				1	
		1	9	y,	
	1	11			
8	γ	\rangle	/		

·OSI - standard reference model for any type of communication

TCP/IP - reference model for Data Comming It is derived from OSI layer made buyers hadlen unless pathergences

Application goraline proglement all as

Presentation

> Application (9

natoraly A. F

Tion Isla . 5

Session

Transport

> Transport (4)

Met work

Network/Internet (3)

Datalink 7

Physical

Network Access (5)

OSI model

TCPICP model.



Scanned with OKEN Scanner

Network Access Layer (12)

- Communication will happened based on the MAC Address and then we will have a MAC Table with switch In order to communicate within the network.

- Inle can call data as frames

- The main protocol in this layer is Ethernel protocol (It having Source MAC and Destination MAC and all the upper layer information + A will carry)

Adress . 5. Ethertype or length " FIFT 185 12. bytes -> 16 bit

-> 0 to 65535 => If it is <1536, this is used for length to chatter but sprober soluer -> >1536 then it is used for type field.) Type field having upper layer protocol information!

length esusize of frame. ator bin "" and out how all reformilation of the to be at mile all to the training of the line

1 Preamble

- It is a I byte field that contains a pattern of alternating o's and is
- It alierte the stations that a frame is
 going to start.
- It also enables the sender and receive to establish bit synchronization.

2. Start frame Delimeter (SFD):

- It is a 1 byte held which is always set to 10101011.
- The last two bits "11' indicate

 the end of Start Frame Delimeter

 and marks the beginning of the frame.

 (Preamble and SFD provides the Synchronization
 between the Sender and specializer.)

_ ft 75 a 6 byte field that contains the MAC Address of the destination for which the data is destined.

4. Source Address

_ It is a 6 byte field that contains the MAC address of the source which is sending the data.

6. Data (or) Payload,

- Payload can be 42 byter if an 802.10 tag is present without tog minimum is 46 bytes.

- It is a variable length which contains the actual data data

- Thus, in a Ethernet Frame, minimum data has to be 46 bytex and monomous data con be 1500 bytes.

7. Frame Check Sequence (CRC):

CRC- Cyclic Redundancy Check.

- It is a 4 byte field that contains the CRC code for errol detection.

8. Finterpacket gap:

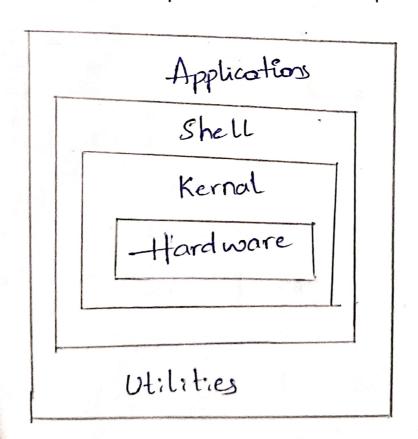
- The inter-packet gap (IPG) in
 Ethernet is the time interval
 between packets:
 - This is a minimum ide time of 96 bit-times (12 bytes) that occurs between the transmission of two Ethernet frames!
- During this time, the network remains alle Lno data transmilled to allow the devices on the network to:
- 1. Recover from the previous Transmission
 - 2. Prepare for the next frame transmission 3 Avoid collisions in half-duplex environment

Linux is a multiuser and multitasking Operating System. It is mole secure compand to windows.

learness and it is

It is free and opensource.

Command to install any package in linua -> Sudo apt install (package-name).



- Junctionality / L-twork Profecols Network Network drve 13 Network Methors Adapti Beneacus Character -Comparent terminals drivers devices Terminal Various Device of Linua Kernal Applications, Tools Pile system CD, Algry Hand disk System calls Drectore devices Systems type FIES Block ام (1) managment manager memory Memory Memory Virtua) RAM Structure Maragment arch; fecturefunctionality > Multi-tanking Scheduler Specific rocess CPU Vser -> Software _ Hardwar > Linus - Kerna - shooms Hard ware Support 5 poddins

File and Directory Management Commands

1) Is - Lists directory contents.

ls - Bosic list

Ls-1 - list with details

Eg: ls -la (shows all files with detailed information)

2) cd - Change the current directory

cd Directory-name

-changes to that directory

Eg-ed /home.

buil - Print the current directory faith.

buil - paints the current directory

prod - paints the current directory

Eg: pwd.

4	mkdri - Create a new directory
	mkdir Directory-Name!
	mkdir Directory-Name! Creates, that directory En what Dand
	Eg:- mkdin Directory-Name.
(5)	rmdir - Remove an empty director
	rmdir Directory-Name
	Deleter that derectory

6 rm _ Deletes files and directories

The Mame - Deletes file

Eg:- rm -rf File-Name (1990)

who differed the tombonio

Eg:- rmdir Directory Name.

Scanned with OKEN Scanner

Op - Copy files or directories

op file new-file

- Copies file to 'new-file

Eg:- op file new-file

8) my - Move or rename files and

into the literación account - información

mv file new-file bons

- Renames 'file' to new-file'
Eg: mv file new-file

Go-touch - Create an Empty file Eg:--touch file

(10) cat - Concotenate and diplay file contents
ig: cat file.