



Configuring Wholesale Dial Performance Optimization

This chapter describes the Wholesale Dial Performance Optimization feature in the following sections:

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Note

This task provides inbound and outbound performance optimization for wholesale dial customers who provide ports to America Online (AOL). It is configured only on Cisco AS5800 access servers.

Wholesale Dial Performance Optimization Feature Overview

Both the inbound and outbound aspects of this feature are enabled using the **autocommand-options telnet-faststream** command.

- **Outbound**—Provides stream processing, allowing the output data processing to occur at the interrupt level. Being event driven, this removes polling and process switching overhead. In addition, the flow control algorithm is enhanced to handle the higher volume of traffic and to eliminate some out-of-resource conditions that could result in abnormal termination of the session.
- **Inbound**—Provides stream processing with the same improvements as for outbound traffic. Also, it removes scanning for special escape characters in the data stream; this is very process-intensive and is not required for this application. (In other situations, the escape characters allow for a return to the privileged EXEC mode prompt (#) on the router.) In addition, Nagle's algorithm is used to form the inbound data stream into larger packets, thus minimizing packet-processing overhead.

This configuration is designed to provide more efficiency in the data transfers for AOL port suppliers who are using a Cisco network access server to communicate with a wholesale dial carrier.

The Cisco AS5800 access server is required to support all dial-in lines supported by two complete T3 connections (that is, 1344 connections) running TCP Clear connections to an internal host. The desired average data throughput for these connections is 6 kbps outbound and 3 kbps inbound.



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When using the **autocommand-options telnet-faststream** command, no special character processing, including break recognition, is performed on incoming data from the dial shelf. This requires the TCP Clear connection to run as the sole connection on the TTY line. This sole connection is terminated by TTY line termination or TCP connection termination, with no EXEC session capability for the user. This has been implemented by specifying a new **autocommand-options telnet-faststream** command that, in conjunction with the **autocommand telnet** command with the **/stream** option, enables Telnet faststream processing. This capability is also available for TACACS/RADIUS attribute-value pair processing, because this processing uses the **autocommand** facility.

How to Configure Automatic Command Execution

The following are three options for configuring the **autocommand telnet /stream** line configuration command:

- Automatic command execution can be configured on the lines.
- Automatic command execution can be configured using user ID and password.
- Automatic command execution can also be configured at a TACACS/RADIUS server, if the username authentication is to be performed there, rather than on the router.

To configure automatic command execution on the lines of a Cisco AS5800 universal network access server, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# line 1/3/00 1/11/143	Selects the lines to be configured and begins line configuration mode.
Step 2	Router(config-line)# autocommand telnet aol-host 5190 /stream	Configures autocommand on the lines.

To configure automatic command execution using a user ID and password on a Cisco AS5800 universal network access server, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# username aol password aol	Defines the user ID and password.
Step 2	Router(config)# username aol autocommand telnet aol-host 5190 /stream	Configures autocommand on the user ID.

You can also configure automatic command execution at a TACACS/RADIUS server if the username authentication is to be performed there rather than on the router. The AV-pair processing allows autocommand to be configured.

How to Configure TCP Clear Performance Optimization

To enable TCP Clear performance optimization, automatic command execution must be configured to enable Telnet faststream capability. To implement TCP Clear performance optimization on a Cisco AS5800 universal network access server, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# line 1/3/00 1/11/143	Selects the lines to be configured and begins line configuration mode.
Step 2	Router(config-line)# autocommand telnet-faststream	Enables the TCP Clear performance optimization on the selected lines.

Verifying Configuration of Preauthentication with ISDN PRI and Channel-Associated Signalling

To check for correct configuration, use the **show line** command. In the following example, Telnet faststream is enabled under “Capabilities”.

```
Router# show line 1/4/00

  Tty Typ      Tx/Rx    A Modem  Roty AccO AccI   Uses   Noise  Overruns  Int
*   1/4/00 Digital modem - inout    -   -   -       1       0     0/0     -

Line 1/4/00, Location: "", Type: ""
Length: 24 lines, Width: 80 columns
Status: PSI Enabled, Ready, Connected, Active, No Exit Banner
  Modem Detected
Capabilities: Hardware Flowcontrol In, Hardware Flowcontrol Out
  Modem Callout, Modem RI is CD, Line usable as async interface
  Hangup on Last Close, Modem Autoconfigure, Telnet Faststream
Modem state: Ready
Modem hardware state: CTS DSR  DTR RTS
modem=1/4/00, vdev_state(0x00000000)=CSM_OC_STATE, bchan_num=(Tl 1/2/0:7:20)
vdev_status(0x00000001): VDEV_STATUS_ACTIVE_CALL.

Group codes:      0, Modem Configured
Special Chars:   Escape Hold Stop Start Disconnect Activation
                ^^x   none   -   -   none
Timeouts:       Idle EXEC   Idle Session   Modem Answer   Session   Dispatch
                never      never         never          none      not set
                Idle Session Disconnect Warning
                never
                Login-sequence User Response
                00:00:30
                Autoselect Initial Wait
                not set

Modem type is 9600.
Session limit is not set.
Time since activation: never
Editing is enabled.
History is enabled, history size is 10.
DNS resolution in show commands is enabled
Full user help is disabled
Allowed transports are telnet. Preferred is lat.
Automatically execute command "telnet 10.100.254.254 2145 /stream"
No output characters are padded
```

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