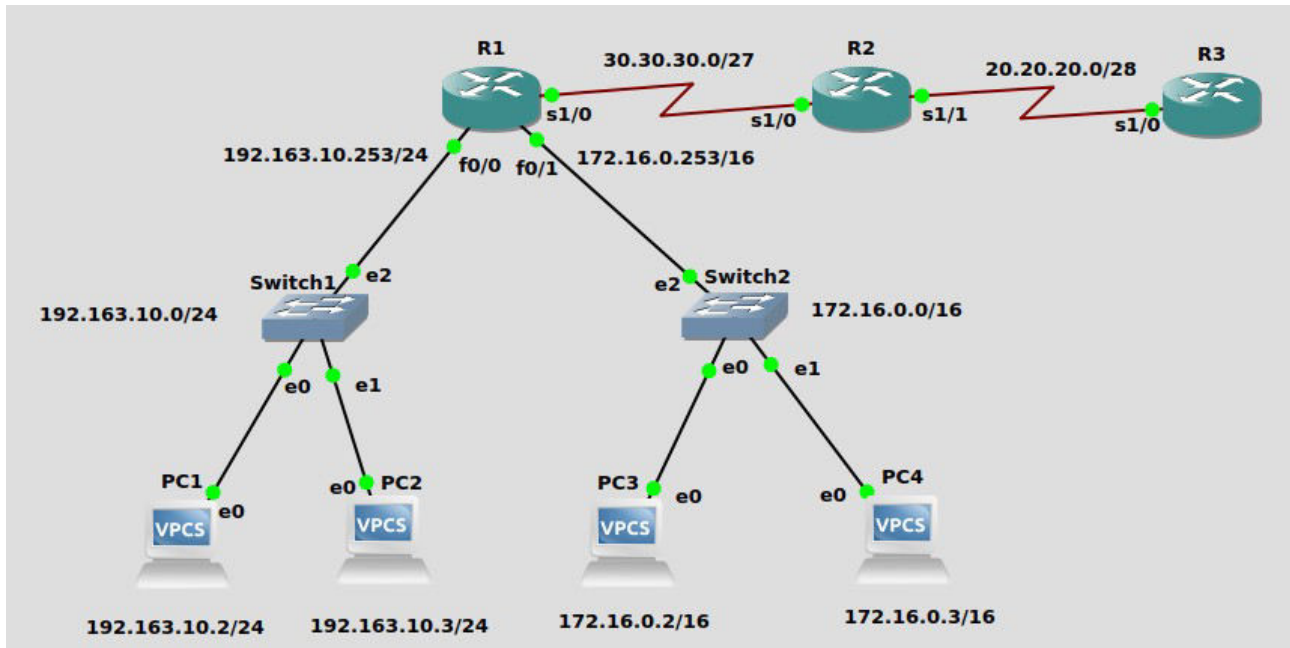# DHCP AND DNS

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CSE B

R1:

```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#hostname SIRI-1
SIRI-1(config)#int f0/0
SIRI-1(config-if)#ip addr 192.168.10.253 255.255.255.0
SIRI-1(config-if)#ip helper 20.20.20.2
SIRI-1(config-if)#no shut
SIRI-1(config-if)#exit
SIRI-1(config)#int f0/1
SIRI-1(config-if)#ip addr 172.16.0.253 255.255.0.0
SIRI-1(config-if)#ip helper 20.20.20.2
SIRI-1(config-if)#no shut
SIRI-1(config-if)#exit
SIRI-1(config)#int s1/0
SIRI-1(config-if)#ip addr 30.30.30.1 255.255.255.224
SIRI-1(config-if)#no shut
SIRI-1(config-if)#exit
*Mar  1 00:00:52.483: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar  1 00:00:52.699: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
*Mar  1 00:00:53.083: %LINK-3-UPDOWN: Interface Serial1/0, changed state to up
*Mar  1 00:00:53.483: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
SIRI-1(config-if)#exit
*Mar  1 00:00:53.699: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
*Mar  1 00:00:54.087: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
SIRI-1(config-if)#exit
SIRI-1(config)#
*Mar  1 00:01:23.859: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to down
SIRI-1(config)#
*Mar  1 00:02:23.839: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
SIRI-1(config)#ip route 20.20.20.0 255.255.255.240 30.30.30.2
SIRI-1(config)#copy run start
                 ^
% Invalid input detected at '^' marker.

SIRI-1(config)#exit
SIRI-1#copy
*Mar  1 00:23:42.067: %SYS-5-CONFIG_I: Configured from console by console
SIRI-1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

R2:

```
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#hostname SIRI-2
SIRI-2(config)#int s1/0
SIRI-2(config-if)#ip addr 30.30.30.2 255.255.255.224
SIRI-2(config-if)#no shut
SIRI-2(config-if)#exit
SIRI-2(config)#int s1/1
SIRI-2(config-if)#ip addr 20.20.20.1 255.255.255.240
SIRI-2(config-if)#no shut
SIRI-2(config-if)#exit
SIRI-2(config)#
*Mar  1 00:01:47.323: %LINK-3-UPDOWN: Interface Serial1/0, changed state to up
*Mar  1 00:01:47.531: %LINK-3-UPDOWN: Interface Serial1/1, changed state to up
SIRI-2(config)#
*Mar  1 00:01:48.327: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
*Mar  1 00:01:48.535: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to up
SIRI-2(config)#
*Mar  1 00:02:13.903: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to down
SIRI-2(config)#
*Mar  1 00:02:43.883: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to up
SIRI-2(config)#ip route 192.168.10.0 255.255.255.0 30.30.30.1
SIRI-2(config)#ip route 172.16.0.0 255.255.0.0 30.30.30.1
SIRI-2(config)#exit
SIRI-2#copy
*Mar  1 00:24:04.979: %SYS-5-CONFIG_I: Configured from console by console
SIRI-2#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

R3:

```
R3(config)#hostname SIRI-3
SIRI-3(config)#int s1/0
SIRI-3(config-if)#ip addr 20.20.20.2 255.255.255.240
SIRI-3(config-if)#no shut
SIRI-3(config-if)#exit
SIRI-3(config)#
*Mar  1 00:01:46.199: %LINK-3-UPDOWN: Interface Serial1/0, changed state to up
SIRI-3(config)#
*Mar  1 00:01:47.203: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
SIRI-3(config)#ip route 192.168.10.0 255.255.255.0 20.20.20.1
SIRI-3(config)#ip route 172.16.0.0 255.255.0.0 20.20.20.1
SIRI-3(config)#ip route 30.30.30.0 255.255.255.224 20.20.20.1
SIRI-3(config)#ip dns server
SIRI-3(config)#ip host www.siri.com 20.20.20.2
SIRI-3(config)#ip dhcp excluded-address 192.168.10.1
SIRI-3(config)#ip dhcp excluded-address 192.168.10.254
SIRI-3(config)#ip dhcp excluded-address 172.16.0.1
SIRI-3(config)#ip dhcp excluded-address 172.16.0.254
SIRI-3(config)#ip dhcp pool POOL-CLASS-C
SIRI-3(dhcp-config)#network 192.168.10.0 255.255.255.0
SIRI-3(dhcp-config)#default-router 192.168.10.253
SIRI-3(dhcp-config)#dns-server 20.20.20.2
SIRI-3(dhcp-config)#exit
SIRI-3(config)#ip dhcp pool POOL-CLASS-B
SIRI-3(dhcp-config)#network 172.16.0.0 255.255.0.0
SIRI-3(dhcp-config)#default-router 172.16.0.253
SIRI-3(dhcp-config)#dns-server 20.20.20.2
SIRI-3(dhcp-config)#exit
SIRI-3(config)#
*Mar  1 00:14:47.467: %DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 192.168.10.2.
SIRI-3(config)#
*Mar  1 00:14:48.691: %DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 192.168.10.3.
SIRI-3(config)#
*Mar  1 00:15:24.071: %DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 172.16.0.2.
SIRI-3(config)#
*Mar  1 00:15:25.691: %DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 172.16.0.3.
SIRI-3(config)#exit
SIRI-3#cpy
*Mar  1 00:23:36.539: %SYS-5-CONFIG_I: Configured from console by console
SIRI-3#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

```
PC2> ip 192.168.10.3/24 192.168.10.253
Checking for duplicate address...
PC2 : 192.168.10.3 255.255.255.0 gateway 192.168.10.253

PC2> ip dns 20.20.20.2

PC2> ping 20.20.20.2

84 bytes from 20.20.20.2 icmp_seq=1 ttl=253 time=59.792 ms
84 bytes from 20.20.20.2 icmp_seq=2 ttl=253 time=50.394 ms
84 bytes from 20.20.20.2 icmp_seq=3 ttl=253 time=49.150 ms
84 bytes from 20.20.20.2 icmp_seq=4 ttl=253 time=48.812 ms
84 bytes from 20.20.20.2 icmp_seq=5 ttl=253 time=49.520 ms
```

```
PC1> dhcp
DORA IP 192.168.10.4/24 GW 192.168.10.253
```

```
PC3> dhcp
DORA IP 172.16.0.4/16 GW 172.16.0.253
```

```
PC4> dhcp
DDORA IP 172.16.0.5/16 GW 172.16.0.253
```