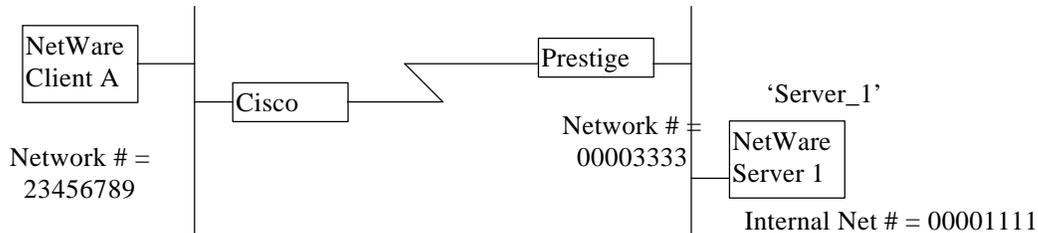Last modified: July 31, 1996

LAN to LAN Connection w/Cisco
   Routing IPX with PC client on Cisco side and Novell Server on Prestige side

Note: The IPX network numbers shown above are examples only!

This configuration note explains how to set up a workstation on a network to use a Cisco 2503 to make a connection to a Prestige to route IPX. In this configuration, the workstation has NetWare client software so that you will be able to log into the NetWare server on the remote network. There will be three items that you need to set up. These are the workstation, Cisco 2503 and the Prestige.

I.   Workstation Setup (NetWare Client)

      To set up the workstation (W/S), you will need to set the following parameters:

      • **IPX Frame Type** - First determine the frame type that the Cisco router is using, and set the same frame type on the NetWare client workstation.
      • **Server Name** - In some cases, you may need the name that has been configured for the NetWare server you wish to login to. In the previous example, that would be 'Server_1'.

      The procedure for configuring these parameters for your workstation may differ depending on the type of IPX client software you are using on your workstation. If you are unfamiliar with how to set these parameters, you can refer to the technical notes corresponding to your software.

      • DOS workstation w/ NetWare Client (VLM) software
      • Windows 95/NT - see section 'LAN-to-LAN'

II.   Prestige Setup

      In order to configure the Prestige on the Novell server side for this application, make sure you have the following menus configured correctly.

      Note that the fields are indicated in **bold** type.

Menu 1:

```
                    Menu 1 - General Setup

            System Name= Prestige
            Location= San Jose
            Contact Person's Name= CC


            Route IP= Yes
            Route IPX= Yes
            Route AppleTalk= N/A
            Bridge= No




            Press ENTER to Confirm or ESC to Cancel:
```

- In menu 1, make sure the **Route IPX** field is set to 'Yes'.

Menu 2:

```
                    Menu 2 - ISDN Setup

            Switch Type= Northern Telecom Custom

            B Channel Usage= Switch/Switch
            1st Phone #= 5551212
              SPID #= 408555121200
              Analog Call= Modem
            2nd Phone #= 5551213
              SPID #= 408555121300
              Analog Call= Voice




            Press ENTER to Confirm or ESC to Cancel:
```

- In menu 2, set your switch type, phone numbers, and SPIDs (if necessary).
- After saving this menu, you will be asked if you want to perform an ISDN connection test. Select 'Yes' to perform the test. If the test fails, refer to the User's Manual Troubleshooting section for corrective action.

Menu 3.3:

```
              Menu 3.3 - Novell IPX Ethernet Setup

          Seed Router= No

          Frame Type 802.2= No
            IPX Network #= N/A

          Frame Type 802.3= Yes
            IPX Network #= N/A

          Frame Type Ethernet II= No
            IPX Network #= N/A

          Frame Type SNAP= No
            IPX Network #= N/A



          Press ENTER to Confirm or ESC to Cancel:
```

- Make sure that you have set the correct **Frame Type**(s) to 'Yes'. You should enable the frame type that the NetWare server is running. (Please note that it is possible to set more than one frame type to 'Yes' if you have more than one server and they are using different frame types.)
- Since Prestige is connected on the Novell server side, set that **Seed Router** field to 'No'.

Menu 11:

```
                   Menu 11 - Remote Node Profile

  Rem Node Name= cisco                 Route= IP+IPX
   Active= Yes                          Bridge= No
   Call Direction= Incoming
                                       Edit PPP Options= No
   Incoming:                           Rem IP Addr= 192.68.135.175
     Rem Login= csco2503               Edit IP/IPX/AppleTalk/Bridge= No
     Rem Password= ********
     Rem CLID=                         Telco Option:
     Call Back= N/A                      Transfer Rate= 64K or 56K

   Outgoing:                           Session Options:
     My Login=                           Input Filter Sets=
     My Password= ********               Output Filter Sets=
     Pri Phone #= N/A                    Call Filter Sets=
     Sec Phone #= N/A                    Idle Timeout(sec)= 300

               Press ENTER to Confirm or ESC to Cancel:
```

- The **Call Direction** should be set to 'Incoming'.
- Make sure the remote node is enabled by setting **Active** to 'Yes'.
- **Rem Login** and **Rem Password** is the login information that this Prestige will use to authenticate Cisco.
- **Route** should be set to 'IPX'.
- Set **Edit IP/IPX/AppleTalk/Bridge** to 'Yes' and press ENTER.

Menu 11.2:

```
                  Menu 11.2 - Remote Node Network Layer Options

     IP Options:                          AppleTalk Options:
       Rem IP Addr: 192.68.135.175          Dial-On-Query= N/A
       Rem Subnet Mask= 255.255.255.0       Rem LAN Net Range= N/A
       My WAN Addr= 0.0.0.0                   1st Zone Name= N/A
       Metric= 2                              2nd Zone Name= N/A
       Private= No                          My WAN Net #= N/A
       RIP= Both                              My WAN Node ID= N/A
     IPX Options:                          Metric= N/A
       Dial-On-Query= No                    ZIP Timeout(min)= N/A
       Rem LAN Net #= 23456789
       My WAN Net #= 00000000              Bridge Options:
       Hop Count= 1                          Dial-On-Broadcast= N/A
       Tick Count= 2                         Ethernet Addr Timeout(min)= N/A
       W/D Spoofing(min)= 255
       SAP/RIP Timeout(min)= 255

                  Enter here to CONFIRM or ESC to CANCEL:
```

- **Dial-On-Query** should be 'No'.
- The **Rem LAN Net #** field should be set to the number that Cisco is using on LAN. This number can be seen in your Cisco router. In our example, this value is '23456789'.
- **W/D Spoofing** can be set to a greater value, so if your ISDN connection drops for an extended period of time, the Prestige will still retain the proper SAP and RIP tables.

Menu 13:

```
                    Menu 13 - Default Dial-in Setup

     Telco Options:                       IP Address Supplied By:
       CLID Authen= None                    Dial-in User= Yes
                                            IP Pool= Yes
     PPP Options:                             IP Start Addr= 192.5.1.1
       Recv Authen= PAP                       IP Count(1,2)= 2
       Mutual Authen= Yes
         PAP Login= 306X                  IPX Net Num. Supplied By:
         PAP Password= ********             IPX Pool= No
                                             IPX Start Net Num.= N/A
     Multiple Link Options:                  IPX Count(2,16)= N/A
       Max Trans Rate(Kbps)= 128
                                          Session Options:
                                            Input Filter Sets=
                                            Output Filter Sets=
                                            Idle Timeout= 300

                  Press ENTER to Confirm or ESC to Cancel:
```

- **Mutual Authen** should be 'Yes'.
- The **PAP login/Password** fields are the name and password that Prestige will send to Cisco when Cisco calls into Prestige and use PAP as authentication. In this example, the name is Prestige and password is hidden.

III. Cisco 2503 Setup

Following is a capture of 'wr t' command. Please note those the fields are indicated in **bold** type.

```
####
Current configuration:
```

```
!
version 10.2
service password-encryption
!
hostname csco2503
!
enable password 7 03085A09
!
username Prestige password 7 08701E1D5D4C
ip subnet-zero
ipx routing
isdn switch-type basic-dms100
!
interface Ethernet0
ip address 192.68.135.175 255.255.255.0
ipx network 23456789
!
interface Serial0
no ip address
shutdown
!
interface Serial1
no ip address
shutdown
!
interface BRI0
ip unnumbered Ethernet0
encapsulation ppp
ipx network 22221111
dialer idle-timeout 300
dialer map ip 204.247.203.176 name Prestige 5551212
dialer map ipx 22221111.0003.0004.0005 name Prestige broadcast 5551212
dialer-group 1
ppp authentication pap
!
ip classless
ip route 204.247.203.0 255.255.255.0 BRI0
ip route 204.247.203.156 255.255.255.255 BRI0
ipx route 00001111 22221111.0003.0004.0005
!
ipx sap 4 1ST_SERVER 00001111.0000.0000.0001 451 2
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol novell permit
!
  :
  :
!
end
```