

DDR Routing Commands

This section describes the function and displays the syntax of each dial-on-demand routing (DDR) command. For more information about defaults and usage guidelines, see the corresponding chapter of the *Router Products Command Reference* publication.

[no] backup delay {*enable-delay* | **never**} {*disable-delay* | **never**}

To define how much time should elapse before a secondary line status changes after a primary line status has changed, use the **backup delay** interface configuration command. To return to the default, which means as soon as the primary fails, the secondary is immediately brought up without delay, use the **no backup delay** command.

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|----------------------|--|
| <i>enable-delay</i> | Number of seconds that elapse after the primary line goes down before the router activates the secondary line. The default is 0 seconds. |
| <i>disable-delay</i> | Number of seconds that elapse after the primary line goes up before the router deactivates the secondary line. The default is 0 seconds. |
| never | Prevents the secondary line from being activated or deactivated. |

[no] backup interface *interface number*

To configure the serial interface as a secondary or dial backup line, use the **backup interface** interface configuration command. To disable this feature, use the **no** form of this command.

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|------------------|---|
| <i>interface</i> | Type of interface. It must be serial . |
| <i>number</i> | Serial port to be set as the secondary line. |

[no] backup load { *enable-threshold* | **never** } { *disable-load* | **never** }

To set traffic load threshold for dial backup service, use the **backup load** interface configuration command. To return to the default value, use the **no** form of this command.

<i>enable-threshold</i>	Percentage of the primary line's available bandwidth.
<i>disable-load</i>	Percentage of the primary line's available bandwidth.
never	Sets the secondary line to never be activated due to traffic load.

[no] chat-script *script-name expect-send*

Use the **chat-script** global configuration command to create a script that will place a call over a modem. Use the **no** form of the command to disable the specified chat script.

<i>script-name</i>	Name of the chat script.
<i>expect-send</i>	Content of the chat script.

dialer enable-timeout *seconds*
no dialer enable-timeout

Use the **dialer enable-timeout** interface configuration command to set the length of time an interface stays down after a call has completed or failed before it is available to dial again. Use the **no** form of this command to reset the enable timeout value to the default.

<i>seconds</i>	Time in seconds that the router waits before the next call can occur on the specific interface. Acceptable values are positive, nonzero integers. The default is 15 seconds.
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dialer fast-idle *seconds*
no dialer fast-idle

Use the **dialer fast-idle** interface configuration command to specify the amount of time that a line for which there is contention will stay idle before the line is disconnected and the competing call is placed. Use the **no** form of this command to return to the default value.

seconds Idle time, in seconds, that must occur on an interface before the line is disconnected. Acceptable values are positive, nonzero integers. The default is 20 seconds.

dialer-group *group-number*
no dialer-group

To control access, use the **dialer-group** interface configuration command. To remove an interface from the specified dialer access group, use the **no** form of this command.

group-number Number of the dialer access group to which the specific interface belongs. This access group is defined using the **dialer-list** command. Acceptable values are nonzero, positive integers between 1 and 10.

dialer idle-timeout *seconds*
no dialer idle-timeout

Use the **dialer idle-timeout** interface configuration command to specify the idle time before the line is disconnected. Use the **no** form of this command to reset the idle timeout to the default value.

seconds Idle time, in seconds, that must occur on an interface before the line is disconnected. Acceptable values are positive, nonzero integers. The default is 120 seconds.

dialer in-band [**no-parity** | **odd-parity**]
no dialer in-band

Use the **dialer in-band** interface configuration command to specify that DDR is to be supported. Use the **no** form of this command to disable dial-on-demand routing for the interface.

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|-------------------|---|
| no-parity | (Optional) Indicates that no parity is to be applied to the dialer string that is sent out to the modem on synchronous interfaces. |
| odd-parity | (Optional) Indicates that the dialed number has odd parity (7-bit ASCII characters with the eighth bit the parity bit) on synchronous interfaces. |

[**no**] **dialer-list** *dialer-group* **list** *access-list-number*

Use the **dialer-list list** global configuration command to group access lists. Use the **no** form of this command to disable automatic dialing.

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|---------------------------|--|
| <i>dialer-group</i> | Specifies the number of a dialer access group identified in any dialer-group interface configuration command. |
| <i>access-list-number</i> | Specifies the access list number specified in any IP service access point or Novell IPX access lists, including Novell IPX extended Service Advertisement Protocol (SAP) access lists, and bridging type. See the supported access list types and numbers table in the <i>Router Products Command Reference</i> publication for the supported access list types and numbers. |

[no] **dialer-list** *dialer-group* **protocol** *protocol-name* {**permit** | **deny**}

Use the **dialer-list protocol** global configuration command to control automatic dialing by a protocol name. Use the **no** form of this command to disable automatic dialing.

<i>dialer-group</i>	Number of a dialer access group identified in any dialer access group interface configuration command.
<i>protocol-name</i>	One of the supported protocols as listed in the supported protocols for DDR access lists table in the <i>Router Products Command Reference</i> publication.
permit	(Optional) Permits access to an entire protocol.
deny	(Optional) Denies access to an entire protocol.

dialer load-threshold *load*

no dialer load-threshold

To configure bandwidth on demand by setting the maximum load before the dialer places another call to a destination, use the **dialer load-threshold** interface configuration command. To disable the setting, use the **no** form of the command.

<i>load</i>	Interface load beyond which the dialer will initiate another call to the destination. This argument is a number between 1 and 255.
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[no] dialer map *protocol next-hop-address* [**modem-script** *modem-regexp*] [**system-script** *system-regexp*] *dial-string* *[:isdn-subaddress]*

[no] dialer map *protocol next-hop-address* [**modem-script** *modem-regexp*] [**system-script** *system-regexp*] **name** *hostname* *dial-string* *[:isdn-subaddress]*

Use the **dialer map** interface configuration command to configure a serial interface to call one or multiple sites. Use the first form of the **dialer map** command to place a call to a single site on an asynchronous line for which a modem script has not been assigned or a system script must be specified, or to multiple sites on a single line, multiple lines, or a dialer rotary group. Use the second form of the **dialer map** command to place a call to multiple sites and to authenticate calls from multiple sites. To delete a particular dialer map entry, use a **no** form of this command.

<i>protocol</i>	Name of the protocol.
<i>next-hop-address</i>	Protocol address used to match against addresses to which packets are destined.
modem-script	(Optional) Indicates the modem script to be used for the connection (for asynchronous interfaces).
<i>modem-regexp</i>	(Optional) Regular expression to which a modem script will be matched (for asynchronous interfaces).
system-script	(Optional) Indicates the system script to be used for the connection (for asynchronous interfaces).
<i>system-regexp</i>	(Optional) Regular expression to which a system script will be matched for asynchronous interfaces).
name	(Optional) Indicates the remote system with which the local router communicates.
<i>hostname</i>	(Optional) Name of the remote device (usually the host name).

<i>dial-string</i>	Telephone number sent to the dialing device when it sees packets with the specified <i>next-hop-address</i> that matches the access lists defined.
<i>:isdn-subaddress</i>	(Optional) Subaddress number used for ISDN multipoint connections.

[no] dialer map protocol next-hop-address name hostname

Use the **dialer map name** interface configuration command to configure a dialer rotary group to receive and take advantage of caller identification using CHAP. Use the **no** form of this command to delete a particular dialer map entry.

<i>protocol</i>	Name of the protocol.
<i>next-hop-address</i>	Protocol address used to match against addresses to which packets are destined.
<i>hostname</i>	Name of the remote device (usually the host name).

[no] dialer map protocol next-hop-address speed speed

Use the **dialer map speed** interface configuration command to set the dialer speed. Use the **no** form of this command to return to the default speed.

<i>protocol</i>	Name of the protocol.
<i>next-hop-address</i>	Protocol address used to match against addresses to which packets are destined.
<i>speed</i>	Dialer speed. It can be either 56 (for 56 kbps) or 64 (for 64 kbps). The default is 64 kbps.

dialer rotary-group *number*

Use the **dialer rotary-group** interface configuration command to include an interface in a dialer rotary group.

number Number of the dialer interface in whose rotary group you want this interface included. An integer that you select that indicates the dialer rotary group; defined by the **interface dialer** command. A number from 0 to 255.

dialer string *dial-string* **no dialer string**

Use the **dialer string** interface configuration command to specify the string (telephone number) to be called for interfaces calling a single site. Use the **no** form of this command to delete the dialer string specified for the interface.

dial-string String of characters to be sent to a DCE.

dialer wait-for-carrier-time *seconds* **no dialer wait-for-carrier-time**

Use the **dialer wait-for-carrier-time** interface configuration command to specify how long to wait for a carrier. Use the **no** form of this command to reset the carrier wait time value to the default.

seconds Number of seconds that the interface waits for the carrier to come up when a call is placed. Acceptable values are positive, nonzero integers. The default is 30 seconds.

encapsulation ppp

Use the **encapsulation ppp** interface configuration command to configure Point-to-Point Protocol (PPP) encapsulation.

interface dialer *number*

Use the **interface dialer** global configuration command to define a dialer rotary group.

number Number of the dialer rotary group. It can be number in the range 0 through 255.

modem chat-script *regexp*

Use the **modem chat-script** line configuration command for asynchronous lines to set a regular expression for a script on a modem line.

regexp Regular expression to be used to select a chat script. The chat script name will be matched to *regexp*.

[no] ppp authentication chap

Use the **ppp authentication chap** interface configuration command to enable Challenge Handshake Authentication Protocol (CHAP) on a serial interface. Use the **no** form of this command to disable this feature.

[no] ppp authentication pap

To enable Password Authentication Protocol (PAP) on a serial interface, use the **ppp authentication pap** interface configuration command. To disable this encapsulation, use the **no** form of this command.

show dialer [**interface** *interface unit*]

Use the **show dialer** EXEC command to obtain a general diagnostic display for serial interfaces configured for DDR.

interface (Optional) Information for the interface specified by the arguments *interface* and *unit* is to be displayed.

interface unit (Optional) Interface and unit identifiers.

DDR Routing Commands

username *name* **password** *secret*

Use the **username** command to specify the password to be used in Challenge Handshake Authentication Protocol (CHAP) caller identification and Password Authentication Protocol (PAP).

<i>name</i>	Host name, server name, user ID, or command name.
password	Possibly an encrypted password for this username.
<i>secret</i>	For CHAP authentication: specifies the secret for the local router or the remote device. The secret is encrypted when it is stored on the local router. This prevents the secret from being stolen. The secret can consist of any string of up to 11 printable ASCII characters. There is no limit to the number of username/password combinations that can be specified, allowing any number of remote devices to be authenticated.