

practical-2

Aim:

Study of different types of network cables

a) understand different types of network cable.

⇒ types of network cable used.

1. unshielded Twisted pair (UTP) cable
2. Shielded twisted pair (STP) cable
3. coaxial cable.
4. fibre optic cable.

cable type	category	Maximum Data transmission	Ad/disad	Applications
UTP	category 3	10bps	ad: cheaper in cost	10 Base-T Ethernet
	category 5	upto 1000 Mbps	easy to install & have a smaller diameter.	Fast ethernet Gigabit Ethernet
	category 5e	1 Gbps	dis: More prone to (EMI) Electromagnetic interference & noise.	
STP	category 6, 6a	10 Gbps	Shielded faster than UTP. Less susceptible to noise & interference.	Gigabit Ethernet 10 G Ethernet widely used in data centres.

SSTP	7	10Gbps	dis Expensive Complex installation	Gigabit, 10G Ethernet
coaxial Cable	RG-6 RG-59 RG-11	10-100 mbps	adv: ↑ BW, immune to interference dis: lost, size distance	Speed is slow Television networking, ↑ Speed internet connection
Fibre optics Cable	Single mode multimode	100 Gbps	adv: ↑ Speed, ↑ BW, Security dis: expensive Skilled installers	maximum distance is 100m

Straight thru cable			Crossover cable		
Tx+1	Green white	1 Rx+	Tx+1	GW	OW 1 Tx+
Tx-2	Green	2 Rx-	Tx-2	GR	OR 2 Tx-
Rx+3	orange white	3 Tx+	Rx+3	OW	GW 3 Rx+
4	Blue	4	4	Blue	4
5	Blue white	5	5	BW	5
Rx-6	orange	6 Tx-	Rx-6	OR	GR 6 Rx-
7	Brown white	7	7	BW	7
8	Brown	8	8	B	8

Student observation:

- 1) What is the diff between cross cable & straight cable.

Cross cable: connects different types of device
(PC to switch, router)

Straight cable: connects similar device
(PC to PC, switch to switch)

2) Type of cable used to connect two PCs:
⇒ cross cable

3) Types of cable used to route / switch to your PCs:
⇒ straight cable

1/3

Result:

Thus the program is executed and output is verified.

