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Roll Number: 31118

Subject: Computer Network and Security Lab

Assignment 01 Writeup



bject: Computer Networks lab.



PICT, PUNE	Subject: Computer Networks the. 30-Aug-2021
	Title: Wireless LAN Setup
	Could also at faithful a salation of the
	Problem Statement
	Setup a wired LAN wing layer -2 soitch. It
	includes preparation of cable, testing of cable using
	line tester, configuration marline using IP
Auca	addresses, testing using PING utility &
	demonstrating the PING parkets captured
	traves wing wireshark packet Analyzer Tool
A PRINCE	Requirements: Lisco Packet Tracer, Wizeshark Packet
	Analyzer Tool, RJ45 connector, Cemping Tool, line
	tester (This was shown virtually due to covid, by
	our lab teacher)
M2 005	
	Pesciption:
+ 1	and the second of the second o
The A	Computer Networks:
20 ml m 1 (2) 11	According to Tenenbaym
	is computer Network is a collection of autonomous
- Y	computers interconnected by a single technology
	y two computers are said to be interiornected
-	if they are able to exchange information.
	3) The connection need not be via a copper wire.
	fiber optics, microwaves, infrared & communication safellites an also be used.
7	signature on any be taken.
-	

Table: Layers Summery (OST, TUP)IP)

Application Appli)		
Persentation Application Persentation Message — Decid frontial Compression Inchement Application Galeway Message — Session Compression Application Compression C		People	HTTP, SMTP etc.	NCP LPP JPEG etc	SMPP, RPC, PPTP.	TCP, UDB, RDP	45000000000000000000000000000000000000	ATM, Ethernet, HDLC, Taken Ring etc.	-
Application Presentation Pre		function		6.		of data.f.	Logical to physical adds. translation.	nuthiplexing data sheard, data frames detection, we didn access	transmy fam bit stræun over medium
Presentation Presentation Presentation Presentation Presentation Presentation Presentation Application Transport Theorem Application Theorem Applicati		Address	1	1	1			S	1
Presentation Presentation Presentation Presentation Presentation Application Application Transport Tra		packet pada Umt (PPV)	Message	Message	Message	Segment (TCP), Patagram(UDP)	Packet	frame	Bit
Application Application Application Application Session Trausport		Network	1	1	Galeway	Asenan	Routez:		Hub, NIC, Cable, wheless
Application Presentation Transport Transport Network Network		ICP/IP Layer		Application		Train poet	Internet		
A A A A A	7	tso	Application	Presentation	<i>session</i>	Trausport	Network	Data Link	Physica.
		3,2	_	\$	A	4	6	\$ 9	分



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	difference be	tween LAN, MA	N + WAN:	ALL STATE OF THE S
	(Note: Ana	lysis is relativ	e to early other	
		J		
- Volai la	Property.	Netwo	ork Type	
	S.P. T. T. A. S. Fan	LAN	MAN	WAN
	fell form	local Area	Metropolitan	
		Network	Area Network	Network.
	Ourse on Nin	1000011	make the time	1110
	Owervership	Mostly private	perveni public	Mostly public.
	Speed 4	High &	Mod erate	Slower
Mark	Bandwidth	(up to 100Mbps)	(up to 100 mbps)	CONTRACTOR OF THE PERSON NAMED IN COLUMN 2 IS NOT THE PERSON NAMED
Marian	Maintainance	Less	Moderate	High
	The state of the s			2
	Coverage.	lom to 1km	1 to 100 km.	100 to 1000 km
	01	2 2 21	6)	A 1
	Places of we	Room, Building,		Country,
		Campus, hospitals	Lowns	Continent.
	Examples	Intronet,	Cable Metwork	Military services
1000	Camples	resource sharing	able require	Airlines,
		in offices.		Railways
	ut aloval		al debt 18 ha	
			19.700	
		*		



Types	OF	cables:
(1)	and a second	al coopse

		THE RESIDENCE OF THE PARTY OF T	ESTABLISH FAIR	MI) AND ROLL OF THE REAL PROPERTY.
	Property	Cable	Type	
	The state of the	Twisted Pair cable	Co-axial Cable	Optical fiber
-	Noise	low	Moderate	Highest
DICA 9	Immunity	Arras Men	large met	Unit de la company
15.00	fall amount	rook and Arca	oto Maria de La compa	
	2) Influence of	Highly	Less affected	Not
- Sidding th	external magnetic	affected	3014 L guyzes	affected
	field			
(90)	leasts ?	10/1	Apill 4	seed .
(anathol at	3> Cost	Very Low.	Moderate	Very high
				1377
N AN	4> Power loss	High (conduction	Moderate	Low (absorption+
		1 radiation)	(conduction)	scattering)
malo04 67	locker and only	at it make a	moltie de la son	Situation
	\$ Bandwidth	low	Moderate	High.
A THE	#speed.	of pullbury at	is of use soon	No.
the state of	6>AHenuation	Very High	Low	Very low
		3 10		veg wa
Himas you	=> Signal 1	In electrical	In electrical	an optical
# 17.56	Transmussion	form many and	Form	form
	foat	Metal Land	HI) A	1001)
	syspeed of data	Low	Moderate	Hiala
	transfer.		The state of the s	High
	/ UNIT CIT			/
	& Amalications	1 A N	Broadband	and an al
	1) Applications	AIV		internet
			Internet, cable	communication
			TV, ethernet	

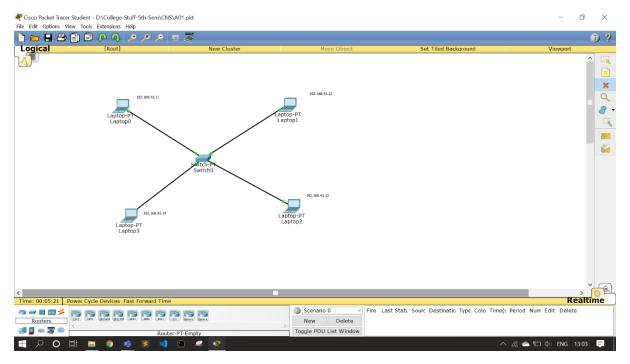
(a)	
9	
PICT	
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	Wizeshark Puket Analyzer Tool -
	plurgeshark is a network analysis tool.
	2797 captures parkets in real time & display them -
The Land of the Land	in human-readable format
	3> Romisuous mode:
	is Normally a network interface will only.
- <u> </u>	receive packets directly addressed to the
- 40 00011	interface.
	113 Promiscous made allaws the interface to
	receive all poukets that it sees wheather
	they are addressed to the interface prot.
	11/2 To enable promisions mode:
Sandyan S	go to:
	Home Screen - Capture - Options ->
	Input -> mark checkbox 1 Enable
	promiscaous mode on all
	interfaces"
	4) To start rapturing parkets:
The Table	select network connection -> select start capture.
	· To stop capturing parkets:
abata	There is a symbol in zed rolour.
	5) Wireshark captures each packet sent to @ from
	your system
10 th 30 th	THE PARTY OF THE P
Carrier	1923 the grade water of the addition
19 10	



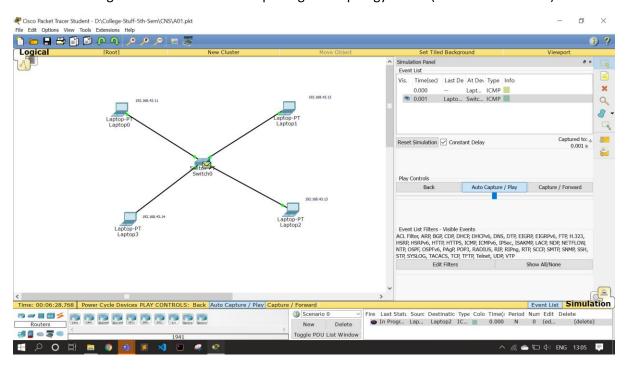
PICT, PUNE	
	Steps of a wized LAN setup
	Sinstallation of othernot and in marline.
and items	2) Sthermet cable crimping using crimping tool
	3) Make straight cable in order to form a star topology
	notwork to connect a different types of
1963	components eg PC to switch.
345 0	4) make cross cable in order to form a star
	topology network to convert 2 same types of
1 1 1 h	components eg pc to pc.
and in a	3) convert sovitch & marlines using cable
	(STAR Topology)
	6) Assign IP address to the machines.
	7> ping from one mailine to another mailine
<u>←1</u>	Cut 1 - mad 1 - mas a smile
200	Troubleshooting:
NV VS	> Always start with Fresh scenario. You con
	delete any previous scenario if that is not
	in use.
23410 (3)	11) Bafore capture alway add simple pou in
	cisco parket traver.
	111) Always capture parkets in simulation mode.
V 1000 (0.0)	14) Assign IP address properly
	machine Desktop IP (tatic machine Desktop IP)
	take down note of IP addresses. address)
	Take there is not a the tree to

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	Conclusion:
	In this assignment experiment I have setup &
	wired LAN & observed how parkets are
	parefered from one marline to another in
	star topology Also studied about IP address &
	star topology. Also studied about IP address & PING conymand to PING other devices
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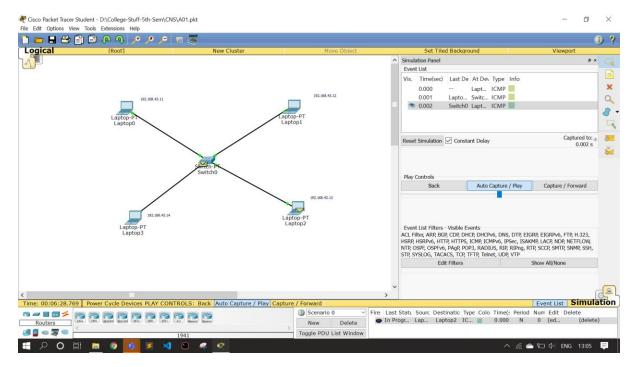
Screenshots of performance:



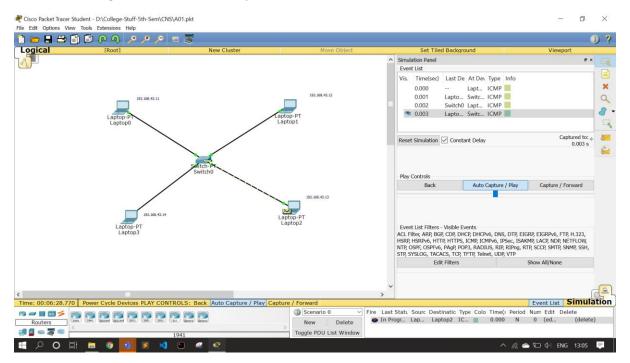
Screenshot-1: figure show wired LAN setup using star topology in CPT (Cisco Packet Tracer)



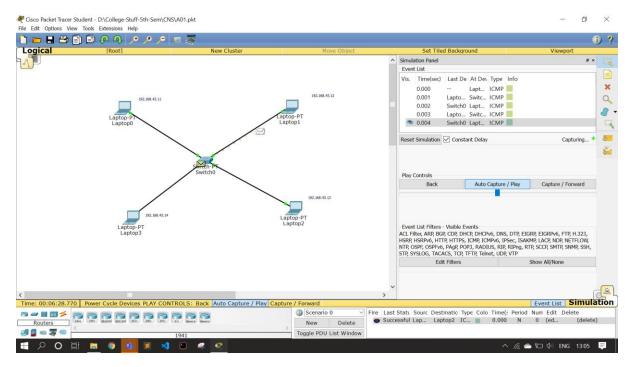
Screenshot-2: figure shows transfer of packet from machine-1 to switch



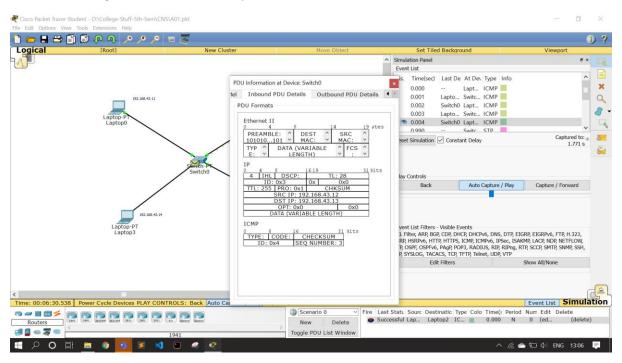
Screenshot-3: figure shows transfer of packet from switch to machine-2



Screenshot-4: figure shows transfer of packet from machine-2 to switch



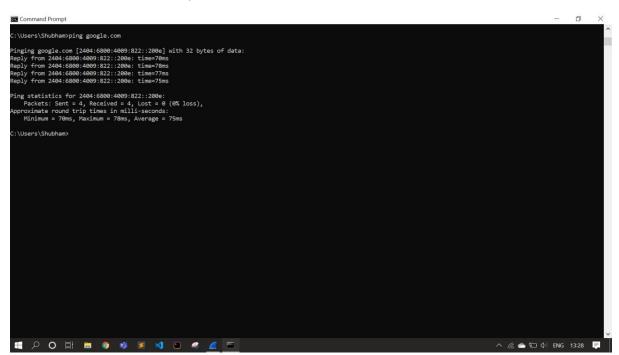
Screenshot-5: figure shows transfer of packet from switch to machine-1



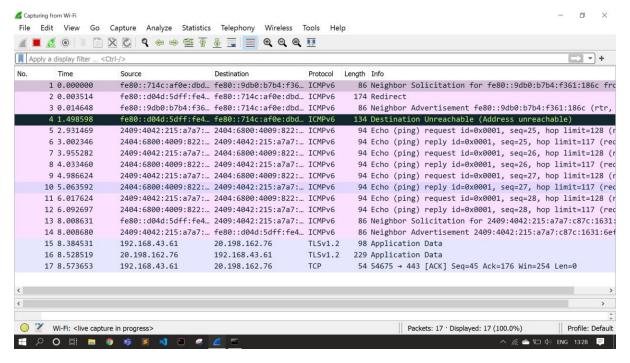
Screenshot-6: figure showing intermediate packet details

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| Commentation | North Comment
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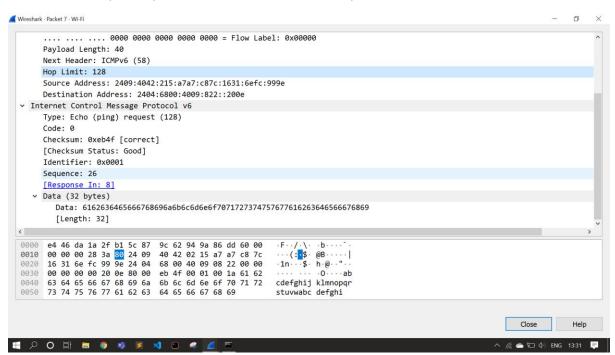
Screenshot-7: IP address of my machine



Screenshot-8: Ping command in command prompt



Screenshot-9: Captured packets in Wireshark Packet Analyzer Tool



Screenshot-10: IPv6 details

Thank You!