DDR Commands

This chapter describes the function and displays the syntax of each dial-on-demand routing 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 brought up without delay, use the **no** form of this command.

enable-delay	Number of seconds that elapse after the primary line goes down before the router activates the secondary line. The default is 0 seconds.
disable-delay	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 serial** *number*
[**no**] **backup interface** *slot*/*port* (For the Cisco 7000series)

To configure an 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.

number	Serial port to be set as the secondary line.
slot	Slot number of the AIP interface.
port	Port number.

[**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.

enable-threshold	Percentage of the primary line's available bandwidth.
disable-load	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 this command to disable the specified chat script.

script-name	Name of the chat script.
expect-send	Content of the chat script.

clear dialer [**interface** *type number*]
clear dialer [**interface serial** *slot*/*port*] (Cisco 7000 series only)

To clear the values of dialer statistics for one or more serial or BRI interfaces configured for DDR, use the **clear dialer** privileged EXEC command.

interface	(Optional) Indicates that one interface will be specified.
type	Interface type, either **serial** or **bri**.
number	Interface number.
slot/*port*	On the Cisco 7000 series, specifies the slot and port numbers.

clear snapshot quiet-time *interface*

To end the quiet period on a client router within two minutes, use the **clear snapshot quiet-time** EXEC command.

interface	Interface type and number.

[**no**] **dialer caller** *number*

To configure caller ID screening, use the **dialer caller** interface configuration command. To disable this feature, use the **no** form of this command.

number	Telephone number for which to screen. Specify an x to represent a single "don't-care" character. The maximum length of each number is 25 characters.

[**no**] **dialer dtr**

To enable DDR on an interface and specify that the serial line is connected by non-V.25bis modems using EIA signaling only (the data terminal ready [DTR] signal), use the **dialer dtr** interface configuration command. To disable dial-on-demand routing for the interface, use the **no** form of this command.

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.

seconds	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.

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 hold-queue *packets*
no dialer hold-queue [*packets*]

To allow "interesting" outgoing packets to be queued until a modem connection is established, use the **dialer hold-queue** interface configuration command. To disable a dialer hold queue, use the **no** form of this command.

packets	Number of packets, in the range 0 to 100 packets, to hold in the queue. This argument is optional with the **no** form of this command.

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.

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*

To group access lists, use the **dialer-list list** global configuration command. To disable automatic dialing, use the **no** form of this command.

dialer-group	Specifies the number of a dialer access group identified in any **dialer-group** interface configuration command.

access-list-number	Specifies the access list number specified in any IP or Novell IPX access lists including Novell IPX extended, Service Access Point (SAP) access lists and bridging type. See this command in the *Router Products Command Reference* publication for a list of supported values.

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

To define a DDR dialer list to control dialing by protocol or by a combination of protocol and access list, use the **dialer-list protocol** global configuration command. To delete a dialer list, use the **no** form of this command.

dialer-group	Number of a dialer access group identified in any **dialer-group** interface configuration command.
protocol-name	One of the following protocol keywords: **appletalk**, **bridge**, **clns**, **clns_es**, **clns_is**, **decnet**, **decnet_router-L1**, **decnet_router-L2**, **decnet_node**, **ip**, **ipx**, **vines**, or **xns**.
permit	Permits access to an entire protocol.
deny	Denies access to an entire protocol.
list	Specifies that an access list will be used for defining a granularity finer than an entire protocol.
access-list-number	Access list number. Access list numbers include any DECnet, Banyan VINES, IP, Novell IPX, or XNS standard or extended access lists, plus Novell IPX extended, Service Access Point (SAP) access lists and bridging types. See this command in the *Router Products Command Reference* publication for a list of supported values.
access-group	Filter list name used in the **clns filter-set** and **clns access-group** commands.

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 this command.

load	Interface load beyond which the dialer will initiate another call to the destination. This argument is a number between 1 and 255.

[**no**] **dialer map** *protocol next-hop-address* [**name** *hostname*] [**spc**] [**speed 56** | **64**] [**broadcast**] [**modem-script** *modem-regexp*] [**system-script** *system-regexp*] [*dial-string*[**:***isdn-subaddress*]]

To configure a serial interface or Integrated Services Digital Network (ISDN) interface to call one or multiple sites, use a form of the **dialer map** interface configuration command; all options are shown in the first form of the command (shown above). Keywords are arguments are defined after the fourth form of the command.

[**no**] **dialer map** *protocol next-hop-address* [**name** *hostname*] [**spc**] [**speed 56** | **64**] [**broadcast**] [*dial-string*[**:***isdn-subaddress*]]

To configure a serial interface or ISDN interface to place a call to multiple sites and to authenticate calls from multiple sites, use the second form of the **dialer map** command (shown above). Keywords are arguments are defined after the fourth form of the command.

[**no**] **dialer map bridge** [**name** *hostname*] [**spc**] [**broadcast**] [*dial-string*[**:***isdn-subaddress*]]]

To configure a serial interface or ISDN interface to support bridging, use the third form of the command (shown above). Keywords are arguments are defined after the fourth form of the command.

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

To configure an asynchronous interface to place a call to a single site that has no modem script assigned or that requires a system script, or to multiple sites on a single line, on multiple lines, or on a dialer rotary group, use the fourth form of the **dialer map** command (shown above).

To delete a particular dialer map entry, use a **no** form of this command.

protocol	Protocol keyword. See this command in the *Router Products Command Reference* publication for a list of supported values.
next-hop-address	Protocol address used to match against addresses to which packets are destined. This argument is not used with the **bridge** protocol keyword.
name	(Optional) Indicates the remote system with which the local router communicates.
hostname	(Optional) Case-sensitive name or ID of the remote device (usually the host name). For routers with ISDN interfaces, if calling line identification (CLI/ANI/caller ID) is provided, the *hostname* field can contain the number that the calling line ID provides.
spc	Specifies a semipermanent connection between customer equipment and the exchange; used only in Germany to configure connections between an ISDN BRI and a 1TR6 ISDN switch type.
speed 56 | **64**	(Optional) Keyword and value indicating the line speed to use. Used for ISDN only.
broadcast	(Optional) Indicates that broadcasts should be forwarded to this protocol address.
modem-script	(Optional) Indicates the modem script to be used for the connection (for asynchronous interfaces).

modem-regexp	(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).
system-regexp	(Optional) Regular expression to which a system script will be matched (for asynchronous interfaces).
dial-string	(Optional) Telephone number sent to the dialing device when it recognizes packets with the specified next-hop-address that matches the access lists defined. *The dial string must be the last item in the command line.*
:*isdn-subaddress*	(Optional) Subaddress number used for ISDN multipoint connections.

dialer map snapshot *sequence-number dial-string*
no dialer map snapshot [*sequence-number*]

To define a dialer map for Cisco's snapshot routing protocol on a client router connected to a DDR interface, use the **dialer map snapshot** interface configuration command. To delete one or more previously defined snapshot routing dialer maps, use the **no** form of this command.

sequence-number	Number in the range from 1 to 254, inclusive, that uniquely identifies a dialer map.
dial-string	Telephone number of a remote snapshot server to be called during an active period.

dialer priority *number*
no dialer priority

To set the priority of an interface in a dialer rotary group use the **dialer priority** interface configuration command. Use the **no** form of this command to revert to the default setting.

number	Specifies the priority of an interface in a dialer rotary group; the highest number indicates the highest priority. A number from 0 to 255. The default value is 0.

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*[**:***isdn-subaddress*]
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.

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.

ppp authentication {**chap** | **pap**} [**if-needed**]
no ppp authentication chap

To enable Challenge Handshake Authentication Protocol (CHAP) or Password Authentication Protocol (PAP) on a serial interface, use the **ppp authentication** interface configuration command. Use the **no** form of this command to disable this feature.

chap	Enables CHAP on a serial interface.
pap	Enables PAP on a serial interface.
if-needed	(Optional) CHAP authentication is not done on this line if the user has already authenticated.

script dialer *regexp*
no script dialer

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

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

show dialer [**interface** *type number*]

To obtain a general diagnostic display for serial interfaces configured for DDR, use th**e show dialer** EXEC command.

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

show snapshot [*interface*]

To display snapshot routing parameters associated with an interface, use the **show snapshot** EXEC command.

interface	(Optional) Interface type and number.

[**no**] **snapshot client** *active-time quiet-time*
[**suppress-statechange-updates**] [**dialer**]

To configure a client router for snapshot routing, use the **snapshot client** interface configuration command. To disable a client router, use the **no** form of this command.

active-time	Amount of time, in minutes, that routing updates are regularly exchanged between the client and server routers. This can be an integer in the range 5 to 100. There is no default value. A typical value would be 5 minutes.
quiet-time	Amount of time, in minutes, that routing entries are frozen and remain unchanged between active periods. Routes are not aged during the quiet period, so they remain in the routing table as if they were static entries. This argument can be an integer from 8 to 100000. There is no default value. The minimum quiet time is generally the active time plus 3.
suppress-statechange-updates	(Optional) Disables the exchange of routing updates each time the line protocol goes from "down" to "up" or from "dialer spoofing" to "fully up."
dialer	(Optional) Allows the client router to dial up the remote router in the absence of regular traffic.

[**no**] **snapshot server** *active-time* [**dialer**]

To configure a server router for snapshot routing, use the **snapshot server** interface configuration command. To disable a server router, use the **no** form of this command.

active-time	Amount of time, in minutes, that routing updates are regularly exchanged between the client and server routers. This can be an integer in the range 5 to 100. There is no default value. A typical value would be 5 minutes.
dialer	(Optional) Allows the client router to dial up the remote router in the absence of regular traffic.

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

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

name	Host name, server name, user ID, or command name.
secret	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.