R

redistribute

To instruct the PNNI to redistribute static routes throughout the PNNI routing domain, use the **redistribute** node-level subcommand. To reset disable redistribution of static routes, use the **no** form of this command.

> **redistribute protocol**
> **no redistribute protocol**

Syntax Description

protocol   This keyword is used for static routes.

Default
Enabled.

Command Mode
ATM router PNNI node-level configuration.

Usage Guidelines
All redistributed routes are advertised in exterior reachable address PTSE with default scope and without metric. All redistributed routes are summarized by the **summary-address** command.

In autoconfiguration mode, PNNI is set to redistribute the configured static routes.

For more information, refer to the *LightStream 1010 ATM Switch Software Configuration Guide*.

Example
The following script shows how to access the **redistribute** node-level subcommand.

```
Switch# configure terminal
Switch(config)# atm router pnni
Switch(config-atm-router)# node 1
Switch(config-pnni-node)# redistribute atm-static
```

Related Commands

atm route
show atm pnni prefix

refuse-message

To define a line-in-use message, use the **refuse-message** line configuration command. Use the **no** form of this command to disable the message.

>**refuse-message** *d message d*
>**no refuse-message**

Syntax Description

d   Delimiting character of your choice—a pound sign (#), for example. You cannot use the delimiting character in the message.

message   Message text.

Default

No line-in-use message is defined.

Command Mode

Line configuration.

Usage Guidelines

Follow the command with one or more blank spaces and a delimiting character of your choice. Then enter one or more lines of text, terminating the message with the second occurrence of the delimiting character. You cannot use the delimiting character within the text of the message.

When you define a message using this command, the switch performs the following tasks:

1 Accepts the connection.

2 Prints the custom message.

3 Clears the connection.

Example

In the following example, line 0 is configured with a lines-in-use message, and the user is instructed to try again later.

```
Switch(config)# line aux 0
Switch(config-line)# refuse-message /The dial-out modem is currently in use.

Please try again later./
```

reload

To reload the operating system, use the **reload** privileged EXEC command.

> **reload**

Syntax Description

This command has no arguments or keywords.

Command Mode

Privileged EXEC.

Usage Guidelines

The **reload** command halts the system. If the system is set to restart on error, it reboots itself. Use the **reload** command after configuration information is entered into a file and saved to the startup configuration.

You cannot reload from a virtual terminal if the system is not set up for automatic booting. This prevents the system from dropping to the ROM monitor and thereby taking the system out of the remote user's control.

If you modify your configuration file, the system prompts you to save the configuration. During a save operation, the system asks you if you want to proceed with the save if the *config_file* environment variable points to a startup configuration file that no longer exists. If you enter "yes" in this situation, the system saves the running configuration to startup configuration.

Example

The following example illustrates how to enter the **reload** command at the privileged EXEC prompt.

```
Switch# reload
```

Related Commands

copy running-config
copy startup-config

rm-poll-interval

To configure the period of time that PNNI polls resource management to update the values of the interface metrics and attributes, use the **rm-poll-interval** ATM router PNNI configuration command. To return to the default value, use the **no** form of this command.

rm-poll-interval *seconds*
no rm-poll-interval

Syntax Description

seconds	Specifies the interval, in seconds, at which the values of the interface metrics and attributes are updated.

Default

5 seconds.

Command Mode

ATM router PNNI configuration.

Usage Guidelines

The maximum allowable poll interval is 300 seconds. Using this value impacts the number of self-generated PTSEs created by the switch. A larger **rm-poll-interval** can generate a smaller number of PTSE updates causing slower creation time to changes in the RM interface status. A large **rm-poll-interval** is desirable when reducing the number of self-generated PTSEs caused by interface traffic fluctuation.

Lowering the default allows PNNI to poll the resource manager (for resource information) at a higher frequency. This allows PNNI to track resource information faster, but it costs more in processing time and should be adjusted only when needed.

For more information, refer to the *LightStream 1010 ATM Switch Software Configuration Guide*.

Example

The following example shows how to change the period of time the interface metrics and attributes are updated using the **rm-poll-interval** ATM router PNNI configuration command.

```
Switch# configure terminal
Switch(config)# atm router pnni
Switch(config-atm-router)# rm-poll-interval 30
```

Related Command

show atm pnni rm-info

rotary

Note This command, or some of its parameters, may not function as expected in the LightStream 1010 ATM switch environment.

To define a group of lines consisting of one of more virtual terminal lines or one auxiliary port line, use the **rotary** line configuration command. Use the **no** form of this command to remove a line or group of lines from a rotary group.

> **rotary** *group*
> **no rotary**

Syntax Description

group	Integer between 1 and 100 you choose to identify the rotary group.

Default

No rotary groups are defined.

Command Mode

Line configuration.

Usage Guidelines

Typically, rotary groups are used on devices with multiple modem connections to allow connections to the next free line in a hunt group. Rotary groups are still useful for defining groups of virtual terminal lines or for defining a rotary group consisting of the single auxiliary port on switches that have only one modem line (the auxiliary port). Putting the auxiliary port in a rotary group is useful because the auxiliary port is not necessarily the same line on all hardware; by putting it in a rotary group, you do not have to track the line number.

Connections to a rotary group can take advantage of the following features:

- Clear To Send (CTS)—If a line in a rotary group is configured to require CTS, the switch skips that line if CTS from the attached device is low. This feature enables the switch to automatically avoid inactive host ports. To enable this feature, use the **modem cts-required** line configuration command.

- RS-232 handshaking—Rotary groups are often associated with large terminal switches that require an RS-232 handshake before forming a connection. In this case, use the **modem callout** line configuration command to configure the lines in the group. If the RS-232 handshake fails on a line, the switch steps to the next free line in the rotary group and restarts the negotiation.

- Access control—You can use access lists for groups of virtual terminal lines.

- Session timeout—Use the **session-timeout** line configuration command to set an interval for a remotely initiated connection on a line during which activity must occur or to prevent the switch from closing the connection. (The switch identifies the host that crashed or is otherwise inaccessible.)

The remote host must specify a particular TCP port on the switch to connect to a rotary group that has connections to an individual line. The available services are the same, but the TCP port numbers are different. Table 15-1 lists the services and port numbers for both rotary groups and individual lines.

For example, if Telnet protocols are required, the remote host connects to the TCP port numbered 3000 (decimal) plus the rotary group number. If the rotary group identifier is 13, the corresponding TCP port is 3013.

Table 15-1   Services and Port Numbers for Rotary Groups and Lines

Services Provided	Base TCP Port for Rotaries	Base TCP Port for Individual Lines
Telnet Protocol	3000	2000
Raw TCP protocol (no Telnet protocol)	5000	4000
Telnet protocol, binary mode	7000	6000

Example

The following example establishes a rotary group consisting of virtual terminal lines 2 through 4 and defines a password on those lines. By using Telnet to connect to TCP port 3001, the user gets the next free line in the rotary group. The user does not have to remember the range of line numbers associated with the password.

```
Switch(config)# line vty 2 4
Switch(config-line)# rotary 1
Switch(config-line)# password letmein
Switch(config-line)# login
```

Related Commands

modem callout
modem cts-required
session-timeout

rsh

To execute a command remotely on a remote **rsh** host, use the **rsh** privileged EXEC command.

> **rsh** {*ip-address* | *host*} [**/user** *username*] *line*

Syntax Description

ip-address	IP address of the remote host on which to execute the **rsh** command. Either the IP address or the host name is required.
host	Name of the remote host on which to execute the command. Either the host name or the IP address is required.
/user *username*	(Optional) Remote username.
line	Required parameter to be executed remotely.

Default

If you do not specify the **/user** keyword and argument, the switch sends a default remote username. As the default value of the remote username, the switch software sends the username associated with the current TTY process if that name is valid. For example, if the user is connected to the switch through Telnet and the user was authenticated through the **username** command, the switch software sends that username as the remote username. If the TTY username is invalid, the switch software uses the switch host name as the both the remote and local usernames.

Note TTYs are commonly used in Cisco communications servers. The concept of TTY originated with UNIX. For UNIX systems, each physical device is represented in the file system. Terminals are called *TTY devices*, which stands for *teletype*, the original UNIX terminal.

Command Mode

Privileged EXEC.

Usage Guidelines

Use the **rsh** command to execute commands remotely. The host on which you remotely execute the command must support the **rsh** protocol, and the *.rhosts* files on the **rsh** host must include an entry that permits you to remotely execute commands on that host.

For security reasons, the switch software does not default to a remote login if no command is specified. Instead, the switch provides Telnet and connect services that you can use rather than **rsh**.

Example

The following command specifies that user *rusty* attempts to remotely execute the UNIX **ls** command with the *-a* argument on the remote host *mysys.cisco.com*. The command output resulting from the remote execution follows the command example.

```
Switch1# rsh mysys.cisco.com /user rusty ls -a
.
..
.alias
.cshrc
.emacs
.exrc
.history
.login
.mailrc
.newsrc
.oldnewsrc
.rhosts
.twmrc
.xsession
jazz
```

rxspeed

To set the terminal baud rate receive (from terminal) speed, use the **rxspeed** line configuration command.

rxspeed *bps*
no rxspeed

Syntax Description

bps   Baud rate in bits per second (bps); see the Usage Guidelines below for settings.

Default

9600 bps.

Command Mode

Line configuration.

Usage Guidelines

This command pertains to the auxiliary port only. Set the speed to match the baud rate of any device you connect to the port. Some baud rates available on devices connected to the port might not be supported on the switch. The switch indicates if the speed you select is not supported.

The following is a list of supported baud rates:

75, 110, 134, 150, 300, 600, 1200, 1800, 2000, 2400, 4800, 9600, 19200, 38400

Example

The following example sets the auxiliary line receive rate to 2400 bps.

```
Switch(config)# line aux 0
Switch(config-line)# rxspeed 2400
```

Related Commands

speed
txspeed