Connecting Routers and the Cisco 200

The Cisco 200 for DOS, Windows 3.1, and Windows for Workgroups 3.11 can communicate with any Cisco router that supports ISDN. This appendix provides guidelines for configuring the connecting router and sample configurations.

Before you install and configure your Cisco 200, you should verify that the connecting router is properly installed and configured. For more information on router installation and configuration, refer to the Cisco Connection Documentation CD-ROMs or the printed Cisco router documentation.

Guidelines

The following are general guidelines for configuring Cisco routers to communicate with the Cisco 200:

- Configure the interface encapsulation as PPP and PPP multilink.

- When using dial-on-demand routing, configure the Challenge Handshake Authentication Protocol (CHAP) authentication and dialer maps.

- The router "hostname" must be identical to the Cisco 200 "connecting router name."

- The router "username" must be identical to the Cisco 200 "local system name."

- The password configured for the router "username" must match the password configured on the Cisco 200.

Figure A-1 illustrates the authentication configuration for the connecting router.

Figure A-1   Connecting Router Authentication Configuration
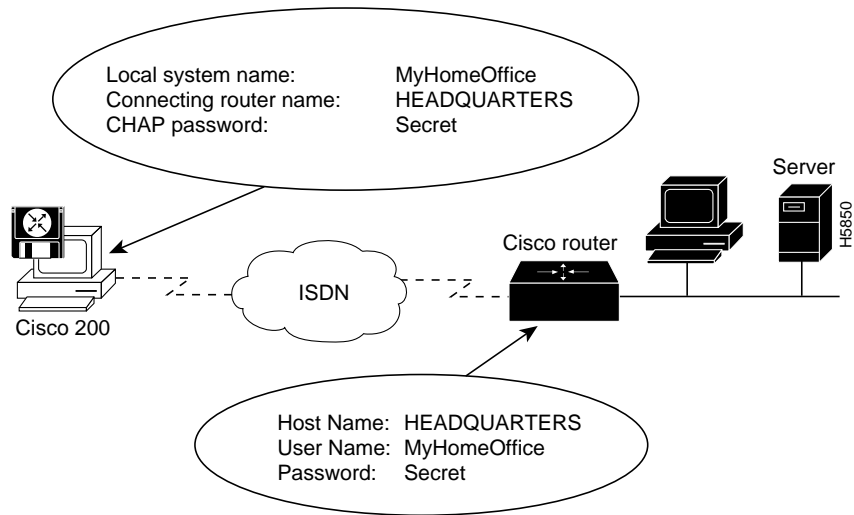
Sample Router Configurations

The following sections provide sample configurations for a Cisco 2503 router. The configurations of other Cisco Access and Cisco Enterprise routers will be similar.

Cisco 2503 Using NI1

The following example illustrates a connecting router configuration using PPP multilink with PPP callback and the NI1 ISDN protocol:

```
Configuration for Central Site (2503)
!
version 11.0
!
hostname HEADQUARTERS                          !The name of the connecting router
!
username MyHomeOffice password 7 044F0E151B    !The Cisco 200 local system name
ipx routing 0000.0c07.ad01
isdn switch-type basic-ni1
!
interface Ethernet0
 ip address 192.168.100.1 255.255.255.0
 no keepalive
 ipx network 50
!
interface BRI0
 ip address 192.168.200.2 255.255.255.0
 encapsulation ppp
 no ip route-cache
 no keepalive
 ipx network 22
 no ipx route-cache
 ipx watchdog-spoof
 isdn spid1 4085553000100 5553000     !SPID and Directory; required for NI1.
 isdn spid2 4085553001200 5553001     !Second SPID and Directory; required for NI1.
 no peer default ip address pool
 dialer enable-timeout 2
 dialer map ip 198.162.200.3 name MyHomeOffice class HOMEOFFICE 7145551111
 dialer map ipx 22.0001.2345.6789 name MyHomeOffice class HOMEOFFICE 7145551111
 dialer-group 1
 no fair-queue                                 !Required for PPP multilink
 ppp callback accept                           !Required for PPP callback
 ppp multilink                                 !Required for PPP multilink
```

```
 ppp authentication chap                         !Required for CHAP authentication
!
router rip
 network 192.168.100.0
 network 192.168.200.0
!
map-class dialer HOMEOFFICE                      !Required for PPP callback
 dialer callback-server username                !Required for PPP callback
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
```

Cisco 2503 Using 5ESS (Point-to-Point or Multipoint)

The following example illustrates a connecting router configuration using the PPP multilink with PPP callback and 5ESS Point-to-Point Protocol (PPP) or Multipoint Protocol:

```
Configuration for Central Site (2503)
!
version 11.0
!
hostname HEADQUARTERS                            !The name of the connecting router
!
username MyHomeOffice password 7 044F0E151B     !The Cisco 200 local system name
ipx routing 0000.0c38.67bc
isdn switch-type basic-5ess
!
interface Ethernet0
 ip address 192.168.100.1 255.255.255.0
 no keepalive
 ipx network 50
!
interface BRI0
 ip address 192.168.200.2 255.255.255.0
 encapsulation ppp
 no ip route-cache
 no keepalive
 ipx network 22
 no ipx route-cache
 ipx watchdog-spoof
 isdn spid1 0155530000                          !SPID might be required for 5ESS
 no peer default ip address pool
```

```
!The following three lines are required for PPP callback
 dialer enable-timeout 2
 dialer map ip 192.168.200.3 name MyHomeOffice class HOMEOFFICE 17145551111
 dialer map ipx 22.0001.2345.6789 name MyHomeOffice class HOMEOFFICE 17145551111
 !
 dialer-group 1
 no fair-queue                            !Required for PPP multilink
 ppp callback accept                      !Required for PPP callback
 ppp multilink                            !Required for PPP multilink
 ppp authentication chap                  !Required for CHAP authentication
!
router rip
 network 192.168.100.0
 network 192.168.200.0
!
map-class dialer HOMEOFFICE               !Required for PPP callback
 dialer callback-server username          !Required for PPP callback
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
```

Cisco 2503 Using DSS1

The following example illustrates a connecting router configuration using PPP multilink with PPP callback and the DSS1 Protocol:

```
!
version 11.0
!
hostname HEADQUARTERS                     !The name of the connecting router
!
username MyHomeOffice password 7 044F0E151B    !The Cisco 200 local system name
ipx routing 0000.0c07.ad01
isdn switch-type basic-net3
isdn tei-negotiation first-call
!
interface Ethernet0
 ip address 192.168.100.1 255.255.255.0
 no keepalive
 ipx network 50
!
interface BRI0
 ip address 192.168.200.2 255.255.255.0
 encapsulation ppp
```

```
 no ip route-cache
 no keepalive
 ipx network 22
 no ipx route-cache
 ipx watchdog-spoof
!No SPID or Directory required for DSS1
 no peer default ip address pool
!The following three lines are required for PPP callback
 dialer enable-timeout 2
 dialer map ip 192.168.200.3 name MyHomeOffice class HOMEOFFICE 49235551111
 dialer map ipx 22.0001.2345.6789 name MyHomeOffice class HOMEOFFICE 49235551111
 !
 dialer-group 1
 no fair-queue                                 !Required for PPP multilink
 ppp callback accept                           !Required for PPP callback
 ppp multilink                                 !Required for PPP multilink
 ppp authentication chap                       !Required for CHAP authentication
!
router rip
 network 192.168.100.0
 network 192.168.200.0
!
map-class dialer HOMEOFFICE                    !Required for PPP callback
 dialer callback-server username              !Required for PPP callback
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
```

Other PPP-Compliant Routers

Refer to your router manufacturer's documentation for instructions on communicating with other PPP-compliant routers.