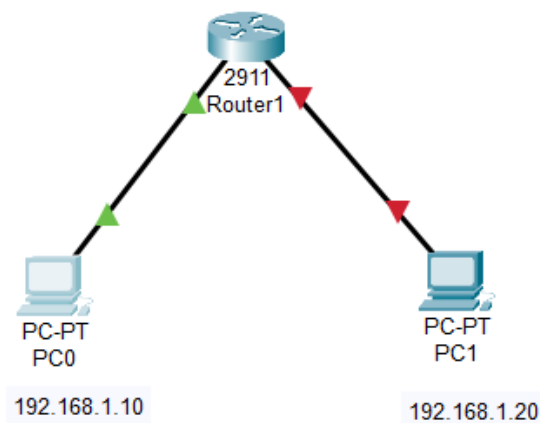


**Q12. Configure a standard Access Control List (ACL) on a router to permit traffic from a specific IP range. Test connectivity to verify the ACL is working as intended.**



## Router Configurations

### Standard ACL Configuration

ACL to Allow PC0 (192.168.1.10) and Block Others

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
exit
Router(config)#access-list 10 permit 192.168.1.10 0.0.0.0
Router(config)#access-list 10 deny any
Router(config)#interface GigabitEthernet 0/0
Router(config-if)#ip access-group 10 in
Router(config-if)#exit
```

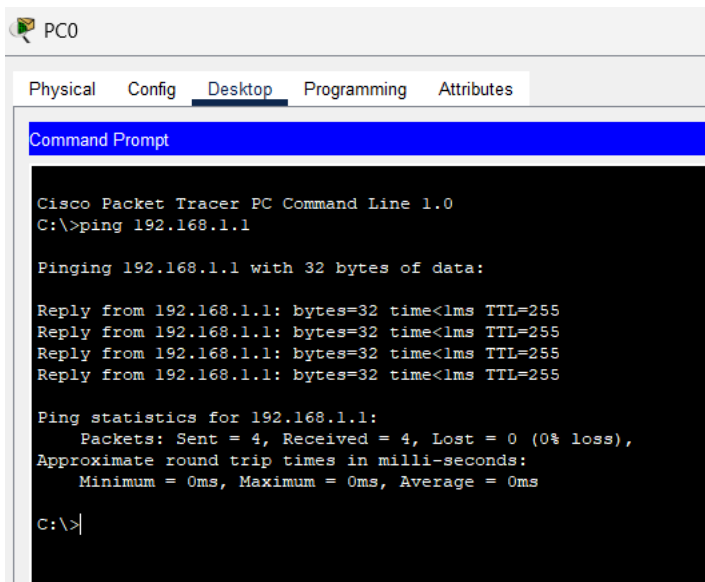
```

Router#show access-lists
Standard IP access list 10
 10 permit host 192.168.1.10 (4 match(es))
 20 deny any

Router#show ip interface GigabitEthernet 0/0
GigabitEthernet0/0 is up, line protocol is up (connected)
 Internet address is 192.168.1.1/24
 Broadcast address is 255.255.255.255
 Address determined by setup command
 MTU is 1500 bytes
 Helper address is not set
 Directed broadcast forwarding is disabled
 Outgoing access list is not set
 Inbound access list is 10
 Proxy ARP is enabled
 Security level is default
 Split horizon is enabled
 ICMP redirects are always sent
 ICMP unreachable are always sent
 ICMP mask replies are never sent
 IP fast switching is disabled
 IP fast switching on the same interface is disabled
 IP Flow switching is disabled
 IP Fast switching turbo vector
 IP multicast fast switching is disabled
 IP multicast distributed fast switching is disabled
 Router Discovery is disabled

```

PC0-> PC1 ping Success



The screenshot shows the Cisco Packet Tracer PC Command Line interface for PC0. The user has entered the command 'ping 192.168.1.1'. The output shows four successful replies from 192.168.1.1 with 32 bytes of data, each taking 0ms and having a TTL of 255. The ping statistics show 4 packets sent, 4 received, and 0 lost (0% loss).

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

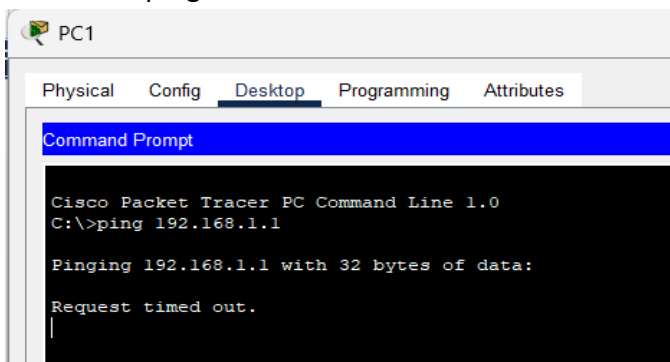
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>

```

PC1 ->PC0 ping failure



The screenshot shows the Cisco Packet Tracer PC Command Line interface for PC1. The user has entered the command 'ping 192.168.1.1'. The output shows 'Request timed out.'.

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.

```

PC0 (192.168.1.10) can communicate with the router. PC1 (192.168.1.20) is blocked from communicating.