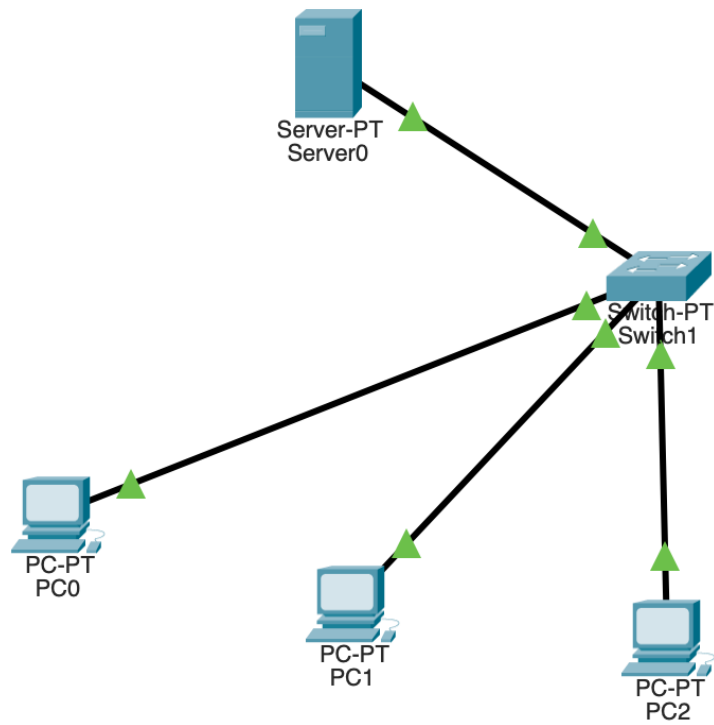
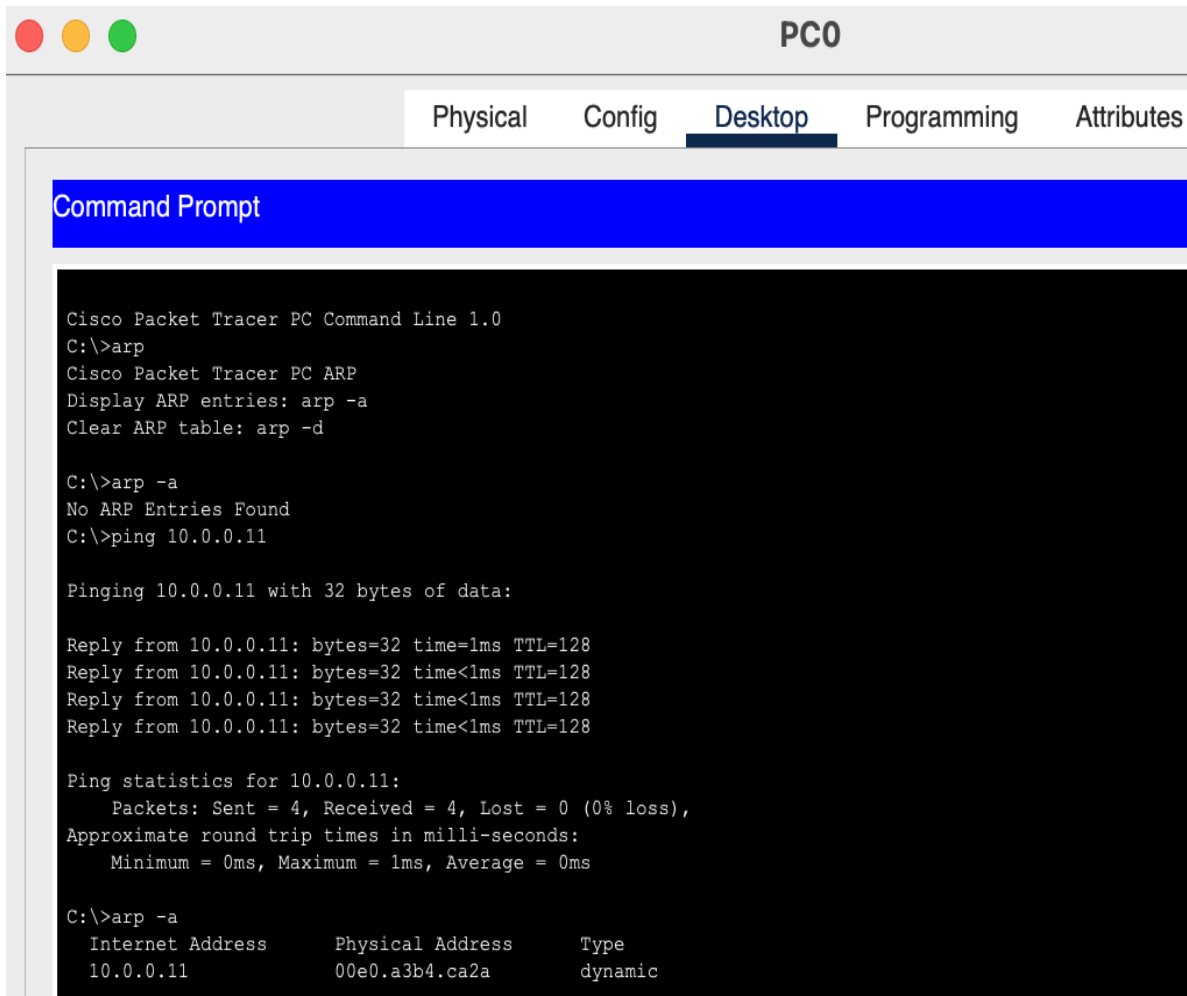


Title: To construct simple LAN and understand the concept and operation of Address Resolution Protocol (ARP)

Topology:



Ping PC1 from PC0:



The screenshot shows the 'PC0' window in Cisco Packet Tracer. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The command prompt shows the execution of several commands: 'arp' (help), 'arp -a' (no entries found), 'ping 10.0.0.11' (successful with 4 replies), and 'arp -a' (showing the ARP table entry for 10.0.0.11).

```
Cisco Packet Tracer PC Command Line 1.0
C:\>arp
Cisco Packet Tracer PC ARP
Display ARP entries: arp -a
Clear ARP table: arp -d

C:\>arp -a
No ARP Entries Found
C:\>ping 10.0.0.11

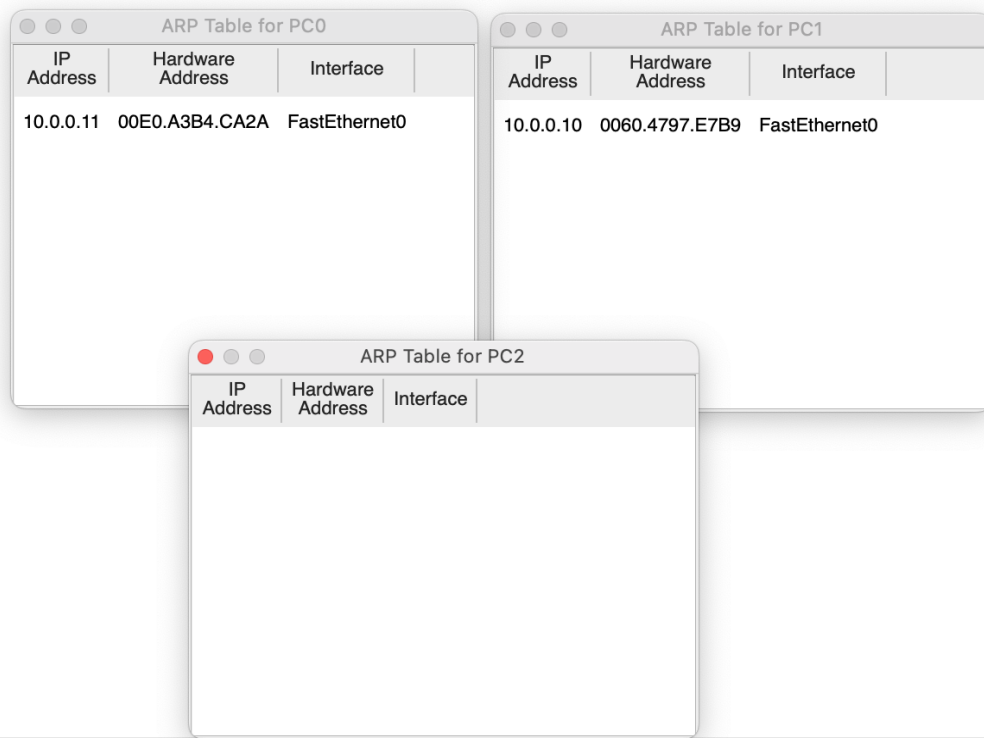
Pinging 10.0.0.11 with 32 bytes of data:

Reply from 10.0.0.11: bytes=32 time=1ms TTL=128
Reply from 10.0.0.11: bytes=32 time<1ms TTL=128
Reply from 10.0.0.11: bytes=32 time<1ms TTL=128
Reply from 10.0.0.11: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>arp -a
Internet Address      Physical Address      Type
10.0.0.11             00e0.a3b4.ca2a       dynamic
```

ARP table for all PCs:



ARP Table for PC0

IP Address	Hardware Address	Interface
10.0.0.11	00E0.A3B4.CA2A	FastEthernet0

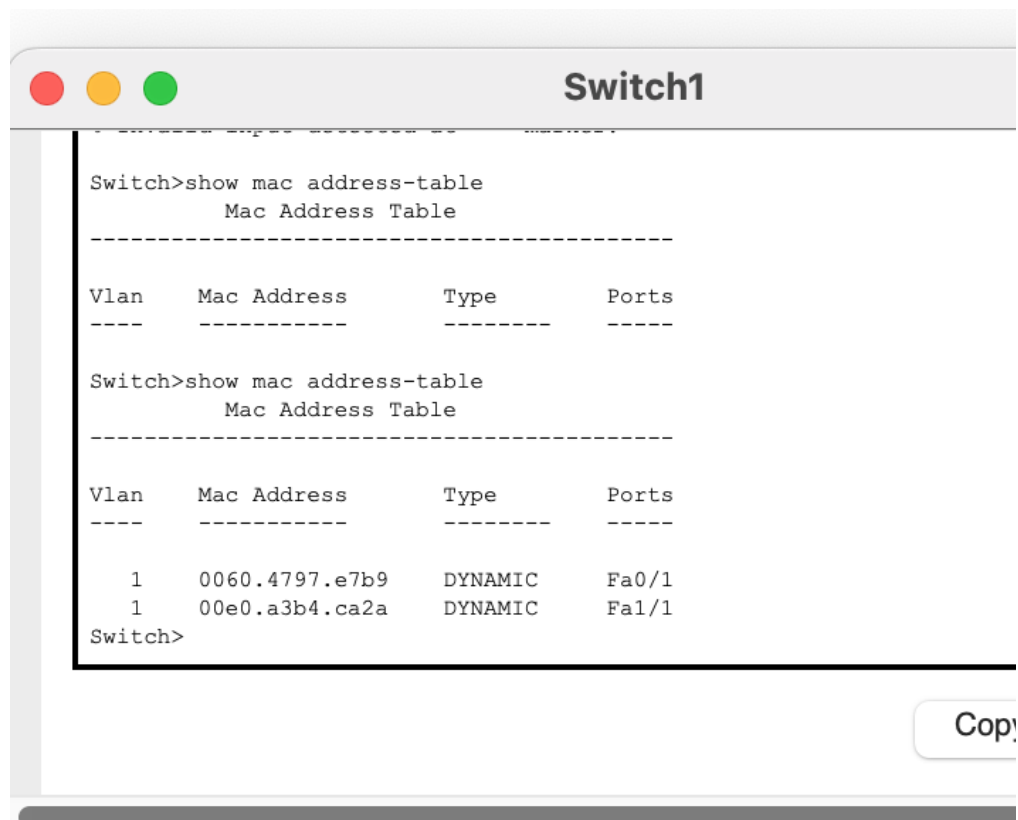
ARP Table for PC1

IP Address	Hardware Address	Interface
10.0.0.10	0060.4797.E7B9	FastEthernet0

ARP Table for PC2

IP Address	Hardware Address	Interface
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Mac Address Table:



Switch1

```
Switch>show mac address-table
Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
Switch>show mac address-table
Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0060.4797.e7b9   DYNAMIC   Fa0/1
1       00e0.a3b4.ca2a   DYNAMIC   Fa1/1
Switch>
```

Copy

Ping PC2 form PC0:

```
PC0
10.0.0.11 00e0.a3b4.ca2a dynamic
C:\>ping 10.0.0.12

Pinging 10.0.0.12 with 32 bytes of data:

Reply from 10.0.0.12: bytes=32 time<1ms TTL=128
Reply from 10.0.0.12: bytes=32 time<1ms TTL=128
Reply from 10.0.0.12: bytes=32 time<1ms TTL=128
Reply from 10.0.0.12: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>arp -a
Internet Address      Physical Address      Type
10.0.0.11             00e0.a3b4.ca2a       dynamic
10.0.0.12             0060.5c45.a275       dynamic

C:\>
```

```
Switch1
Switch>show mac address-table
Mac Address Table
-----
Vlan    Mac Address      Type    Ports
----    -
1       0060.4797.e7b9   DYNAMIC Fa0/1
1       0060.5c45.a275   DYNAMIC Fa2/1
Switch>
```