

Smart Garden

192.168.1.10

Server-PT
Server0

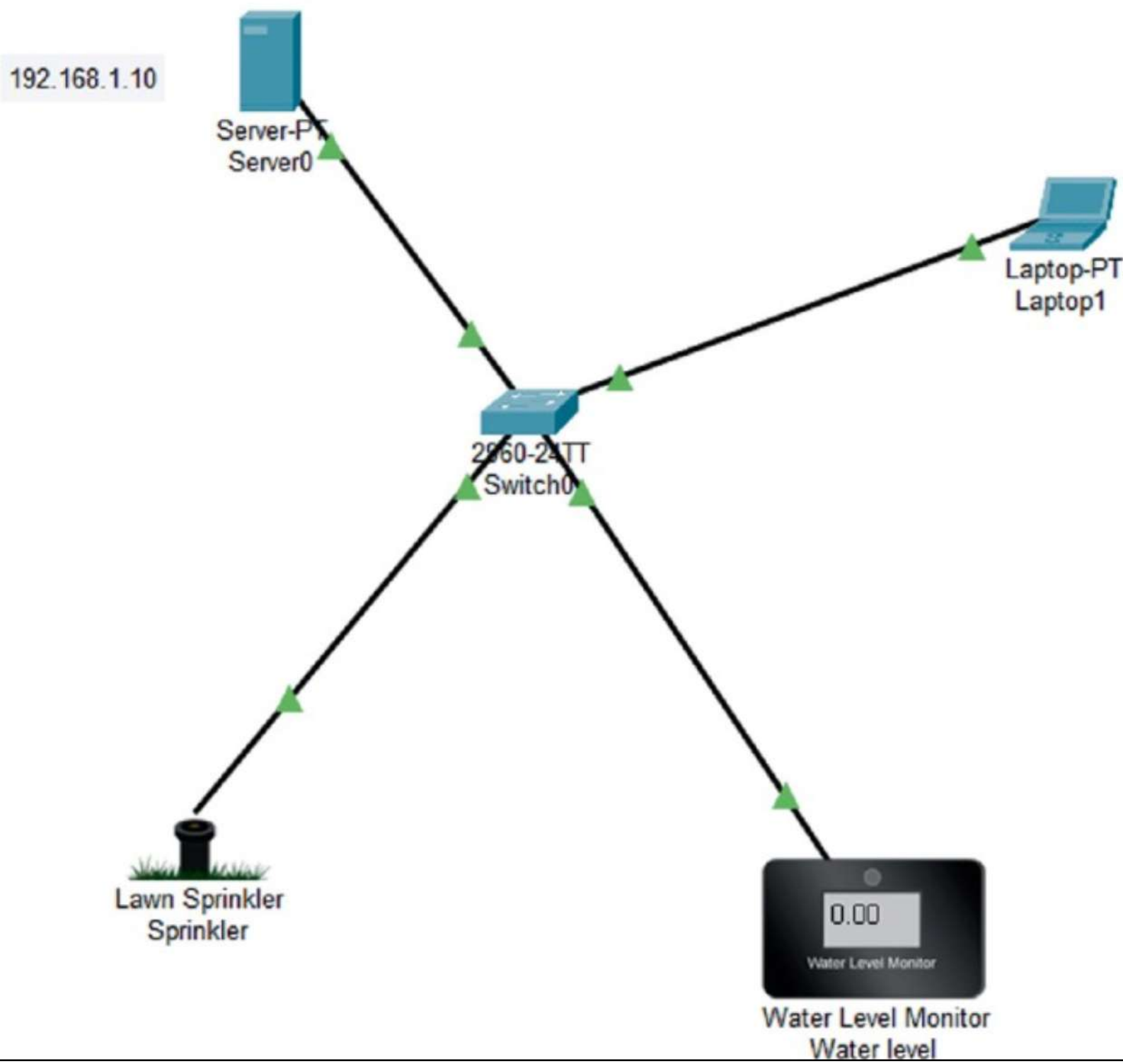
Laptop-PT
Laptop1

2860-24TT
Switch0

Lawn Sprinkler
Sprinkler

0.00
Water Level Monitor

Water Level Monitor
Water level



Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 275, y 1 [Root] 06:43:00

Simulation Panel

Vis	Time(sec)	Last Device	At Device	Type
4.586	...	Home Gate...	Home Gat...	IoT TCP
4.587	Home Gate...	IoT3	IoT TCP	
4.587	Home Gate...	IoT2	IoT TCP	
4.587	Home Gate...	Smartpho...	IoT TCP	
4.628	...	IoT2	TCP	
4.629	IoT2	Home Gat...	TCP	
4.631	...	IoT3	TCP	
4.632	IoT3	Home Gat...	TCP	
4.634	...	Home Gat...	TCP	
4.635	Home Gate...	IoT3	TCP	
4.635	Home Gate...	IoT2	TCP	
4.635	Home Gate...	Smartpho...	TCP	
4.639	...	Home Gat...	TCP	
Visible 4.639	Home Gate...	IoT3	TCP	
Visible 4.639	Home Gate...	IoT2	TCP	
Visible 4.639	Home Gate...	Smartpho...	TCP	

Reset Simulation ☒ Constant Delay Capturing...

Play Controls

Event List Filters - Visible Events

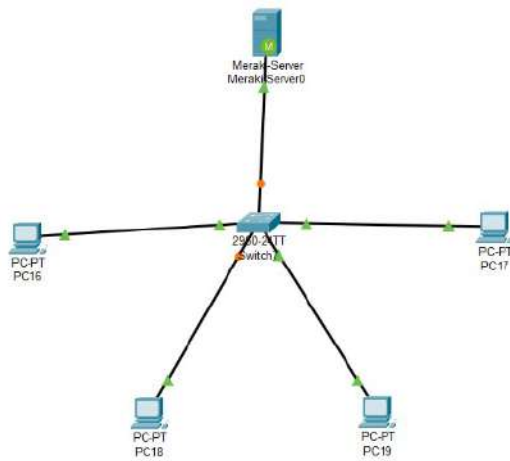
ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FIP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP,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

Edit Filters Show All/None

Time: 06:17:22.850 PLAY CONTROLS

PC Laptop Server Network Phone TV Wireless Desktop Generic Wireless Server

Simulation



Vis.	Time(sec)	Last Device	At Device	Type
	0.182	Switch7	Meraki Se...	STP
	0.182	Switch7	PC17	STP
	0.182	Switch7	PC19	STP
	0.187	--	Switch2	STP
	0.188	Switch2	PC4	STP
	0.613	--	Switch5	STP
	0.614	Switch5	PC9	STP
	0.614	Switch5	PC11	STP
	0.614	Switch5	PC10	STP
	0.793	--	Switch4	STP
	0.794	Switch4	PC6	STP
	0.794	Switch4	PC8	STP
	0.794	Switch4	PC7	STP
	1.056	--	Switch1	STP
Visible	1.057	Switch1	PC2	STP
Visible	1.057	Switch1	PC3	STP

Reset Simulation ☒ Constant Delay Captured to 1.057 s

Play Controls ⏮ ⏪ ⏩ ⏭

Event List Filters - Visible Events

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

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical v. 108, r. 210

Simulation Panel

Event List

Vis	Time(sec)	Last Device	At Device	Type
	2.001	--	Switch0	STP
	2.002	Switch0	Printer0	STP
	2.002	Switch0	PC2	STP
	2.002	Switch0	PC1	STP
	2.002	Switch0	PC0	STP
	4.003	--	Switch0	STP
	4.004	Switch0	Printer0	STP
	4.004	Switch0	PC2	STP
	4.004	Switch0	PC1	STP
	4.004	Switch0	PC0	STP
	6.001	--	Switch0	STP
	6.002	Switch0	Printer0	STP
	6.002	Switch0	PC2	STP
	6.002	Switch0	PC1	STP
	6.002	Switch0	PC0	STP
	7.167	--	Switch0	DTP

Reset Simulation ☒ Constant Delay Captured to 7.167 s

Play Controls

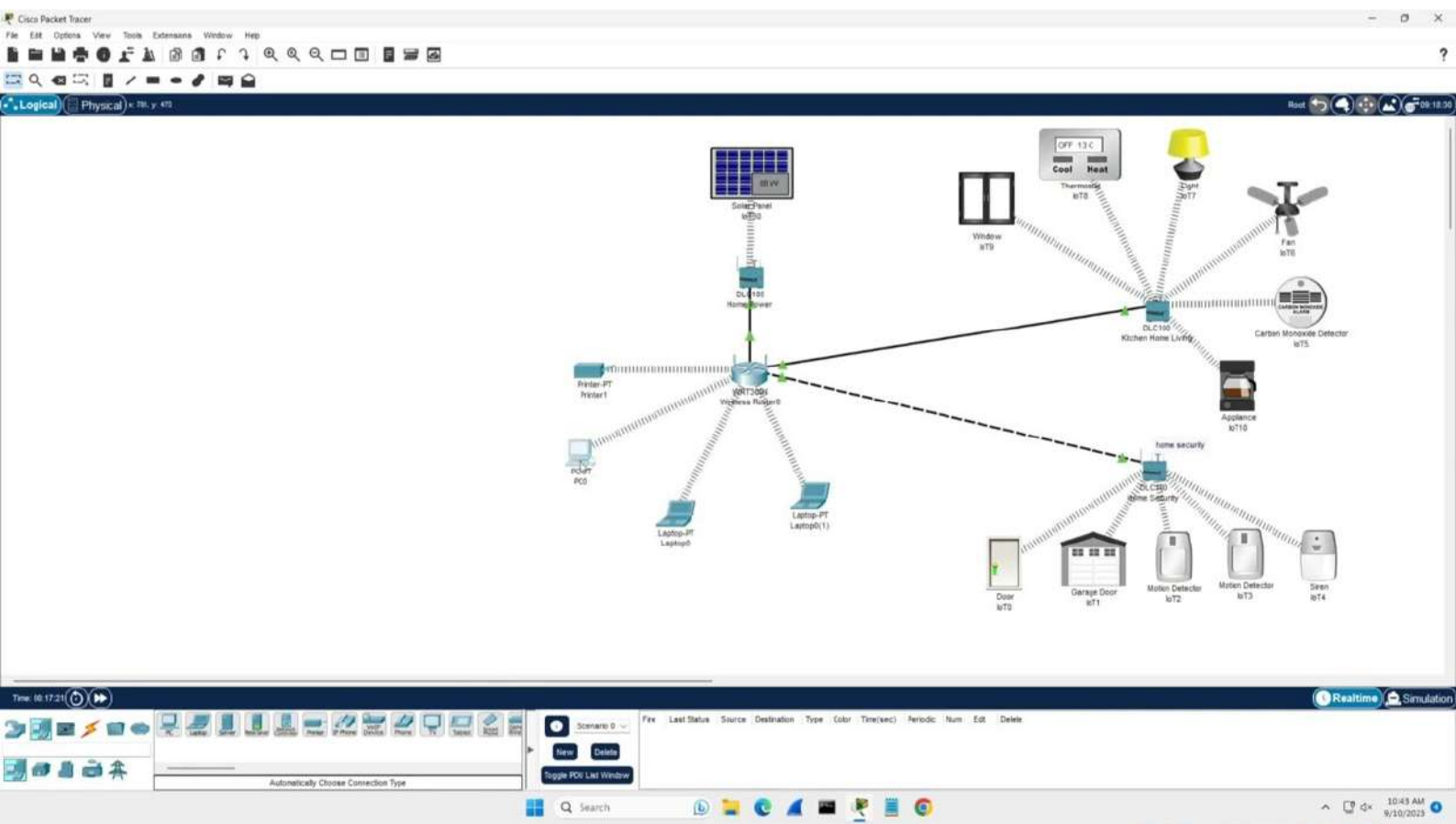
Event List Filters - Visible Events

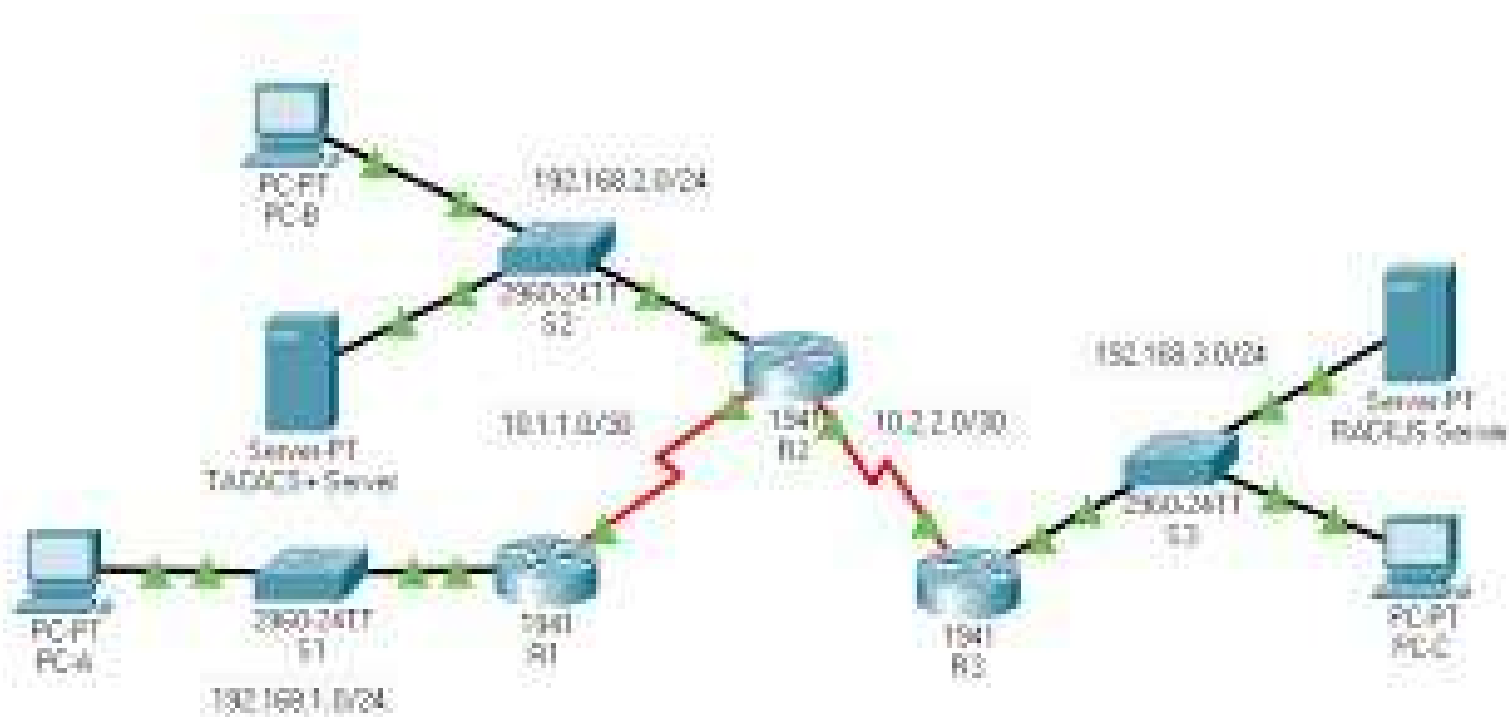
ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP,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

Edit Filters Show All/None

Time: 00:01:42.088 PLAY CONTROLS

Automatically Choose Connection Type





Capturing from Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply all filters Capture options

No.	Time	Source	Destination	Protocol	Length	Info
675	17.860266	2401:4900:915e:9b70...	2a03:90c0:5a1:2801...	TCP	86	54123 → 80 [ACK] Seq=438 Ack=47214 Win=2304 Len=0 TSval=522199645 TSecr=611041571
676	17.860360	192.168.172.150	3.233.158.41	TCP	54	54133 → 443 [ACK] Seq=518 Ack=3415 Win=65792 Len=0
677	17.861498	192.168.172.150	3.233.158.41	TLSv1.2	139	Client Key Exchange, Change Cipher Spec, Encrypted Handshake Message
678	17.900566	192.168.172.150	151.101.38.172	TCP	66	54122 → 80 [ACK] Seq=438 Ack=66422 Win=2304 Len=0 TSval=522199685 TSecr=3607574450
679	18.471733	2a03:90c0:5a1:2801...	2401:4900:915e:9b70...	TCP	105	80 → 54123 [ACK] Seq=47214 Ack=438 Win=32768 Len=19 TSval=611042124 TSecr=522199544 [TCP segment of a reassembled PDU]
680	18.471733	2a03:90c0:5a1:2801...	2401:4900:915e:9b70...	TCP	1219	80 → 54123 [ACK] Seq=47214 Ack=438 Win=32768 Len=1133 TSval=611042125 TSecr=522199644 [TCP segment of a reassembled PDU]
681	18.471828	2401:4900:915e:9b70...	2a03:90c0:5a1:2801...	TCP	86	54123 → 80 [ACK] Seq=438 Ack=48366 Win=2304 Len=0 TSval=522200257 TSecr=611042124
682	18.471932	3.233.158.41	192.168.172.150	TLSv1.2	304	New Session Ticket, Change Cipher Spec, Encrypted Handshake Message
683	18.471932	2a03:90c0:5a1:2801...	2401:4900:915e:9b70...	TCP	105	80 → 54123 [PSH, ACK] Seq=48366 Ack=438 Win=32768 Len=19 TSval=611042265 TSecr=522199645 [TCP segment of a reassembled PDU]
684	18.473354	192.168.172.150	3.233.158.41	TCP	590	54133 → 443 [ACK] Seq=603 Ack=3665 Win=65536 Len=536 [TCP segment of a reassembled PDU]
685	18.473354	192.168.172.150	3.233.158.41	TCP	590	54133 → 443 [ACK] Seq=1139 Ack=3665 Win=65536 Len=536 [TCP segment of a reassembled PDU]
686	18.473354	192.168.172.150	3.233.158.41	TCP	590	54133 → 443 [ACK] Seq=1675 Ack=3665 Win=65536 Len=536 [TCP segment of a reassembled PDU]

> Frame 613: 78 bytes on wire (624 bits), 78 bytes captured (624 bits) on interface \Device\NPF_{D9B26A6C-BFA3-418C-B8D5-03BC775F74AC}, id 0

> Ethernet II, Src: 28:2e:89:0b:c8:e4 (28:2e:89:0b:c8:e4), Dst: 92:al:cb:14:ec:24 (92:al:cb:14:ec:24)

> Internet Protocol Version 4, Src: 192.168.172.150, Dst: 151.101.38.172

> Transmission Control Protocol, Src Port: 54122, Dst Port: 80, Seq: 438, Ack: 53639, Len: 0

```
0000  92 a1 cb 14 ec 24 28 2e 89 0b c8 e4 08 00 45 00  ....$(.....E
0010  00 40 8b 14 40 00 00 06 44 53 c0 a8 ac 96 97 65  @..@...DS....e
0020  26 ac d3 6a 00 50 cf 15 76 d5 54 fc 7b ae b0 10  &..jP...v.T{...
0030  00 09 4b 3e 00 00 01 01 08 0a 1f 20 13 54 d7 07  .K>.....
0040  27 2c 01 01 05 0a 54 fc 80 2e 54 fc 84 ae      ',.....T:..T...
```

Wi-Fi: <live capture in progress> Packets: 1639 - Displayed: 1639 (100.0%) Profile: Default

eth0: Capturing - Wireshark

File Edit View Go Capture Analyze Statistics Help

Filter: + Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
46	139.931167	Wistron_07:07:ee	Broadcast	ARP	Who has 192.168.1.254? Tell 192.168.1.68
47	139.931463	ThomsonT_08:35:4f	Wistron_07:07:ee	ARP	192.168.1.254 is at 00:90:d0:08:35:4f
48	139.931466	192.168.1.68	192.168.1.254	DNS	Standard query A www.google.com
49	139.975406	192.168.1.254	192.168.1.68	DNS	Standard query response CNAME www.l.google.com A 66.102.9.99
50	139.976811	192.168.1.68	66.102.9.99	TCP	62216 > http [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=2
51	140.079578	66.102.9.99	192.168.1.68	TCP	http > 62216 [SYN, ACK] Seq=0 Ack=1 Win=5720 Len=0 MSS=1430
52	140.079583	192.168.1.68	66.102.9.99	TCP	62216 > http [ACK] Seq=1 Ack=1 Win=65780 Len=0
53	140.080278	192.168.1.68	66.102.9.99	HTTP	GET /complete/search?hl=en&client=suggest&js=true&q=m&cp=1 H
54	140.086765	192.168.1.68	66.102.9.99	TCP	62216 > http [FIN, ACK] Seq=805 Ack=1 Win=65780 Len=0
55	140.086921	192.168.1.68	66.102.9.99	TCP	62218 > http [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=2
56	140.197484	66.102.9.99	192.168.1.68	TCP	http > 62216 [ACK] Seq=1 Ack=805 Win=7360 Len=0
57	140.197777	66.102.9.99	192.168.1.68	TCP	http > 62216 [FIN, ACK] Seq=1 Ack=806 Win=7360 Len=0
58	140.197811	192.168.1.68	66.102.9.99	TCP	62216 > http [ACK] Seq=806 Ack=2 Win=65780 Len=0
59	140.218210	66.102.9.99	192.168.1.68	TCP	http > 62218 [SYN, ACK] Seq=0 Ack=1 Win=5720 Len=0 MSS=1430

Frame 1 (42 bytes on wire, 42 bytes captured)

Ethernet II, Src: Vmware_38:eb:0e (00:0c:29:38:eb:0e), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

Address Resolution Protocol (request)

```
0000  ff ff ff ff ff ff 00 0c 29 38 eb 0e 08 06 00 01  ..... )8.....
0010  08 00 06 04 00 01 00 0c 29 38 eb 0e c0 a8 39 80  ..... )8....9.
0020  00 00 00 00 00 00 c0 a8 39 02  ..... 9.
```

eth0: <live capture in progress> Fil... Packets: 445 Displayed: 445 Marked: 0 Profile: Default



Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
3713	1051.573602	192.168.29.52	224.77.77.77	UDP	148	12177 → 12177 Len=10
3714	1051.574665	192.168.29.52	224.77.77.77	UDP	148	12177 → 12177 Len=10
3715	1052.592470	Serverco_79:a9:e7	IntelCor_a1:a2:bb	ARP	42	Who has 192.168.29.52
3716	1052.592506	IntelCor_a1:a2:bb	Serverco_79:a9:e7	ARP	42	192.168.29.52 is at
3717	1054.588652	192.168.29.52	224.77.77.77	UDP	148	12177 → 12177 Len=10
3718	1054.615545	192.168.29.52	224.77.77.77	UDP	148	12177 → 12177 Len=10

- > Frame 1196: 50 bytes on wire (400 bits), 50 bytes captured (400 bits) on interface \Device\NPF_{E9...}
- > Ethernet II, Src: Serverco_79:a9:e7 (a8:da:0c:79:a9:e7), Dst: IPv4mcast_01 (01:00:5e:00:00:01)

> Destination: IPv4mcast_01 (01:00:5e:00:00:01)

> Source: Serverco_79:a9:e7 (a8:da:0c:79:a9:e7)

Type: IPv4 (0x0800)
- > Internet Protocol Version 4, Src: 192.168.29.1, Dst: 224.0.0.1
- > Internet Group Management Protocol

0000	01 00 5e 00 00 01	a8 da 0c 79 a9 e7 08 00 46 c0	..^.... .y...F.
0010	00 24 bd b3 00 00	01 02 a8 b5 c0 a8 1d 01 e0 00	-\$.....
0020	00 01 94 04 00 00	11 64 e5 87 00 00 00 00 09 14d
0030	00 00		..