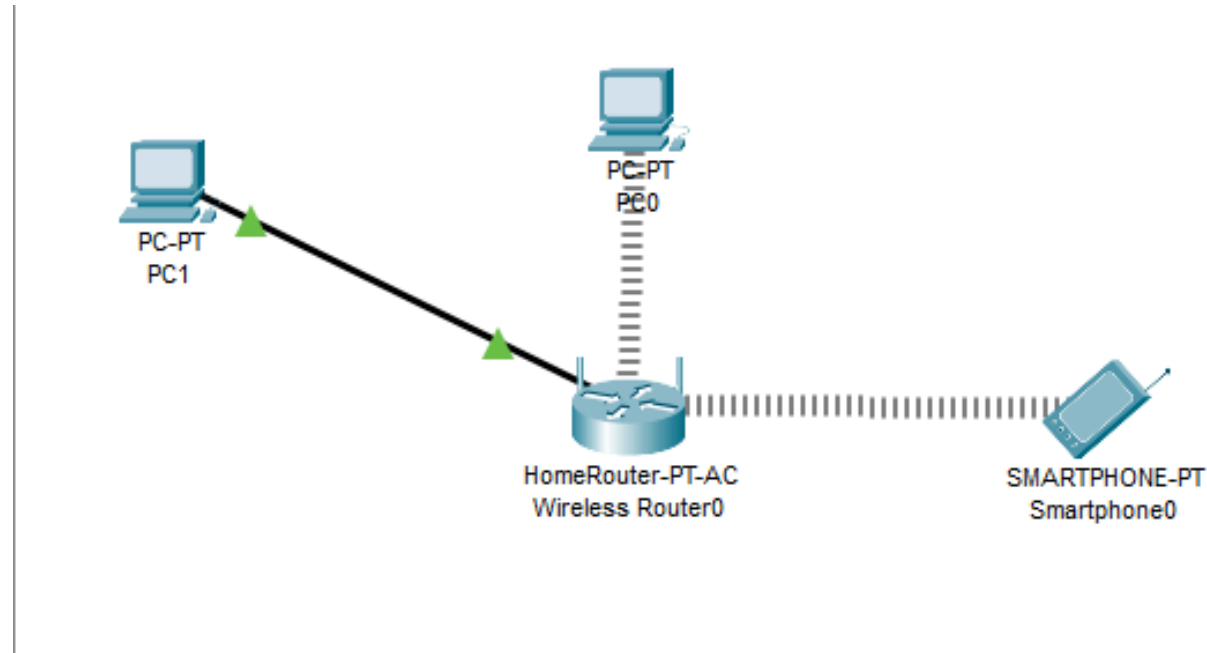


crear una red en packet tracer con una antena wifi o home router



Event List

Vis.	Time(sec)	Last Device	At Device
------	-----------	-------------	-----------

Reset Simulation Constant Delay Captured to: (no captures)

Play Controls

Navigation buttons: Previous, Play, Next

Observar que ocurre con los protocolos ARP e ICMP cuando llega un aparato nuevo en la red (ejemp: movil)

The screenshot shows the Packet Tracer interface. The network diagram is visible on the left, with PC1, the HomeRouter-PT-AC Wireless Router0, PC0, and Smartphone0. The Event List window is open on the right, showing captured events:

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	Wireles...	ICMP
<input checked="" type="checkbox"/>	0.001	Wireless...	Smartp...	ICMP
<input checked="" type="checkbox"/>	0.001	Wireless...	PC0	ICMP

Reset Simulation Constant Delay Captured to: 0.001 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

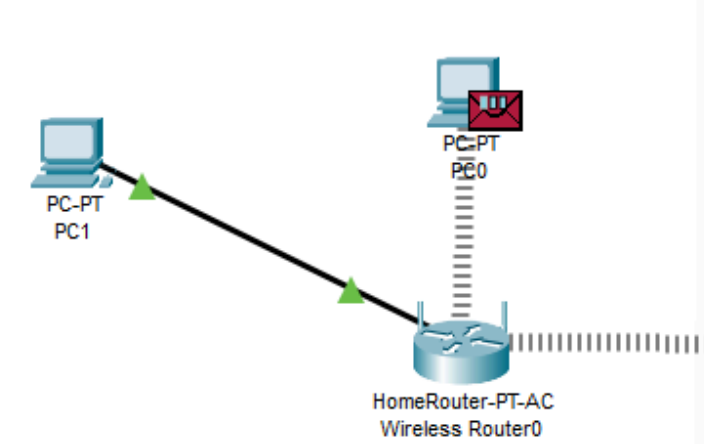
00:04:44.278 PLAY CONTROLS: Previous, Play, Next

Scenario 0

New Delete

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
<input checked="" type="checkbox"/>	In Progress	Wirel...	PC0	ICMP	Red	0.000	N

Hacemos ping de router al pc0.
1ª realiza broadcast



PDU Information at Device: PC0

At Device: PC0
Source: Wireless Router0
Destination: PC0

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101, Dest. IP: 192.168.0.1 ICMP Message Type: 0
Layer 2: Wireless	Layer 2: Wireless
Layer 1: Port Wireless0	Layer 1: Port(s):

1. Wireless0 receives the frame.

PDU Information at Device: PC0

Time(sec)	Last Device	At Device	Type
0.000	--	Wireless...	ICMP
0.001	Wireless...	Smartp...	ICMP
0.001	Wireless...	PC0	ICMP

Simulation Constant Delay Captured to: 0.001 s

PDU Information at Device: PC0

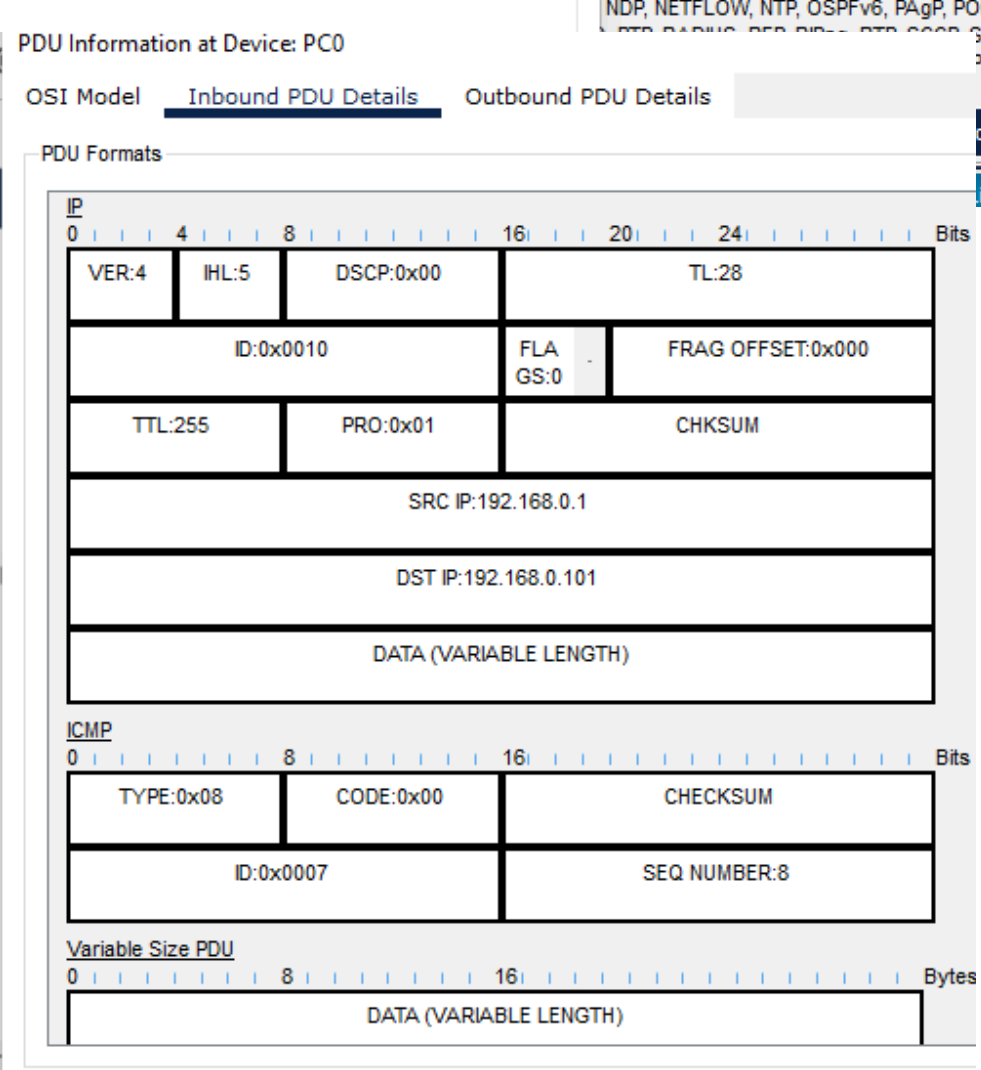
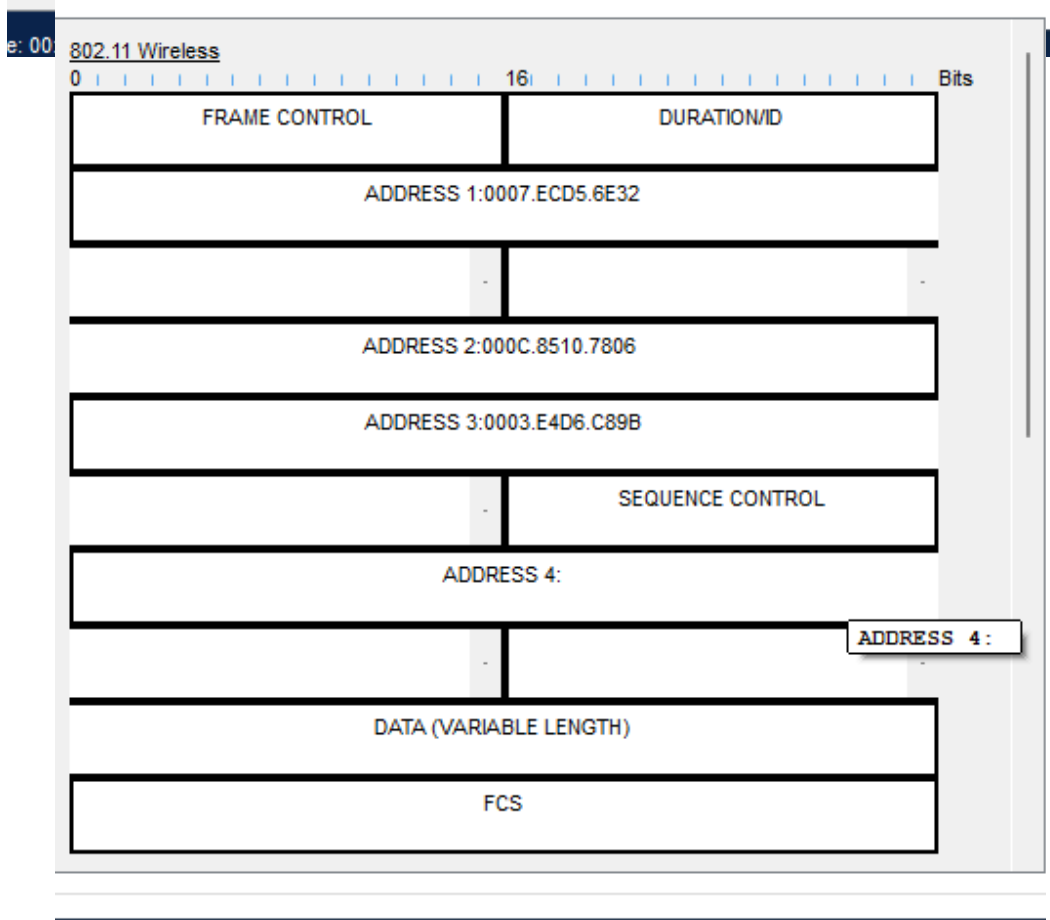
At Device: PC0
Source: Wireless Router0
Destination: PC0

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101, Dest. IP: 192.168.0.1 ICMP Message Type: 0
Layer 2: Wireless	Layer 2: Wireless
Layer 1: Port Wireless0	Layer 1: Port(s):

1. The next-hop IP address is a unicast. The ARP process looks it up in the ARP table.
2. The next-hop IP address is in the ARP table. The ARP process sets the frame's destination MAC address to the one found in the table.
3. The device encapsulates the PDU into an Ethernet frame.

PDU Information at Device: PC0

At Device: PC0
Source: Wireless Router0
Destination: PC0



PDU Information at Device: PC0

At Device: PC0
Source: Wireless Router0
Destination: PC0

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 192.168.0.1, Dest. IP: 192.168.0.101, Dest. IP: 192.168.0.1 ICMP Message Type: 0
Layer 2: Wireless	Layer 2: Wireless
Layer 1: Port Wireless0	Layer 1: Port(s):

1. The ICMP process replies to the Echo Request by setting ICMP type to Echo Reply.
2. The ICMP process sends an Echo Reply.
3. The destination IP address is in the same subnet. The device sets the next-hop to destination.

sucesfull

Vis.	Time(sec)	Last Device	At Device	Type
	0.001	Wireless...	Smartp...	IC
	0.001	Wireless...	PC0	IC
	0.003	--	PC0	IC
	0.004	PC0	Wireles...	IC
	0.006	--	Wireles...	IC

Reset Simulation Constant Delay Capturing...

Play Controls

Event List Filters - Visible Events
 ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
<input checked="" type="checkbox"/>	Successful	Wirel...	PC0	ICMP	■	0.000	N	0	(edit)

Vamos a hacer ping desde movil al pc0 que es 192.168.0.101

Simulation Panel

Vis.	Time(sec)	Last Device	At Device	Type
	0.007	--	PC0	IC
	0.008	PC0	Wireles...	IC
	0.010	--	Wireles...	IC
	0.011	Wireless...	Smartp...	IC
	0.011	Wireless...	PC0	IC

Reset Simulation Constant Delay Captured to: 0.011 s

Play Controls

Event List Filters - Visible Events
 ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS

PDU Information at Device: Smartphone0

OSI Model Outbound PDU Details

At Device: Smartphone0
Source: Smartphone0
Destination: 192.168.0.101

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer3: IP Header Src. IP: 192.168.0.100, Dest. IP: 192.168.0.101 ICMP Message Type: 8
Layer2	Layer 2: Wireless
Layer1	Layer 1: Port(s): Wireless0

1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The destination IP address is in the same subnet. The device sets the next-hop to destination.

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.101

Pinging 192.168.0.101 with 32 bytes of data:

Reply from 192.168.0.101: bytes=32 time=11ms TTL=128
```

Time: 00:04:55.279 PLAY CONTROLS: [Back] [Play] [Forward]

PDU Information at Device: Smartphone0

OSI Model Outbound PDU Details

PDU Formats

802.11 Wireless

FRAME CONTROL	DURATION/ID
ADDRESS 1:000C.8510.7806	
ADDRESS 2:0001.C70D.91CC	
ADDRESS 3:0007.ECD5.6E32	
SEQUENCE CONTROL	
ADDRESS 4:	
DATA (VARIABLE LENGTH)	
FCS	

Simulation Panel

Time(sec)	Last Device	At Device	Type
0.011	Wireless...	Smartp...	ICMP
0.011	Wireless...	PC0	ICMP
1.011	--	Smartp...	ICMP
1.012	Smartph...	Wireles...	ICMP
1.013	--	Wireles...	ICMP

Reset Simulation [x] Constant Delay Captured to: 1.013 s

Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

PDU Information at Device: Smartphone0

OSI Model Outbound PDU Details

PDU Formats

VER:4	IHL:5	DSCP:0x00	TL:128
ID:0x0014		FLA GS:0	FRAG OFFSET:0x000
TTL:128	PRO:0x01	CHKSUM	
SRC IP:192.168.0.100			
DST IP:192.168.0.101			
DATA (VARIABLE LENGTH)			

ICMP

TYPE:0x08	CODE:0x00	CHECKSUM
ID:0x0002		SEQ NUMBER:2
DATA (VARIABLE LENGTH)		

Simulation Panel

Time(sec)	Last Device	At Device	Type
0.011	Wireless...	Smartp...	ICMP
0.011	Wireless...	PC0	ICMP
1.011	--	Smartp...	ICMP
1.012	Smartph...	Wireles...	ICMP
1.013	--	Wireles...	ICMP

Reset Simulation [x] Constant Delay Captured to: 1.013 s

Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Extensions Window Help

7, y: 404

Simulation Panel

Vis.	Time(sec)	Last Device	At Device	Type
	3.037	Smartph...	Wireles...	IC
	3.042	--	Wireles...	IC
	3.043	Wireless...	Smartp...	IC
	3.043	Wireless...	PC0	IC
	3.045	--	PC0	IC

Reset Simulation Constant Delay Capturing...

Play Controls

Root

Smartphone0

Physical Config Desktop Programming Attributes

Command Prompt

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.101

Pinging 192.168.0.101 with 32 bytes of data:

Reply from 192.168.0.101: bytes=32 time=11ms TTL=128
Reply from 192.168.0.101: bytes=32 time=8ms TTL=128
Reply from 192.168.0.101: bytes=32 time=15ms TTL=128
  
```

Simulation Panel

Vis.	Time(sec)	Last Device	At Device	Type
	3.045	--	PC0	IC
	3.046	PC0	Wireles...	IC
	3.049	--	Wireles...	IC
	3.050	Wireless...	Smartp...	IC
	3.050	Wireless...	PC0	IC

Reset Simulation Constant Delay Captured to: 3.050 s

Play Controls

Root

Smartphone0

Physical Config Desktop Programming Attributes

Command Prompt

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.101

Pinging 192.168.0.101 with 32 bytes of data:

Reply from 192.168.0.101: bytes=32 time=11ms TTL=128
Reply from 192.168.0.101: bytes=32 time=8ms TTL=128
Reply from 192.168.0.101: bytes=32 time=15ms TTL=128
Reply from 192.168.0.101: bytes=32 time=14ms TTL=128

Ping statistics for 192.168.0.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 8ms, Maximum = 15ms, Average = 12ms
  
```

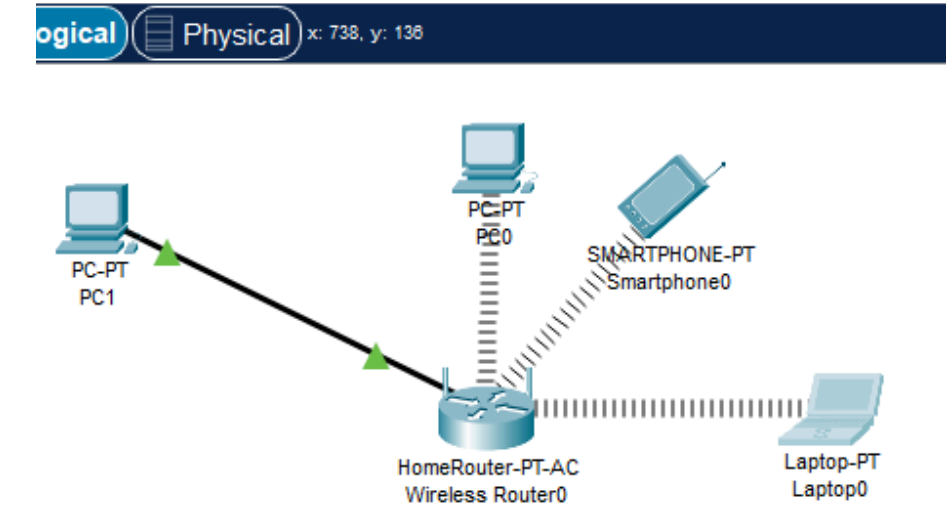
C:\>

Añadimos un laptop a la red para estudiar ARP

WPC300N

- PT-LAPTOP-NM-1AM
- PT-LAPTOP-NM-1CE
- PT-LAPTOP-NM-1CFE
- PT-LAPTOP-NM-1CGE
- PT-LAPTOP-NM-1FFE
- PT-LAPTOP-NM-1FGE
- PT-LAPTOP-NM-1W
- PT-LAPTOP-NM-1W-A
- PT-LAPTOP-NM-1W-AC
- PT-LAPTOP-NM-3G/4G
- PT-HEADPHONE
- PT-MICROPHONE

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.



```

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:\>
    
```

Vis.	Time(sec)	Last Device	At Device	Type
	19.705	Wireless...	PC0	DHCP
	19.705	Wireless...	PC1	DHCP
	19.705	Wireless...	Laptop0	DHCP
	19.706	--	Wireles...	ARP
	19.707	--	Wireles...	ARP
	19.707	--	Wireles...	ARP
	19.707	--	Wireles...	DHCP
	19.708	--	Wireles...	ARP
	19.708	--	Wireles...	DHCP
	19.709	--	Wireles...	DHCP
	19.710	--	Wireles...	ARP
	19.710	Wireless...	Smartp...	ARP
	19.710	Wireless...	PC0	ARP
	19.710	Wireless...	Laptop0	ARP

Vis.	Time(sec)	Last Device	At Device	Type
	0.002	Wireless...	PC1	ARP
	0.002	--	Wireles...	ARP
	0.004	--	Wireles...	ARP
	0.005	--	Wireles...	ARP
	0.006	--	Wireles...	ARP
	0.006	Wireless...	Smartp...	ARP
	0.006	Wireless...	PC0	ARP
	0.006	Wireless...	Laptop0	ARP
	0.008	--	Wireles...	ARP
	0.009	Wireless...	Smartp...	ARP
	0.009	Wireless...	PC0	ARP
	0.009	Wireless...	Laptop0	ARP
	0.009	--	Laptop0	ICMP
	0.012	--	Laptop0	ICMP

Reset Simulation Constant Delay

Play Controls

Physical x: 452, y: 192

At Device: Laptop0
Source: Laptop0
Destination: Broadcast

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer3
Layer2: Wireless ARP Packet Src. IP: 192.168.0.102, Dest. IP: 192.168.0.1	Layer2
Layer 1: Port Wireless0	Layer1

1. Wireless0 receives the frame.

OSI Model Inbound PDU Details

At Device: PC1
Source: Wireless Router0
Destination: STP Multicast Address

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer3
Layer 2: IEEE 802.3 Header 000C. 8510.7802 >> 0180.C200.0000 LLC STP BPDU	Layer2
Layer 1: Port FastEthernet0	Layer1

1. FastEthernet0 receives the frame.

Vis.	Time(sec)	Last Device	At Device	Type
	0.019	Wireless...	PC0	ICMP
	0.019	Wireless...	Laptop0	ICMP
	0.021	--	Wireles...	ICMP
	0.022	Wireless...	Smartp...	ICMP
	0.022	Wireless...	PC0	ICMP
	0.022	Wireless...	Laptop0	ICMP
	1.991	--	Wireles...	STP
	1.992	Wireless...	PC1	STP

Reset Simulation Constant Delay

Play Controls

Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, US...

Edit Filters Show All/None

```

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
Internet Address      Physical Address      Type
192.168.0.1           0003.e4d6.c89b       dynamic

C:\>

```

```

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
Internet Address      Physical Address      Type
192.168.0.1           0003.e4d6.c89b       dynamic

C:\>arp -d
C:\>arp -a
No ARP Entries Found
C:\>

```