}

configure interface dsl {port_id} **min-snr-margin-upstream{** margin}

configure interface dsl {port_id} **min-speed-downstream** {rate}

configure interface dsl {port_id} **min-speed-upstream** {rate}

configure interface dsl {port_id} **name {** port_name}

configure interface dsl {port_id} **show**

configure interface dsl {port_id} **state {disabled | enabled}**

configure interface dsl {port_id} **target-downstream-margin** {margin}

configure interface dsl {port_id} **target-upstream-margin** { margin}

configure interface dsl {port_id} **vlan acceptable-frame-type {all | tagged}**

configure interface dsl {port_id} **vlan ingress-filtering {disabled | enabled}**

configure interface dsl {port_id} **vlan priority** {priority}

configure interface dsl {port_id} **vlan pvid** {pvid}

configure interface ethernet [port_id**] show**

configure interface ethernet { port_id} **mode {auto | manual}**

configure interface ethernet { port_id} **rate {10full | 10half | 100full | 100half | 1000full | 1000half}**

configure interface ethernet { port_id} **vlan acceptable-frame-type {all | tagged}**

configure interface ethernet { port_id} **vlan ingress-filtering {disabled | enabled}**

configure interface ethernet { port_id} **vlan priority** {priority}

configure interface ethernet { port_id} **vlan pvid** {pvid}

configure interface ethernet { port_id} **xover {mdi | mdix}**

configure interface ethernet {port_id} **connector {rj45 | fiber}**

configure interface ethernet {port_id} **flow-control {enabled | disabled}**

configure interface t1e1 {port_id} **circuit-name {** name **}**

configure interface t1e1 {port_id} **frame-format** {crc | no-crc **} (note: E1 Only)**

configure interface t1e1 {port_id} **line-build-out** {0 | 7.5 | 15 | 22.5} **(note: short haul only)**

configure interface t1e1 {port_id} **line-equalization** {0 | 134 | 267 | 400 | 534 **} (note: long haul only)**

configure interface t1e1 {port_id} **line-type** {long-haul | short-haul}

configure interface t1e1 {port_id} **port-status** {enable | disable **}**

configure interface t1e1 {port_id} **timing {** local | loop **}**

configure management default-gateway {ip_address}

configure management inband address {ip_address} **{** subnet_mask}

configure management inband vlan {vlan_tag}

configure management inband vlan {vlan_tag} **{enabled|disabled}**

configure management out-of-band address {bootp | { ip_address} **{** subnet_mask} **}**

configure management route add {ip_address} {subnet_mask} {gateway}

configure management route delete {ip_address}

configure management route show

configure management snmp access-validation {disabled | enabled}

configure management snmp nms-address { nms_address1**}... [** nms_address8**]**

configure management snmp nms-traps { traps_address1**}... [** traps_address8**]**

configure management snmp private-string { private_community_string**}**

configure management snmp public-string { public_community_string**}**

configure management snmp state {disabled | enabled}

configure mlppp-bundle {mlppp-bundle-number**} add {**port id**}**

configure mlppp-bundle {mlppp-bundle-number**} delete {**port id**}**

configure mlppp-bundle {mlppp-bundle-number**} fragment-size** { value **}**

configure mlppp-bundle {mlppp-bundle-number**} mrru {** value **}**

configure mlppp-bundle {mlppp-bundle-number**} restart**

configure mlppp-bundle {mlppp-bundle-number**} short-sequence-number {12bit | 24bit }**

configure mlppp-bundle {mlppp-bundle-number**} vlan acceptable-frame-type {all | tagged}**

configure mlppp-bundle {mlppp-bundle-number**} vlan ingress-filtering {disabled | enabled}**

configure mlppp-bundle {mlppp-bundle-number**} vlan priority {**priority**}**

configure mlppp-bundle {mlppp-bundle-number**} vlan pvid {**pvid**}**

configure ppp {port_id**} address-control-field-compression {enable | disable }**

configure ppp {port_id**} bridge-control-protocol {** enable | disable **}**

configure ppp {port_id**} fcs-size {** value **}**

configure ppp {port_id**} keep-alive-quiet-time {** value **}**

configure ppp {port_id**} keep-alive-timeout {** value **}**

configure ppp {port_id**} magic-number {** enable | disable **}**

configure ppp {port_id**} maximum-receive-unit {** value **}**

configure ppp {port_id**} protocol-field-compression {enable | disable }**

configure ppp {port_id**} vlan acceptable-frame-type {all | tagged}**

configure ppp {port_id**} vlan ingress-filtering {disabled | enabled}**

configure ppp {port_id**} vlan priority {**priority**}**

configure ppp {port_id**} vlan pvid {**pvid**}**

configure security ip { port_id**} add {** ip_address**} {** nhr_address**}**

configure security ip { port_id**} delete {** ip_address**}**

configure security ip { port_id**} max-ip {** max_ip**}**

configure security ip { port_id**} show**

configure security ip {port_id**} {disabled | enabled}**

configure security mac { port_id**} add {**mac_address**}**

configure security mac { port_id**} delete {mac_address | all}**

configure security mac { port_id**} show**

configure sntp {disabled | enabled}

configure sntp address { ip_address}

configure sntp interval { interval}

configure syslog rate-limiting {disabled | enabled}

configure syslog remote {enabled | disabled}

configure syslog remote create {ip_address**} [**udp_port**]**

configure syslog threshold {emergency | alert | information | debug}

configure system information system-contact {contact**}**

configure system information system-location { location**}**

configure system information system-name { name**}**

configure system options date-display-format {dd/mm/yy | mm/dd/yy**}**

configure system options inactivity-timeout {time**}**

configure system options port-display-format {name | port}

configure system options spectrum-management {enabled | disabled}

configure system options test-timeout {time**}**

configure uplink {eth2 |eth3 | ppp1..ppp8 | mlppp1..mlppp8}

configure uplink-tag base { base**}**

configure uplink-tag index { index**}**

configure user-accounts create { user**} {** login_password**} [** privilege_password**]**

configure user-accounts delete {user**}**

configure vlan create {vlan_id**}**

configure vlan delete {vlan_id | vlan_name**}**

configure vlan modify {vlan_id | vlan_name**} dhcp-option-82 {**enabled | disabled**}**

configure vlan modify {vlan_id | vlan_name**} name {**vlan_name**}**

configure vlan modify {vlan_id | vlan_name**} nhr {**ip_address**}**

configure vlan modify {vlan_id | vlan_name**} ports {**port-id | port-list**} {tagged | untagged | delete}**

configure vlan modify {vlan_id | vlan_name**} proxy-arp (enabled | disabled}**

configure vlan modify {vlan_id | vlan_name**} secure (enabled | disabled}**

configure vlan modify {vlan_id | vlan_name**} show**

copy ftp { ip_address**} {** user_name**} {** password**} {** filename**} startup-config**

copy running-config startup-config

copy startup-config ftp {ip_address**} {**user_name**} {**password**} {**filename**}**

copy startup-config running-config

end

exit

firmware download {ip_address**} {**user_name} **{**password**} {**filename**} [no | yes]**

firmware download-status

firmware revision

firmware switch

paging {disabled | enabled}

password

ping {ip_address**}**

privilege

restart

save

show bridge [port_id**]**

show bridge timeout

show date

show filter [filter_name**]**

show filter-binding [filter [filter_name**]] | [port [** port_id**]]**

show filter-proto-specific

show filter-rule [rule_name**]**

show igmp {port_id**} configuration**

show igmp-proxy

show igmp-snooping

show interface console

show interface dsl {port_id**} clear-statistics**

show interface dsl {port_id**} configuration**

show interface dsl {port_id**} performance**

show interface dsl {port_id**} rates**

show interface dsl {port_id} **statistics**

show interface ethernet {port_id} **clear-statistics**

show interface ethernet {port_id} **configuration**

show interface ethernet {port_id} **statistics**

show interface t1e1 {port_id} **configuration**

show interface t1e1 {port_id} **performance**

show interface t1e1 {port_id} **statistics**

show management arp

show management default-gateway {ip_address}

show management inband address

show management out-of-band address

show management route

show management snmp configuration

show management snmp statistics

show management vlan

show mlppp-bundle {bundle-number} **clear-statistics**

show mlppp-bundle {bundle-number} **configuration**

show mlppp-bundle {bundle-number} **statistics**

show mlppp-bundle {bundle-number} **status**

show muticast forwarding-table

show muticast last-reporter

show ppp {port id} **configuration**

show ppp {port id} **statistics**

show proxy-arp nhr

show scheduled backup

show security ip [port_id]

show security mac [port_id]

show sntp

show syslog

show syslog-remote

show system information

show system options

show system self-test

show system spectrum-management

show system status

show technical-support

show uplink

show uplink-tag

show user-accounts

show users

show vlans

test leds

test ppp {echo-reply **} {**start | status**}** {port_id}

test t1e1 inject-error start

test t1e1 local-line-loopback {start | stop| status**} {**port_id**}**

test t1e1 local-monitor-2e15-pattern {start | stop| status**} {**port_id**}**

test t1e1 local-monitor-qrss-pattern {start | stop| status**} {**port_id**}**

test t1e1 local-payload-loopback {start | stop| status**} {**port_id**}**

test t1e1 local-send-2e15-pattern {start | stop| status **} {**port_id**}**

test t1e1 local-send-qrss-pattern {start | stop| status**} {**port_id**}**

test t1e1 remote-fdl-line-loopback {start | stop| status **} {**port_id**} (note: t1 only)**

test t1e1 remote-fdl-payload-loopback {start | stop| status**} {**port_id**} (note: t1 only)**

test t1e1 remote-inband-line {start | stop| status**} {**port_id**} (note: t1 only)**

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