Assignment No.

Title: Lab Assignment on Unit V: (Mandatory Assignment) (Use C/C++)

Write a program to analyze following packet formats captured through Wireshark/Internet for wired network. 1. Ethernet 2. IP 3.TCP 4. UDP

Date:-

Marks:- Signature:-

Packet tracer

Q1 Draw header formate of IPv4 packet?

Octet	0	3 4	7 8	13 14	15 16	31
0	Version	IHL	DSCP	ECN	Total length	
	0			15 16	18 19	31
4	identification			flags	Fragment offset.	
	0		7 8	15 16		31
8	Time to Live.		Protocol	Header Checksum		
						31
12	Source Address					
						31
16	Destination Address					
						31
20	Options.					

IPv4 header packet.

Q2 Draw header format of TCP.

→

Byte offset					
0	Source Port				Destination Port.
4	Sequence Number				
8	Acknowledgment Number				
12	Offset	Reserved	TCP flag CE UA P R S F		Window
16	Checksum				Urgent Pointer
20	TCP Options (optional)				

Header formed TCP

Q3 Draw header format of UDP?

Byte offset		
0	Source Port	Destination Port
4	Length	Checksum

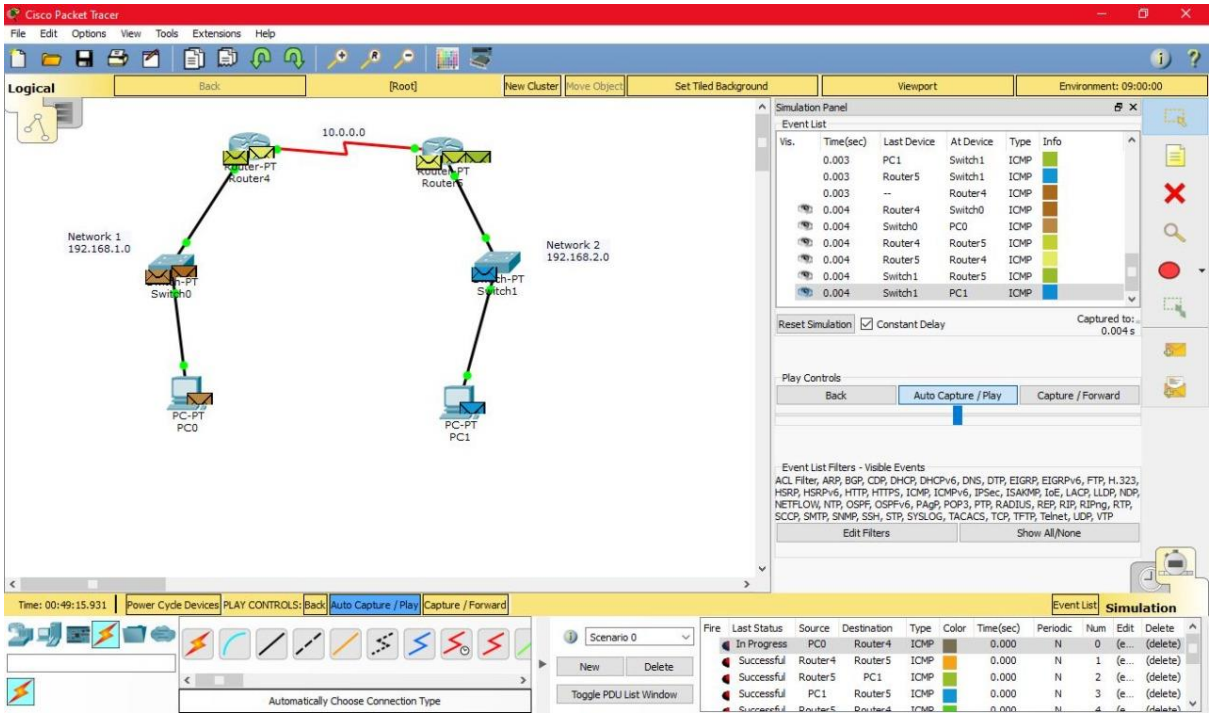
Checksum RFC768

UDP Header

Q4 Draw header format of IGMP?

Byte offset			
0	Type	Code	Checksum.
4	Other message specific information		

ICMP Header.


Cisco Packet Tracer
File Edit Options View Tools Extensions Help
Logical
Back
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Environment: 09:00:00
10.0.0.0
Router4
Router5
Network 1
192.168.1.0
Network 2
192.168.2.0
Switch0
Switch1
PC-PT
PC0
PC-PT
PC1
Simulation Panel
Event List
Vis. Time(sec) Last Device At Device Type Info
0.003 PC1 Switch1 ICMP
0.003 Router5 Switch1 ICMP
0.003 -- Router4 ICMP
0.004 Router4 Switch0 ICMP
0.004 Switch0 PC0 ICMP
0.004 Router4 Router5 ICMP
0.004 Router5 Router4 ICMP
0.004 Switch1 Router5 ICMP
0.004 Switch1 PC1 ICMP
Reset Simulation
Constant Delay
Captured to: 0.004 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoE, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP
Edit Filters
Show All/None
Time: 00:49:15.931
Power Cycle Devices
PLAY CONTROLS:
Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
In Progress PC0 Router4 ICMP 0.000 N 0 (e... (delete)
Successful Router4 Router5 ICMP 0.000 N 1 (e... (delete)
Successful Router5 PC1 ICMP 0.000 N 2 (e... (delete)
Successful PC1 Router5 ICMP 0.000 N 3 (e... (delete)