



Peer-to-Peer DDR with Dialer Profiles Commands

This chapter lists commands for the Dialer Profiles implementation of dial-on-demand routing (DDR), explains the command syntax, and provides usage guidelines. For information about configuring Dialer Profiles DDR and for configuration examples, refer to the “Configuring Peer-to-Peer DDR with Dialer Profiles” chapter in the *Dial Solutions Configuration Guide*.

dialer-group

To control access by configuring an interface to belong to a specific dialing group, use the **dialer-group** interface configuration command. To remove an interface from the specified dialer access group, use the **no** form of this command.

```
dialer-group group-number  
no dialer-group
```

Syntax Description

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

Default

No access is predefined.

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

An interface can be associated with a single dialer access group only; multiple **dialer-group** assignment is not allowed. A second dialer access group assignment will override the first. A dialer access group is defined with the **dialer-group** command. The **dialer-list** command associates an access list with a dialer access group.

Packets that match the dialer group specified trigger a connection request.

Example

The following example specifies dialer access group number 1.

The destination address of the packet is evaluated against the access list specified in the associated **dialer-list** command. If it passes, either a call is initiated (if no connection has already been established) or the idle timer is reset (if a call is currently connected).

```
interface async 1  
  dialer-group 1  
  access-list 101 deny igrp 0.0.0.0 255.255.255.255 255.255.255.255 0.0.0.0  
  access-list 101 permit ip 0.0.0.0 255.255.255.255 0.0.0.0 255.255.255.255  
  dialer-list 1 list 101
```

dialer idle-timeout (map-class dialer)

To specify the idle time before the calls in this map class are disconnected, use the **dialer idle-timeout** map-class dialer configuration command. To reset the idle timeout to the default, use the **no** form of this command.

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

Syntax Description

<i>seconds</i>	Idle time, in seconds, that must occur on an interface associated with a map class before calls are disconnected. Acceptable values are positive, nonzero integers.
----------------	---

Default

Defaults to a value set for the interface.

Command Mode

Map-class configuration

Usage Guidelines

The **dialer string class** command defines the map class associated with the dial string and interface.

Example

The following example sets a dialer idle-timeout interval of 180 seconds:

```
dialer idle-timeout 180
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer string (dialer profiles)

dialer isdn

To specify the bit rate used on the B channel associated with a specified map class and to specify whether to set up semipermanent connections for this map class, use the **dialer isdn** map-class configuration command.

```
dialer isdn [speed speed] [spc]  
no dialer isdn [speed speed] [spc]
```

Syntax Description

speed <i>speed</i>	(Optional) Bit rate, in kilobytes per second (kbps), used on the ISDN B channel. Values are 56 and 64 . Default is 64.
spc	(Optional) Specifies that an ISDN semipermanent connection is to be used for calls associated with this map class.

Default

Bit rate is 64 Kbps. Semipermanent connections are not set up.

Command Mode

Map-class dialer configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

This command is valid for ISDN interfaces only.

Example

The following example configures a speed of 56 kbps and no semipermanent connections for the *Eng* map class:

```
dialer string 4156884540 class Eng  
  
! This map-class ensures that these calls use an ISDN speed of 56 kbps and that  
! no semipermanent connection is set up.  
map-class dialer Eng  
dialer isdn speed 56
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer string (dialer profiles)

dialer-list protocol

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-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]]
```

Syntax Description

<i>dialer-group</i>	Number of a dialer access group identified in any dialer-group interface configuration command.
<i>protocol-name</i>	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.
<i>access-list-number</i>	Access list numbers specified in any DECnet, Banyan VINES, IP, Novell IPX, or XNS standard or extended access lists, including Novell IPX extended service access point (SAP) access lists and bridging types. See Table 124 for the supported access list types and numbers.
<i>access-group</i>	Filter list name used in the clns filter-set and clns access-group commands.

Default

No dialer lists are defined.

Command Mode

Global configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0. The **list** keyword and *access-list-number* and *access-group* arguments first appeared in Cisco IOS Release 10.3.

The various **no** forms of this command have the following effects:

- The **no dialer-list 1** command deletes all lists configured with list 1, regardless of the keyword previously used (**permit**, **deny**, **protocol**, or **list**).
- The **no dialer-list 1 protocol protocol-name** command deletes all lists configured with list 1 and protocol *protocol-name*.

- The **no dialer-list 1 protocol protocol-name list access-list-number** command deletes the specified list.

The **dialer-list protocol** form of this command permits or denies access to an entire protocol. The **dialer-list protocol list** form of this command provides a finer permission granularity and also supports protocols that were not previously supported.

The **dialer-list protocol list** form of this command applies protocol access lists to dialer access groups to control dialing using DDR. The dialer access groups are defined with the **dialer-group** command.

Although the **dialer-list list** command is still supported for IP, IPX, DECnet, AppleTalk, XNS, and bridging, the new **dialer-list protocol list** command should be used for all protocols. The **dialer-list protocol list** command is supported for all those protocols and also for Banyan VINES and International Organization for Standardization (ISO) Connectionless Network Service (CLNS).

Table 124 lists the access list types and numbers that the **dialer-list protocol list** command supports. The table does not include ISO CLNS because that protocol uses filter names instead of predefined access list numbers.

Table 124 Dialer-List Supported Access List Types and Numbers

Access List Type	Access List Number Range (decimal)
AppleTalk	600–699
Banyan VINES (standard)	1–100
Banyan VINES (extended)	101–200
DECnet	300–399
IP (standard)	1–99
IP (extended)	100–199
Novell IPX (standard)	800–899
Novell IPX (extended)	900–999
Transparent Bridging	200–299
XNS	500–599

Examples

Dialing occurs when an interesting packet (one that matches access list specifications) needs to be output on an interface. Using the standard access list method, packets can be classified as interesting or uninteresting. In the following example, IGRP TCP/IP routing protocol updates are not classified as interesting and do not initiate calls:

```
access-list 101 deny igmp 0.0.0.0 255.255.255.255 255.255.255.255 0.0.0.0
```

The following example classifies all other IP packets as interesting and permits them to initiate calls:

```
access-list 101 permit ip 0.0.0.0 255.255.255.255 0.0.0.0 255.255.255.255
```

Then the following command places list 101 into dialer access group 1:

```
dialer-list 1 protocol ip list 101
```

In the following example, DECnet access lists allow any DECnet packets with source area 10 and destination area 20 to trigger calls:

```
access-list 301 permit 10.0 0.1023 10.0 0.1023
access-list 301 permit 10.0 0.1023 20.0 0.1023
```

Then the following command places list 301 into dialer access group 1:

```
dialer-list 1 protocol decnet list 301
```

The following example defines both IP and VINES access lists. The IP access lists define IGRP packets as uninteresting, but permits all other IP packets to trigger calls. The VINES access lists do not allow Routing Table Protocol (RTP) routing updates to trigger calls, but allow any other data packets to trigger calls.

```
access-list 101 deny igrp 0.0.0.0 255.255.255.255 0.0.0.0 255.255.255.255
access-list 101 permit ip 0.0.0.0 255.255.255.255 0.0.0.0 255.255.255.255
!
vines access-list 107 deny RTP 00000000:0000 FFFFFFFF:FFFF 00000000:0000 FFFFFFFF:FFFF
vines access-list 107 permit IP 00000000:0000 FFFFFFFF:FFFF 00000000:0000 FFFFFFFF:FFFF
```

The following two commands place the IP and VINES access lists into dialer access group 1:

```
dialer-list 1 protocol ip list 101
dialer-list 1 protocol vines list 107
```

The following example defines a Connectionless Network Service (CLNS) filter, and then the filter is placed in dialer access group 1:

```
clns filter-set ddrline permit 47.0004.0001....
!
dialer-list 1 protocol clns list ddrline
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

- access-list**
- clns filter-set**
- dialer-group**
- vines access-list**

dialer max-call

To specify, for a dialer profile, the maximum number of links to a remote destination that can be up at any one time, use the **dialer max-call** interface configuration command.

dialer max-call *number*

Syntax Description

number Maximum number of calls, ranging from 1 to 4096.

Default

No maximum number of calls is specified.

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

This command applies to dialer interfaces only.

This command is used to specify the maximum number of calls for the dialer interface.

This command can be configured only if a dialer profile is enabled using the **dialer pool** command. The **dialer max-call** command cannot be used with legacy dial-on-demand routing (DDR).

When two connected routers are configured to dial out, only one router should have the **dialer max-call** or **dialer pool-member max-links** command configured. Otherwise, if both routers dial simultaneously, each will reject the incoming call when it exceeds the setting for the **max-links** argument. If the maximum number of calls configured is one and dialing out is synchronized, no connection will come up or it will take many retries before the connection stays up. To prevent this problem, one of the following configurations is recommended:

- Use the **dialer max-call** command to restrict the number of connections, rather than the **dialer pool-member max-links** command. The result is the same and the **dialer max-call** command is easier to understand and configure.
- When two systems will dial each other and a maximum of one link is desired, configure the **dialer max-calls** command on only one side of the connection, not on both sides.
- Configure the **dialer load-threshold** command on only one side of the connection, either the local or remote router, and configure the **dialer max-call** command on the interface where the **dialer load-threshold** command is configured.

Example

The following example sets a maximum of six calls:

```
dialer max-call 6
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer isdn
dialer load-threshold
dialer pool
dialer pool-member max-links
dialer string (dialer profiles)
dialer wait-for-carrier-time (map-class)

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer pool-member

dialer remote-name

dialer pool-member

To configure a physical interface to be a member of a Dialer Profiles dialing pool, use the **dialer pool-member** interface configuration command.

dialer pool-member *number* [**priority** *priority*] [**min-link** *minimum*] [**max-link** *maximum*]

Syntax Description

<i>number</i>	Dialing pool number, in the range 1 through 255.
priority <i>priority</i>	(Optional) Priority of this interface within the dialing pool, in the range 0 (lowest) to 255 (highest). Interfaces with the highest priority are selected first for dialing out. Default is 0.
min-link <i>minimum</i>	(Optional) Minimum number of B channels on this interface that are reserved for this dialing pool, in the range 0 to 255. Default is 0. A reserved channel is inactive until the specified interface uses it to place calls. Applies to ISDN interfaces only.
max-link <i>maximum</i>	(Optional) Maximum number of B channels on this interface that can be used by this dialing pool, in the range 0 to 255. Default is 255. Applies to ISDN interfaces only.

Defaults

Disabled. When enabled, no default dialing pool number is assigned; the default value of *priority*, and *minimum* is 0; the default value of *maximum* is 255.

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

This command applies to asynchronous serial, synchronous serial, BRI, and PRI *physical* interfaces only. It does not apply to dialer interfaces.

The common number used in the **dialer pool** command and in the **dialer pool-member** command links the physical interface and dialer interface configurations together.

The min-link keyword and value are used primarily for dial backup.

Examples

This following example shows the configuration of one ISDN BRI interface to be a member of dialer pool 2 with priority 100:

```
interface BRI2
 encapsulation ppp
 dialer pool-member 2 priority 100
 ppp authentication chap
```

dialer pool-member

In the following example, BRI physical interface configuration BRI 1 has a reserved channel in dialer pool 3. That channel is inactive until BRI 1 uses it to place calls.

```
interface BRI1
  encapsulation ppp
  dialer pool-member 1 priority 50
  dialer pool-member 2 priority 50
  !BRI 1 has a reserved channel in dialer pool 3; the channel remains inactive
  !until BRI 1 uses it to place calls.
  dialer pool-member 3 min-link 1
  ppp authentication chap
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer pool

dialer remote-name

To specify, for a dialer interface, the authentication name of the remote router on the destination subnetwork, use the **dialer remote-name** interface configuration command.

dialer remote-name *username*

Syntax Description

<i>username</i>	Case-sensitive character string identifying the remote device; maximum length is 255 characters.
-----------------	--

Default

Disabled. No default username is specified.

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

This command applies only to dialer interfaces.

When using CHAP or PAP authentication, *username* is the name of the remote device that is authenticating.

Example

The following partial example sets the name of the remote host to dallas.

```
dialer remote-name dallas
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

ppp authentication chap

ppp authentication pap

dialer string (dialer profiles)

To specify the string (telephone number) to be used when placing a call from an interface, use the **dialer string** interface configuration command. To delete the telephone number specified for the interface, use the **no** form of this command.

```
dialer string dial-string [class class-name]  
no dialer string
```

Syntax Description

<i>dial-string</i>	Telephone number to be sent to a DCE device.
class <i>class-name</i>	(Optional) Dialer map class associated with this telephone number.

Default

No telephone numbers and class names are predefined.

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

When you use Dialer Profiles for DDR, use the **dialer string class** form of this command to define a map class for a specific dialer profile.

Dialer Profiles make it unnecessary to use dialer maps to configure DDR.

Note If a **dialer string** command is specified without a **dialer-group** command with access lists defined, dialing is never initiated. If the **debug dialer** command is enabled, an error message is displayed indicating that dialing never will occur.

Example

The following example specifies that the dial string 4159991234 be used in calls to destinations defined by the map class sf:

```
dialer string 4159991234 class sf
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

```
dialer remote-name  
interface dialer
```

dialer wait-for-carrier-time (map-class dialer)

To specify the length of time to wait for a carrier when dialing out to the dial string associated with a specified map class, use the **dialer wait-for-carrier-time** map-class dialer configuration command. To reset the carrier wait time value to the default, use the **no** form of this command.

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

Syntax Description

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.

Default

30 seconds

Command Mode

Map-class dialer configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

You can define different dialer map classes with different wait-for-carrier times to suit the different types of lines and interfaces. For example, you must define a longer wait time for a map class used by serial interfaces than for one used by ISDN interfaces.

Example

The following example specifies a carrier wait time of 20 seconds for the *Eng* class on the *Dialer2* interface:

```
interface Dialer2
 ip address 2.2.2.2 255.255.255.0
 encapsulation ppp
 dialer remote-name Mediumuser
 dialer string 5264540 class Eng
 dialer wait-for-carrier-time 20
 dialer load-threshold 50 either
 dialer pool 1
 dialer-group 2
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer string (dialer profiles)

interface dialer

To define a dialer rotary group, use the **interface dialer** global configuration command.

interface dialer *number*

Syntax Description

<i>number</i>	Number of the dialer rotary group. It can be number in the range 0 through 255.
---------------	---

Default

No dialer rotary groups are predefined.

Command Mode

Global configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

Dialer rotary groups allow you to apply a single interface configuration to a set of physical interfaces. This allows a group of interfaces to be used as a pool of interfaces for calling many destinations.

Once the interface configuration is propagated to a set of interfaces, those interfaces can be used to place calls using the standard DDR criteria. When multiple destinations are configured, any of these interfaces can be used for outgoing calls.

Dialer rotary groups are useful in environments that require multiple calling destinations. Only the rotary group needs to be configured with the **dialer map** commands. The only configuration required for the interfaces is the **dialer rotary-group** command indicating that each interface is part of a dialer rotary group.

Although a dialer rotary group is configured as an interface, it is not a physical interface. Instead, it represents a group of interfaces. Interface configuration commands entered after the **interface dialer** command will be applied to all physical interfaces assigned to specified rotary groups. Individual interfaces in a dialer rotary group do not have individual addresses. The dialer interface has a protocol address, and that address is used by all interfaces in the dialer rotary group.

Example

The following example identifies interface dialer 1 as the dialer rotary group leader. Interface dialer 1 is not a physical interface, but represents a group of interfaces. The interface configuration commands that follow apply to all interfaces included in this group.

```
interface dialer 1
  encapsulation ppp
  authentication chap
  dialer in-band
  ip address 1.2.3.4
  dialer map ip 1.2.2.5 name YYY 14155553434
  dialer map ip 1.3.2.6 name ZZZ
```

map-class dialer

To define a class of shared configuration parameters associated with the **dialer map** command, use the **map-class dialer** global configuration command.

map-class dialer *classname*

Syntax Description

classname Unique class identifier.

Default

Disabled; no class name is provided.

Command Mode

Global configuration

Usage Guidelines

The *classname* must be the same as the *classname* in the **dialer map** command.

Example

The following example configures a map class called “hawaii” and sets an ISDN speed of 56 kbps for the class.

```
map-class dialer hawaii
 isdn speed 56
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

dialer map

show dialer

To display general diagnostic information for interfaces configured for DDR, use the **show dialer EXEC** command.

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

Syntax Description

interface	(Optional) Displays information for the interface specified by the arguments <i>type</i> and <i>number</i> .
<i>type</i>	(Optional) Interface type.
<i>number</i>	(Optional) Interface number.

Command Mode

EXEC

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

Sample Displays

If you enter the **show dialer interface** command for the D channel of an ISDN BRI or PRI, the command output also displays the B channels. That is, the command **show dialer interface bri 0** displays information of interfaces bri 0, bri 0:1, and bri 0:2. The command **show dialer interface serial 0:23** (for a channelized T1 line configured for ISDN PRI) displays information for serial interfaces 0:23, 0:0, 0:1, and so forth to 0:22.

If you have defined a dialer group that consists of the interfaces serial 0, serial 1, and bri 2, the command **show dialer interface dialer 1** displays information for interfaces bri 0, bri 0:1, bri 0:2, serial 1, and serial 0.

The following is sample output from the **show dialer** command for a BRI interface when dialer profiles are configured:

```
impulse# show dialer interface bri 0

BRI0 - dialer type = ISDN

Dial String      Successes  Failures   Last called  Last status

0 incoming call(s) have been screened.

BRI0: B-Channel 1
Idle timer (120 secs), Fast idle timer (20 secs)
Wait for carrier (30 secs), Re-enable (15 secs)

Dialer state is data link layer up

Dial reason: ip (s=6.1.1.8, d=6.1.1.1)

Interface bound to profile Dialer0

Time until disconnect 102 secs
```

```

Current call connected 00:00:19
Connected to 5773872 (wolfman)

BRI0: B-Channel 2
Idle timer (120 secs), Fast idle timer (20 secs)
Wait for carrier (30 secs), Re-enable (15 secs)
Dialer state is idle

```

Table 125 describes significant fields shown in the display.

Table 125 Show Dialer Interface BRI Field Descriptions

Field	Description
BRI0 - dialer type = ISDN	ISDN dialer.
Dial String	Dial strings of logged calls (telephone numbers). On ISDN BRI interfaces, if you have specified a subaddress number in the dialer string , this number is included in the dial string after a colon.
Successes	Successful connections (even if no data is passed).
Failures	Failed connections; call not successfully completed.
Last called	Time that last call occurred to specific dial string.
Last status	Status of last call to specific dial string (successful or failed).
0 incoming call(s) have been screened.	Number of calls subjected to Dialer Profiles screening to determine how the call is to be treated.
BRI0: B-Channel 1	Header indicating the following data is for B channel 1.
Idle timer (120 secs), Fast idle timer (20 secs)	Settings (in seconds) for the idle timer and the fast idle timer.
Wait for carrier (30 secs), Re-enable (15 secs)	Settings (in seconds) for the wait for carrier timer and the reenable timer.
Dialer state is data link layer up	The message “data link layer up” suggests that the dialer came up properly; if it says anything else then dialer did not come up properly. The message “physical layer up” means the line protocol (LCP) came up, but the NCP did not come up. The show interfaces command also provides the similar information.
Dial reason: ip (s=6.1.1.8, d=6.1.1.1)	What initiated the dial, namely an IP packet, plus source and destination address in the packet.
Interface bound to profile Dialer0	Dialer profile that is bound to this interface or B channel.
Time until disconnect	Time until line is configured to disconnect.
Current call connected	Time at which the current call was connected.
Connected to	Dial string to which line is currently connected.

The following is sample output from the **show dialer** command for an asynchronous interface:

```
Router# show dialer interface async 1

Async1 - dialer type = IN-BAND NO-PARITY
Idle timer (900 secs), Fast idle timer (20 secs)
Wait for carrier (30 secs), Re-enable (15 secs)
Time until disconnect 838 secs
Current call connected 0:02:16
Connected to 8986

Dial String      Successes  Failures  Last called  Last status  Default
8986             0         0         never       Success     Default
8986             8         3         0:02:16    Success     Default
```

Table 126 describes significant fields shown in the display.

Table 126 Show Dialer Interface Async Field Descriptions for In-Band Dialers

Field	Description
Async 1	Name of an asynchronous interface.
dialer type = IN-BAND	Indicates that DDR is enabled.
Idle timer (900 secs)	Idle timeout specification (in seconds).
Fast idle timer (20 secs)	Fast idle timer specification (in seconds).
Wait for carrier (30 secs)	Wait for carrier timer specification (in seconds).
Re-enable (15 secs)	Enable timeout specification (in seconds).
Time until disconnected	Time until line is configured to disconnect.
Current call connected	Time at which the current call was connected.
Connected to	Dial string to which line is currently connected.
Dial String	Dial strings of logged calls (telephone numbers). On ISDN BRI interfaces, if you have specified a subaddress number in the dialer string or dialer map command, this number is included in the dial string after a colon.
Successes	Successful connections (even if no data is passed).
Failures	Failed connections; call not successfully completed.
Last called	Time that last call occurred to specific dial string.
Last status	Status of last call to specific dial string (successful or failed).
Default	If the DDR facility is using the dial string specified with the dialer string command, the word <i>Default</i> is appended to the Last status entry.

When the **show dialer EXEC** command is issued for a synchronous serial interface configured for DTR dialing, output similar to the following is displayed:

```
Serial 0 - dialer type = DTR SYNC
Idle timer (120 secs), Fst idle timer (20 secs)
Wait for carrier (30 secs), Re-enable (15 secs)

Dial String      Successes  Failures  Last called  Last status
----             1         0         1:04:47    Success     DTR dialer
8986             0         0         never       Success     Default
```

Table 127 describes additional fields shown in the display.

Table 127 Show Dialer Field Descriptions for DTR Dialers

Field	Description
DTR SYNC	Indicates that DDR is enabled and that DTR dialing is enabled on this synchronous interface.
Last status: Success	Indicates that the last call was successful and that DTR dialing was used.
DTR dialer	Phrase appended to the Last status entry to indicate that this is a DTR dialer.

If an interface is connected to a destination, a display is provided that indicates the idle time before the line is disconnected. (The value decrements each second.) Then the duration of the current connection is shown. The following shows an example of this display; it appears after the third line in the **show dialer** display:

```
Time until disconnect 596 secs
Current call connected 0:00:25
```

After a call disconnects, the system displays the time remaining before being it can dial again. The following is an example of this display; it appears after the third line in the **show dialer** display:

```
Time until interface enabled 8 secs
```

If the **show dialer** command is issued for an interface on which DDR is not enabled, the system displays an error message. The following is a sample error message:

```
Async 1 - Dialing not enabled on this interface.
```

If an interface is configured for DDR, the **show interfaces** command displays the following message:

```
Asyncl is up, line protocol is up (spoofing)
Hardware is Async Serial
```

The word *spoofing* indicates that the line really is not up, but the dialer is forcing the line to masquerade as “up” so that upper level protocols will continue to operate as expected. Spoofing is a state added to allow DDR to work. The interface “dials on demand” in response to packets being routed to it. But because no packets are routed to down interfaces, the interface must pretend to be up (spoo) so packets will be routed to it when it is not connected. Spoofing is the normal idle state on a dial-on-demand interface.

If caller ID screening is configured on an ISDN BRI, the **show dialer** command display includes a line similar to the following:

```
1 incoming call(s) have been screened.
```

This line reports the number of calls that have been screened.

