

Terminal Line and Modem Support Commands

activation-character *ASCII-number*
no activation-character

To set the activation character, use the **activation-character** line configuration command. This command defines the character you type at a vacant terminal to begin a terminal session. Use the **no** form of this command to make any character activate a terminal.

ASCII-number ASCII decimal representation of the activation character

[no] autobaud

To set the line for automatic baud detection, use the **autobaud** line configuration command. Use the **no autobaud** command to restore the default.

autocommand *command*

To configure the router to automatically execute a command or list of commands when a user connects to a particular line, use the **autocommand** line configuration command.

command Any appropriate EXEC command, including the host name and any switches associated with the EXEC command.

autohangup

To configure automatic line disconnect, use the **autohangup** line configuration command. The command causes the EXEC to issue the **exit** command when the last connection closes.

banner exec *d message d*

To display a message on terminals with an interactive EXEC, use the **banner exec** global configuration command. This command specifies a message to be displayed when an EXEC process is created (line activated, or incoming connection to VTY).

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

banner incoming *d message d*

To specify a message used when you have an incoming connection to a line from a host on the network, use the **banner incoming** global configuration command. An incoming connection is one initiated from the network side of the router. The EXEC banner can be suppressed on certain lines using the **no exec-banner** line configuration command. This line should *not* display the EXEC or MOTD banners when an EXEC is created.

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

banner motd *d message d*

To specify a message-of-the-day (MOTD) banner, use the **banner motd** global configuration command.

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

busy-message *hostname d message d***no busy-message** *hostname*

To create a “host failed” message that displays when a connection fails, use the **busy-message** global configuration command. Use the **no** form of this command to disable the “host failed” message from displaying on the specified host.

- hostname* Name of the host that cannot be reached.
- d* Delimiting character of your choice—a pound sign (#), for example. You cannot use the delimiting character in the message.
- message* Message text.

data-character-bits {**7** | **8**}

To set the number of data bits per character that are interpreted and generated by software, use the **data-character-bits** line configuration command.

- 7** Seven data bits per character
- 8** Eight data bits per character

databits {5 | 6 | 7 | 8}

To set the number of data bits per character that are interpreted and generated by hardware, use the **databits** line configuration command.

- 5** Five data bits per character
- 6** Six data bits per character
- 7** Seven data bits per character
- 8** Eight data bits per character

default-value exec-character-bits {7 | 8}

To define the EXEC character width for either 7 bits or 8 bits, use the **default-value exec-character-bits** global configuration command.

- 7** Selects the 7-bit ASCII character set.
- 8** Selects the full 8-bit ASCII character set.

default-value special-character-bits {7 | 8}

To configure the flow control default value from a 7-bit width to an 8-bit width, use the **default-value special-character-bits** global configuration command.

- 7** Selects the 7-bit character set.
- 8** Selects the full 8-bit character set.

disconnect-character *ASCII-number***no disconnect-character**

To define a character to disconnect a session, use the **disconnect-character** line configuration command. This command defines the character you enter to end a terminal session. Use the **no** form of this command to remove the disconnect character.

ASCII-number ASCII decimal representation of the session disconnect character

[no] dispatch-character *ASCII-number1* [*ASCII-number2* . . .
ASCII-number]

To define a character that causes a packet to be sent, use the **dispatch-character** line configuration command. Use the **no** form of this command to remove the definition of the specified dispatch character.

ASCII-number ASCII decimal representation of the character, such as Return (ASCII decimal 13) for line-at-a-time transmissions.

dispatch-timeout *milliseconds*
no dispatch-timeout

To set the character dispatch timer, use the **dispatch-timeout** line configuration command. Use the **no** form of this command to remove the timeout definition.

milliseconds Integer that specifies the number of milliseconds the router waits after putting the first character into a packet buffer before sending the packet. During this interval, more characters may be added to the packet, which increases the processing efficiency of the remote host.

[no] editing

To enable enhanced editing mode for a particular line, use the **editing** line configuration command. To disable the enhanced editing mode, use the **no** form of this command.

escape-character *ASCII-number*

no escape-character

To define a system escape character, use the **escape-character** line configuration command. The **no** form of this command sets the escape character to Break.

ASCII-number Either the ASCII decimal representation of the character or a control sequence (Ctrl-E, for example).

[no] exec

To allow an EXEC process on a line, use the **exec** line configuration command. The **no exec** command turns off the EXEC process for the line specified.

[no] exec-banner

To control whether banners are displayed or suppressed, use the **exec-banner** line configuration command. This command determines whether or not the router will display the EXEC banner or the message-of-the-day (MOTD) banner when an EXEC is created. The **no** form of this command suppresses the banner messages.

exec-character-bits {7 | 8}

To configure the character widths of EXEC and configuration command characters, use the **exec-character-bits** line configuration command.

- 7** Selects the 7-bit character set.
- 8** Selects the full 8-bit character set for use of international and graphical characters in banner messages, prompts, and so forth.

exec-timeout *minutes* [*seconds*]

no exec-timeout

To set the interval that the EXEC command interpreter waits until user input is detected, use the **exec-timeout** line configuration command. The **no** form of this command removes the timeout definition. It is the same as entering **exec-timeout 0**.

minutes Integer that specifies the number of minutes.

seconds (Optional) Additional time intervals in seconds. An interval of zero specifies no time-outs.

[no] flowcontrol { **none** | **software** [**in** | **out**] | **hardware** [**in** | **out**] }

To set the method of data flow control between the terminal or other serial device and the router, use the **flowcontrol** line configuration command. To disable flow control, use the **no** form of this command.

none Turns off flow control.

software Sets software flow control. An optional keyword specifies the direction: **in** causes the router to listen to flow control from the attached device, and **out** causes the router to send flow control information to the attached device. If you do not specify a direction, both are assumed.

hardware Sets hardware flow control. An optional keyword specifies the direction: **in** causes the router to listen to flow control from the attached device, and **out** causes the router to send flow control information to the attached device. If you do not specify a direction, both are assumed. For more information about hardware flow control, see the hardware installation and maintenance manual for your router.

hold-character *ASCII-number*

no hold-character

To define the local hold character used to pause output to the terminal screen, use the **hold-character** line configuration command. The **no** form of this command restores the default.

ASCII-number Either the ASCII decimal representation of the hold character or a control sequence (for example, Ctrl-P).

length *screen-length*

To set the terminal screen length, use the **length** line configuration command.

screen-length Number of lines on the screen. A value of zero disables pausing between screens of output.

line [**aux** | **console** | **vty**] *line-number* [*ending-line-number*]

To configure a console port line, auxiliary port line, or virtual terminal lines, use the **line** global configuration command.

aux (Optional) Enables the auxiliary RS-232 DTE port. Must be addressed as relative line 0. The auxiliary port can be used for modem support and asynchronous connections.

console (Optional) Specifies the console terminal line. The console port is DCE.

vty (Optional) Specifies a virtual terminal for remote console access.

line-number Specifies the relative number of the terminal line (or the first line in a contiguous group) you want to configure when the line type is specified. Numbering begins with zero.

ending-line-number (Optional) Specifies the relative number of the last line in a contiguous group you want to configure. If you omit the keyword, then *line-number* and *ending-line-number* are absolute rather than relative line numbers.

location *text*
no location

To record the location of a serial device, use the **location** line configuration command. The **no** form of this command removes the description.

text Location description

[no] lockable

To enable the EXEC command lock, use the **lockable** global configuration command. The **no lockable** command reinstates the default, which does not allow the terminal to be locked.

login [**local** | **tacacs**]
no login

To enable password checking at login, use the **login** line configuration command. Use the **no** form of this command to disable password checking and allow connections without a password.

local (Optional) Selects local password checking. Authentication is based on the username specified with the **username** global configuration command.

tacacs (Optional) Selects the TACACS-style user ID and password-checking mechanism.

login-string *hostname d message [%secp] [%secw] [%b] d*
no login-string *hostname*

To define a string of characters that the router sends to a host after a successful Telnet connection, use the **login-string** global configuration command. This command applies only to rlogin and Telnet sessions. The **no** form of this command removes the login string.

<i>hostname</i>	Specifies the name of the host.
<i>d</i>	Sets a delimiting character of your choice—a pound sign (#) for example. You cannot use the delimiting character in the busy message.
<i>message</i>	Specifies the login string.
%secp	(Optional) Sets a pause in seconds. To insert pauses into the login string, embed a percent sign (%) followed by the number of seconds to pause and the letter “p.”
%secw	(Optional) Prevents users from issuing commands or keystrokes during a pause.
%b	(Optional) Sends a Break character.

modem answer-timeout *seconds*
no modem answer-timeout

To set the amount of time that the router waits for CTS after raising DTR in response to RING, use the **modem answer-timeout** line configuration command. The **no** form of this command reverts the router to the default value.

<i>seconds</i>	Specifies the timeout interval in seconds.
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[no] modem callin

To support dial-in modems that use DTR to control the off-hook status of the modem, use the **modem callin** line configuration command. In response to RING, the modem raises the DTR signal, which answers the

modem. At the end of the session, the router lowers DTR, which disconnects the modem. The **no** form of this command disables this feature.

[no] modem callout

To configure a line for reverse connections, use the **modem callout** line configuration command. The **no** form of this command disables this feature.

modem chat-script *regular-expression* **no modem chat-script**

To specify a default modem chat script, use the **modem chat-script** line configuration command. Use the **no** form of this command to disable this feature.

regular-expression Specifies the set of modem scripts that might be executed. The first script that matches the argument *regular-expression* will be used.

[no] modem cts-required

To configure a line to require a Clear To Send (CTS) signal, use the **modem cts-required** line configuration command. Use the **no** form of this command to disable this feature.

[no] modem dtr-active

To configure a line to leave DTR low unless the line has an active incoming connection or an EXEC process, use the **modem dtr-active** line configuration command. The **no** form of this command disables this feature.

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[no] modem in-out

To configure a line for both incoming and outgoing calls, use the **modem in-out** line configuration command. The **no** form of this command disables this feature.

[no] modem ri-is-cd

To configure a line for a high-speed modem, use the **modem ri-is-cd** line configuration command. The **no** form of this command disables this feature.

[no] notify

To enable terminal notification about pending output from other connections, use the **notify** line configuration command. The **no** form of this command ends notification.

[no] padding *ASCII-number count*

To set the padding on a specific output character, use the **padding** line configuration command. The **no padding** command removes padding for the specified output character.

<i>ASCII-number</i>	ASCII decimal representation of the character.
<i>count</i>	Number of NULL bytes sent after that character; the maximum is 255.

parity { none | even | odd | space | mark }

To define generation of a parity bit, use the **parity line** configuration command.

none	No parity
even	Even parity
odd	Odd parity

space Space parity
mark Mark parity

password *password*
no password

To specify a password on a line, use the **password** line configuration command. Use the **no password** command to remove the password.

password Case-sensitive character string that specifies the line password. The string can contain any alphanumeric characters, including spaces, up to 80 characters, except that the first character cannot be a number. You cannot specify the password in the format number-space-anything because the space after the number causes problems. For example, hello 21 is a legal password, but 21 hello is not.

[no] private

To save user EXEC command changes between terminal sessions, use the **private** line configuration command. Use the **no** form of the command to restore the default condition.

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

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

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

rotary *group*

no rotary

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

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

rxspeed *bps*

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

bps Baud rate in bits per second (bps); see the router line speeds in bits per second table in the *Router Products Command Reference* publication for settings.

[no] service linenumber

To configure the router to display line number information after the EXEC or incoming banner, use the **service linenumber** global configuration command. To disable this function, use the **no** form of the command.

session-limit *session-number*

no session-limit

To set the maximum number of terminal sessions per line, use the **session-limit** line configuration command. The **no** form of the command removes any specified session limit.

session-number Maximum number of sessions.

session-timeout *minutes* [**output**]

no session-timeout

To set the interval for closing the connection when there is no input or output traffic, use the **session-timeout** line configuration command. The **no** form of this command removes the timeout definition.

minutes Time interval in minutes.

output (Optional) Specifies that when traffic is sent to an asynchronous line from the router (within the specified interval), the connection is retained.

special-character-bits {**7** | **8**}

To configure the number of data bits per character for special characters such as software flow control characters and escape characters, use the **special-character-bits** line configuration command.

7 Selects the 7-bit ASCII character set.

8 Selects the full 8-bit character set for special characters.

speed *bps*

To set the terminal baud rate, use the **speed** line configuration command. The command sets both the transmit (to terminal) and receive (from terminal) speeds.

bps Baud rate in bits per second (bps); see the router line speeds in bits per second table in the *Router Products Command Reference* publication for settings.

start-character *ASCII-number*

no start-character

To set the flow control start character, use the **start-character** line configuration command. The command defines the character that signals the start of data transmission when software flow control is in effect. The **no** form of this command removes the character.

ASCII-number ASCII decimal representation of the start character

stop-character *ASCII-number*

no stop-character

To set the flow control stop character, use the **stop-character** line configuration command. The **no** form of this command removes the character.

ASCII-number ASCII decimal representation of the stop character

stopbits { **1** | **1.5** | **2** }

To set the number of the stop bits transmitted per byte, use the **stopbits** line configuration command.

1	One stop bit
1.5	One and one-half stop bits
2	Two stop bits

telnet break-on-ip

To configure the router to generate a hardware Break signal upon receiving an Interrupt Process (IP) command, use the **telnet break-on-ip** line configuration command.

telnet refuse-negotiations

To configure a line using Telnet to refuse to negotiate full-duplex, remote echo options on incoming connections, use the **telnet refuse-negotiations** line configuration command.

telnet speed *default-speed maximum-speed*

To allow the router to negotiate transmission speed of the line to a connected device, use the **telnet speed** line configuration command.

default-speed Line speed (in bps) that the router will use if the device on the other end of the connection has not specified a speed.

maximum-speed Maximum speed (in bps) that the device on the port will use.

telnet sync-on-break

To configure the router to cause an incoming connection to send a Telnet synchronize signal when it receives a Telnet Break signal, use the **telnet sync-on-break** line configuration command.

telnet transparent

To configure the router to send a carriage return (CR) as a CR followed by a NULL instead of a CR followed by a line feed (LF), use the **telnet transparent** line configuration command.

terminal-type *terminal-name*

no terminal-type

Use the **terminal-type** line configuration command to specify the type of terminal connected to a line. Use the **no** form of this command to remove any information about the type of terminal and reset the line to the default terminal emulation.

terminal-name Terminal name and type

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transport input { mop | telnet | none }

To allow the system administrator to define which protocols to use to connect to a specific line of the router, use the **transport input** line configuration command.

- | | |
|---------------|----------------------------------------------------------------------------------------------------|
| mop | Selects the MOP protocol. |
| telnet | Specifies all types of incoming TCP/IP connections. |
| none | Prevents any protocol selection on the line. This makes the port unusable by incoming connections. |

transport output { telnet | none }

To determine the protocols that can be used for outgoing connections from a line, use the **transport output** line configuration command.

- | | |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| telnet | Selects the TCP/IP Telnet protocol. It allows a user at one site to establish a TCP connection to a login server at another site. |
| none | Prevents any protocol selection on the line. The system normally assumes that any unrecognized command is a host name. If the protocol is set to none , the system no longer makes that assumption. No connection will be attempted if the command is not recognized. |

transport preferred { telnet | none }

To specify the transport protocol the router uses if the user does not specify one when initiating a connection, use the **transport preferred** line configuration command.

- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------|
| telnet | Selects the TCP/IP Telnet protocol. It allows a user at one site to establish a TCP connection to a login server at another site. |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------|

none Prevents any protocol selection on the line. The system normally assumes that any unrecognized command is a host name. If the protocol is set to **none**, the system no longer makes that assumption. No connection will be attempted if the command is not recognized.

txspeed *bps*

To set the terminal transmit baud rate (to terminal), use the **txspeed** line configuration command.

bps Baud rate in bits per second (bps); see the router line speeds in bits per second table in the *Router Products Command Reference* publication for settings.

vacant-message [*d message d*]

no vacant-message

To display an idle terminal message, use the **vacant-message** line configuration command. The command enables the banner to be displayed on the screen of an idle terminal. The **vacant-message** command without any arguments restores the default message. The **no vacant-message** command removes the default vacant message or any other vacant message that may have been set.

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

message (Optional) Vacant terminal message.

width *characters*

To set the terminal screen width, use the **width** line configuration command. This command sets the number of character columns displayed on the attached terminal.

characters Integer that specifies the number of character columns displayed on the terminal.