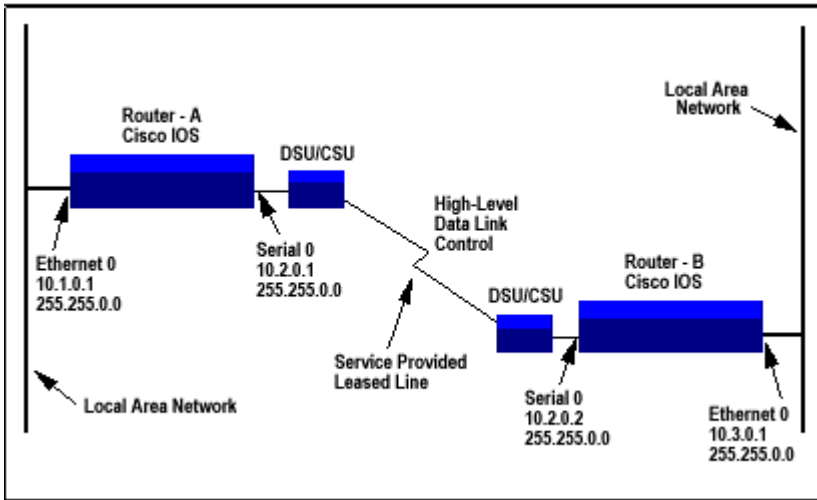


Leased Line HDLC Connections Between IOS Routers

This technical document describes how to connect two IOS Routers over a high-level data link control line. An example of two IOS routers connected together are shown below:



If you want a similar connection between IOS routers, follow these three steps to connect them over HDLC:

1) Configure the routers with these settings:

- IP routing
- IGRP routing protocol
- Telnet access allowed
- SNMP with read only access
- Interface Serial 0 (S0) is configured for Cisco's HDLC protocol

2) Change the following items in order to use the provided files at the end of this file:

- Hostnames
- Passwords:
 - secret
 - enable
 - virtual terminal (vty)
- IGRP autonomous system number
- IP address on interface Ethernet 0 (E0) or VG-AnyLAN0 (V0)
- IP addresses on interface Serial 0 (S0)
- community string if it is not "public"

3) Configure Your IOS Routers

Decide which router is to be "Router A" and which one is "Router B". (This choice is arbitrary.) After the IOS routers boot up for the first time, use the initial System Configuration Dialog to configure as much of the IOS routers as possible. Then modify the router files:

a) Modify Router A's IOS router file to have the configuration shown below.

b) Modify Router B's IOS router file to have the configuration shown below.

Router A's configuration file

```
!  
! In a configuration file all comments begin with a "!"  
!  
version 11.2  
!  
no service udp-small-servers  
no service tcp-small-servers  
!  
hostname ROUTER-A                ! define the hostname for the router  
!  
enable secret 5 XXXXX            ! password in encrypted form  
!  
!                                * The enable password will be used if the  
!                                enable secret password is not configured.  
!  
enable password XXXX            ! define the password for  
!                                entering enable level.  
!  
!  
interface Ethernet0              ! designates the ethernet interface  
  ip address 10.1.0.1 255.255.0.0 ! assigns the IP address and  
  no mop enabled                  ! subnet mask.  
!  
interface Serial0                ! assign the IP address  
  ip address 10.2.0.1 255.255.0.0 ! and subnet mask.  
!  
interface Serial1                ! this interface is not operational  
  no ip address  
  shutdown  
!  
interface BRI0                   ! this interface is not operational  
  no ip address  
  shutdown  
!  
router igrp 1                    ! enable IGRP with autonomous system number 1  
  network 10.0.0.0              ! list of directly connected networks  
!                                using IGRP  
!  
no ip classless  
!  
snmp-server community public RO  ! enable SNMP for get only with "public" as string  
!  
line con 0                       ! define the console port  
line aux 0  
line vty 0 4                     ! define virtual terminals for telnet access  
  password XXXX                 ! define the virtual terminal password  
  login                         ! allow logins via telnet session  
!  
end
```

Router B's configuration file

The additional comments included in Router A's configuration file have not been added to this file. It shows how the configuration file looks without any comments added.

```
!  
version 11.2  
no service udp-small-servers  
no service tcp-small-servers  
!  
hostname ROUTER-B  
!  
enable secret 5 XXXXX  
enable password XXXX  
!  
!  
interface Ethernet0  
  ip address 10.3.0.1 255.255.0.0  
  no mop enabled  
!  
interface Serial0  
  ip address 10.2.0.2 255.255.0.0  
!  
interface Serial1  
  no ip address  
  shutdown  
!  
interface BRI0  
  no ip address  
  shutdown  
!  
router igrp 1  
  network 10.0.0.0  
!  
no ip classless  
snmp-server community public RO  
!  
line con 0  
  line aux 0  
  line vty 0 4  
  password XXXX  
  login  
!  
end
```