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CSE – BD (N2)

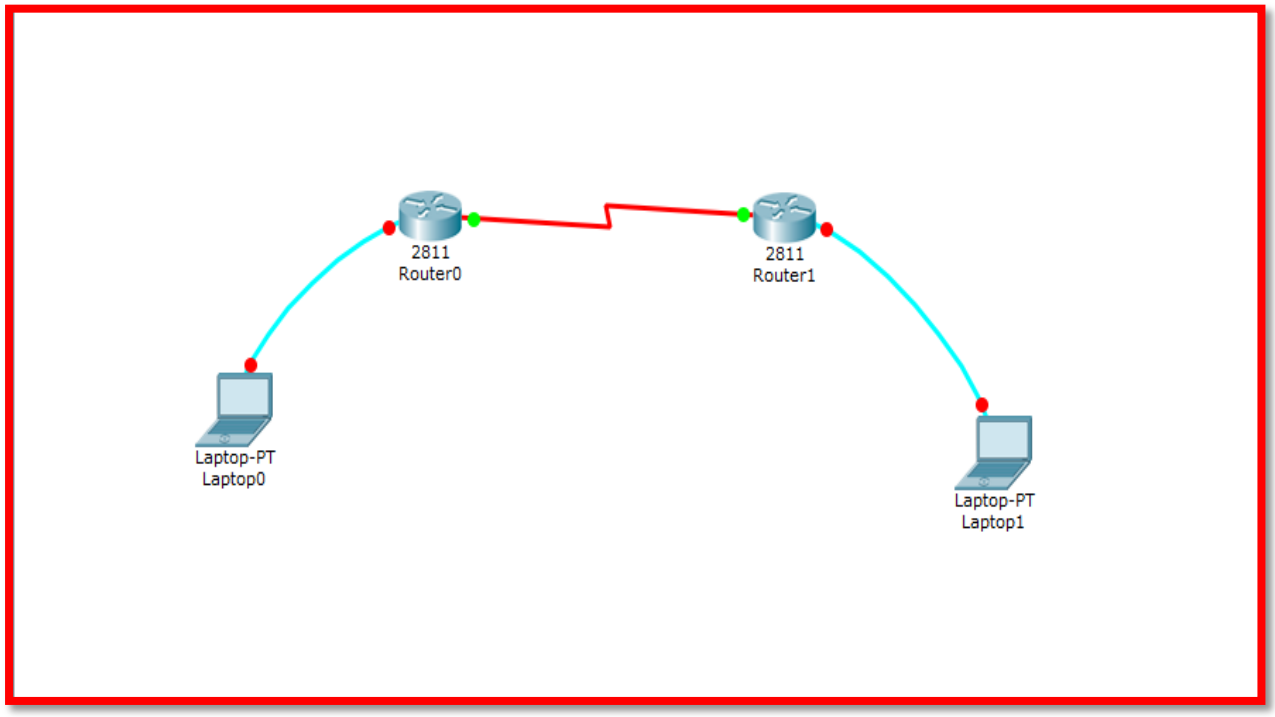
Computer Networks (Experiment – 15)

AIM: To implement PPP Configuration using routers.

SOFTWARE USED: Cisco Packet Tracer.

REQUIREMENTS: 2 routers and 2 Laptops.

Network Design:



OUTPUTS:

IOS Command Line Interface:

Router 1:

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface Serial0/0/0
R1(config-if)#encapsulation ppp
R1(config-if)#ip address 192.168.10.6 255.255.255.252
R1(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
R1(config-if)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

R1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface Serial0/0/0
R1(config-if)#clock rate 250000
R1(config-if)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
R1#ping 192.168.10.5

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.5, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/7 ms
```

Router 2:

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R2
R2(config)#interface Serial0/0/0
R2(config-if)#exit
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#show controllers Serial0/0/0
Interface Serial0/0/0
Hardware is PowerQUICC MPC860
DTE V.35 TX and RX clocks detected
idb at 0x81081AC4, driver data structure at 0x81084AC0
SCC Registers:
General [GSMR]=0x2:0x00000000, Protocol-specific [PSMR]=0x8
Events [SCCE]=0x0000, Mask [SCCM]=0x0000, Status [SCCS]=0x00
Transmit on Demand [TODR]=0x0, Data Sync [DSR]=0x7E7E
Interrupt Registers:
Config [CICR]=0x00367F80, Pending [CIPR]=0x0000C000
Mask   [CIMR]=0x00200000, In-srv  [CISR]=0x00000000
Command register [CR]=0x580
Port A [PADIR]=0x1030,  [PAPAR]=0xFFFF
       [PAODR]=0x0010,  [PADAT]=0xCBFF
Port B [PBDIR]=0x09C0F,  [PBPAR]=0x0800E
       [PBODR]=0x00000,  [PBDAT]=0x3FFFD
Port C [PCDIR]=0x00C,  [PCPAR]=0x200
       [PCSO]=0xC20,  [PCDAT]=0xDF2,  [PCINT]=0x00F
Receive Ring
        rmd(68012830): status 9000 length 60C address 3B6DAC4
        rmd(68012838): status B000 length 60C address 3B6D444
```

```
R2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#interface Serial0/0/0
R2(config-if)#encapsulation ppp
R2(config-if)#ip address 192.168.10.5 255.255.255.252
R2(config-if)#no shutdown

R2(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

R2(config-if)#exit
R2(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#show interfaces Serial0/0/0
Serial0/0/0 is up, line protocol is up (connected)
  Hardware is HD64570
  Internet address is 192.168.10.5/30
  MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation PPP, loopback not set, keepalive set (10 sec)
  LCP Open
  Open: IPCP, CDPCP
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0 (size/max/drops); Total output drops: 0
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
     Conversations  0/0/256 (active/max active/max total)
     Reserved Conversations 0/0 (allocated/max allocated)
     Available Bandwidth 1158 kilobits/sec
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
```