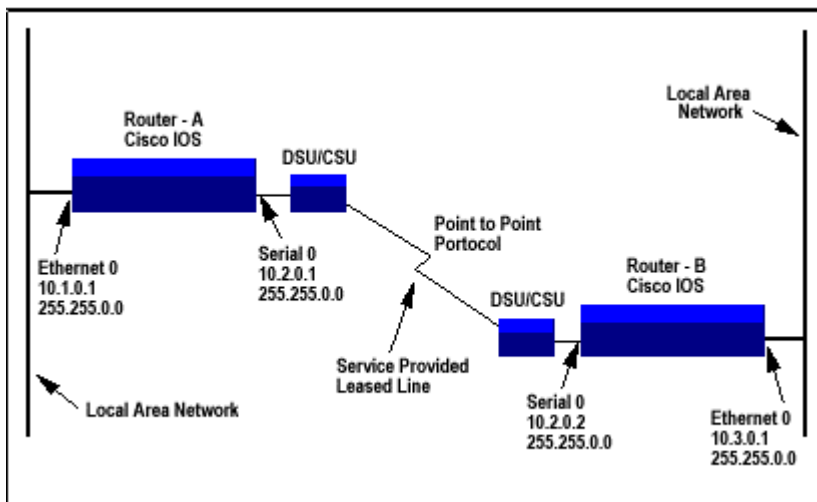


Leased Line PPP Connections Between IOS Routers

This technical document describes how to connect IOS routers together over point-to-point protocol. An example of two IOS routers connected over PPP is shown below:



If you want a similar connection between two IOS routers over PPP, follow these three steps:

1) Configure both routers with these settings:

- IP routing
- IGRP routing protocol
- Telnet access allowed
- SNMP with read only access
- Interface Serial 0 (S0) is configured for PPP protocol with predictor compression

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

- Hostnames
- Passwords:
 - enable secret
 - enable
 - virtual terminal
- 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". 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 the first IOS router file to have the configuration shown below for Router-A.

b) Modify the second IOS router file to have the configuration shown below for Router-B.

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             ! defines password for entering enable level  
!  
!  
interface Ethernet0              ! designates the ethernet interface  
 ip address 10.1.0.1 255.255.0.0 ! assigns IP addr./subnet mask  
 no mop enabled  
!  
interface Serial0                ! designates the serial 0 interface  
 ip address 10.2.0.1 255.255.0.0 ! assigns IP address/subnet mask  
 no ip mroute-cache  
 encapsulation ppp               ! configure PPP as the link protocol  
 compress predictor              ! enable predictor compression  
!  
interface Serial1                !  
 no ip address  
 shutdown                        ! this interface is not operational  
!  
interface BRI0                   !  
 no ip address  
 shutdown                        ! this interface is not operational  
!  
router igrp 1                    ! enable IGRP with autonomous system number1  
 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 remote access  
 password XXXX                   ! define the virtual terminal password  
 login  
!  
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  
 no ip mroute-cache  
 encapsulation ppp  
 compress predictor  
!  
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
```