

Configuring PPP Callback for DDR

PPP callback provides a client-server relationship between the end points of a point-to-point connection. PPP callback allows a router to request that a dial-up peer router call back. The callback feature can be used to control access and toll costs between the routers.

When PPP callback is configured on the participating routers, the calling router (the callback client) passes authentication information to the remote router (the callback server), which uses the host name and dial string authentication information to determine whether to place a return call. If the authentication is successful, the callback server disconnects and then places a return call. The remote username of the return call is used to associate it with the initial call so that packets can be transmitted.

Both routers on a point-to-point link must be configured for PPP callback; one must function as a callback client and one must be configured as a callback server. The callback client must be configured to initiate PPP callback requests, and the callback server must be configured to accept PPP callback requests and place return calls.

This feature implements the following callback specifications of RFC 1570:

- For the client—Option 0, location is determined by user authentication
- For the server—Option 0, location is determined by user authentication; Option 1, dialing string; and Option 3, E.164 number.

Return calls are made through the same dialer rotary group but not necessarily the same line as the initial call.

Note If the return call fails (because the line is not answered or the line is busy), no retry occurs. If the callback server has no interface available when attempting the return call, it does not retry.

For an example of configuring PPP callback, see the “PPP Callback Examples” section later in this chapter.

For a complete description of the PPP callback commands in this chapter, refer to the “PPP Callback Commands for DDR” chapter of the *Dial Solutions Command Reference*. To locate documentation of other commands that appear in this chapter, use the command reference master index or search online.

Configure a Router as a Callback Client

To configure a router interface as a callback client, complete the following tasks beginning in global configuration mode:

Task	Command
Step 1 Specify the interface.	interface <i>type number</i>
Step 2 Enable DDR. Set parity on synchronous serial interfaces and asynchronous interfaces.	dialer in-band [no-parity odd-parity]
Step 3 Enable PPP encapsulation.	encapsulation ppp
Step 4 Enable CHAP or Password Authentication Protocol (PAP) authentication.	ppp authentication chap or ppp authentication pap
Step 5 Map the next hop address to the host name and phone number.	dialer map <i>protocol next-hop-address name hostname dial-string</i>
Step 6 Enable the interface to request PPP callback for this callback map class.	ppp callback request
Step 7 (Optional) Configure a dialer hold queue to store packets for this callback map class.	dialer hold-queue <i>packets timeout seconds</i>

Configure a Router as a Callback Server

To configure a router as a callback server, complete the following tasks beginning in global configuration mode:

Task	Command
Step 1 Specify the interface and enter interface configuration mode.	interface <i>type number</i>
Step 2 Enable DDR. Specify parity, if needed, on synchronous or asynchronous serial interfaces.	dialer in-band [no-parity odd-parity]
Step 3 Enable PPP encapsulation.	encapsulation ppp
Step 4 Enable CHAP or PAP authentication.	ppp authentication { chap pap }
Step 5 Map the next hop address to the host name and phone number, using the name of the map-class established for PPP callback on this interface.	dialer map <i>protocol address name hostname class classname dial-string</i>
Step 6 (Optional) Configure a dialer hold queue to store packets to be transferred when the callback connection is established.	dialer hold-queue <i>number timeout seconds</i>
Step 7 (Optional) Configure a timeout period between calls.	dialer enable-timeout <i>seconds</i>
Step 8 Configure the interface to accept PPP callback.	ppp callback accept
Step 9 (ISDN only) Configure the time to wait before another call is placed on a B channel, to allow prior call to be torn down completely.	isdn fast-rollover-delay <i>seconds</i>

Task	Command
Step 10 (Optional) Enable callback security, if desired.	dialer callback-secure
Step 11 Return to global configuration mode.	exit
Step 12 Configure a dialer map class for PPP callback.	map-class dialer <i>classname</i>
Step 13 Configure a dialer map class as a callback server.	dialer callback-server [username]

Note On the PPP callback server, the **dialer enable-timeout** functions as the timer for returning calls to the callback client.

PPP Callback Examples

The following example configures a PPP callback server and client to call each other.

The PPP callback server is configured on an ISDN BRI interface in a router in Atlanta. The callback server requires an enable timeout and a map class to be defined.

The PPP callback client is configured on an ISDN BRI interface in a router in Dallas. The callback client does not require an enable timeout and a map class to be defined.

PPP Callback Server

```
interface bri 0
 ip address 7.1.1.7 255.255.255.0
 encapsulation ppp
 dialer callback-secure
 dialer enable-timeout 2
 dialer map ip 7.1.1.8 name atlanta class dial1 81012345678901
 dialer-group 1
 ppp callback accept
 ppp authentication chap
!
map-class dialer dial1
 dialer callback-server username
```

PPP Callback Client

```
interface bri 0
 ip address 7.1.1.8 255.255.255.0
 encapsulation ppp
 dialer map ip 7.1.1.7 name dallas 81012345678902
 dialer-group 1
 ppp callback request
 ppp authentication chap
```

