CSE-322: Network Sessional

Basic Config:

Router: / Switch
_____

- CPU
- RAM ⟹ Running-config
- ROM
- NV-RAM ⟹ Startup-Config (copy of running-config)
- Flash ⟹ IOS (Inter-networking OS)

✳Switch has a port named "Console"

✳Switch এর console port-এ console cable (blue color wire) দিয়ে এটা PC-এর RS-232 port-এ connect করব।

✳Putty software দিয়ে switch-এর console access করব।
(Terminal is putty)

switch> ⟶ user mode

switch# ⟶ priviledge mode (administrator)

switch (config)# line console 0
           password cisco   } console password set
           login

switch(config)# enable secret class   } administrator mode
                                          এর password set

*telnet is used for remote administration

Switch# show run ||(to show detailed running config)

    service password-encryption (Run config -এ এখন
                                          password গুলো encrypted
                                          দেখাবে।)

    banner motd #write msg#

* Switch is a layer-2 device, তাই ip address আবশ্যর কথা না।
  ip address দিতে হলে vlan 1 interface use করতে হবে।

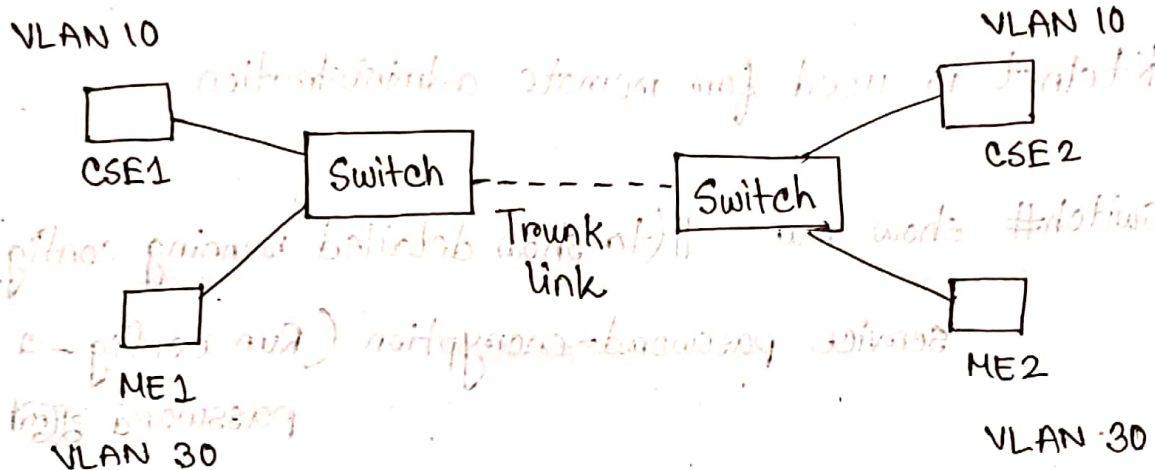*ip না দিলে switch-এ telnet করা যাবে না।

*"no shutdown" command দিলে uplink আসবে,

R1# show ip interface brief ||to check status of inter-
                                          face

Virtual LAN :

VLAN 10   VLAN 10

```
    ┌──┐                                               ┌──┐
    └──┘                                               └──┘
    CSE1    ┌────────┐         ┌────────┐              CSE 2
            │ Switch │---------│ Switch │
            └────────┘  Trunk  └────────┘
    ┌──┐               link                  ┌──┐
    └──┘                                      └──┘
    ME1                                        ME2
    VLAN 30                                    VLAN 30
```

*Similar device connect করতে cable : crossover cable (black dashed)

       VLAN 10 ———— f0/1

       VLAN 30 ———— f0/2

step-1:
VLAN creation :
    VLAN 10
    name CSE
    VLAN 30
    name ME

step-2:
port assign :
    int f0/1
    switchport mode access
      " access vlan 10

    int f0/2
    switchport mode access
      " access vlan 30

Access port: A port where data of only one vlan goes
Trunk port: A port where data of many vlans goes

trunk line config:

int g0/1

switchport mode trunk

"   trunk native vlan 1

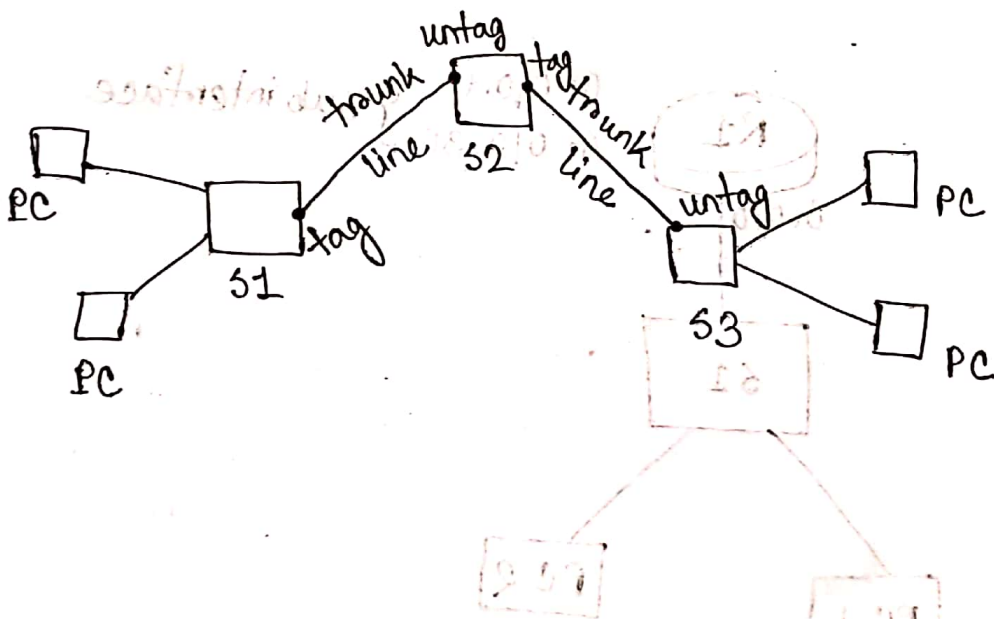"   "   allowed vlan 10, 30, 1

Management VLAN — switch, router
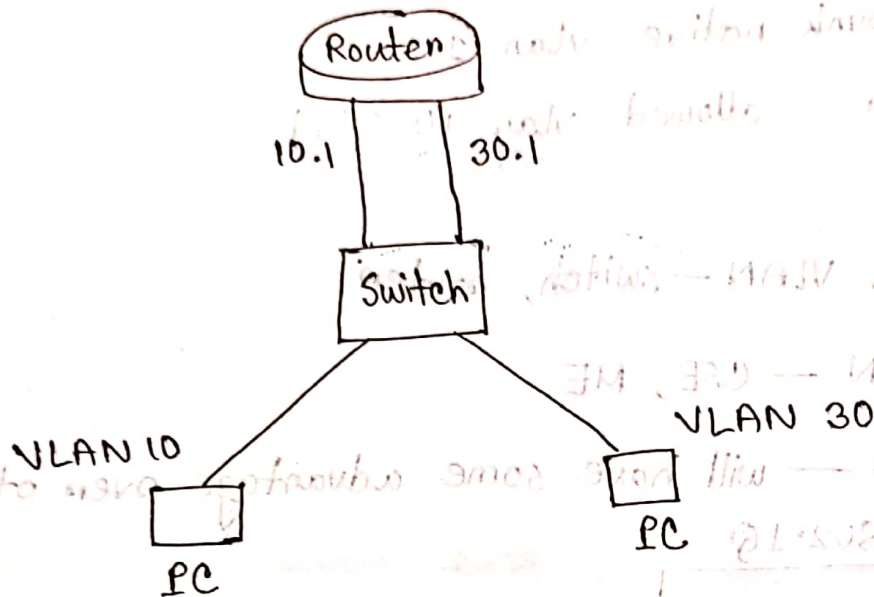
Data VLAN — CSE, ME

Native VLAN — will have some advantage over other VLANs.

IEEE 802.1Q

✱ VLAN tagging & untagging for non-native VLANs, ~~wi~~ packet will be comparatively slower.

* Router দ্বারা inter VLAN Routing possible না।

* it is not scalable, because it requires one physical router interface per VLAN and router has limited no. of physical interface.
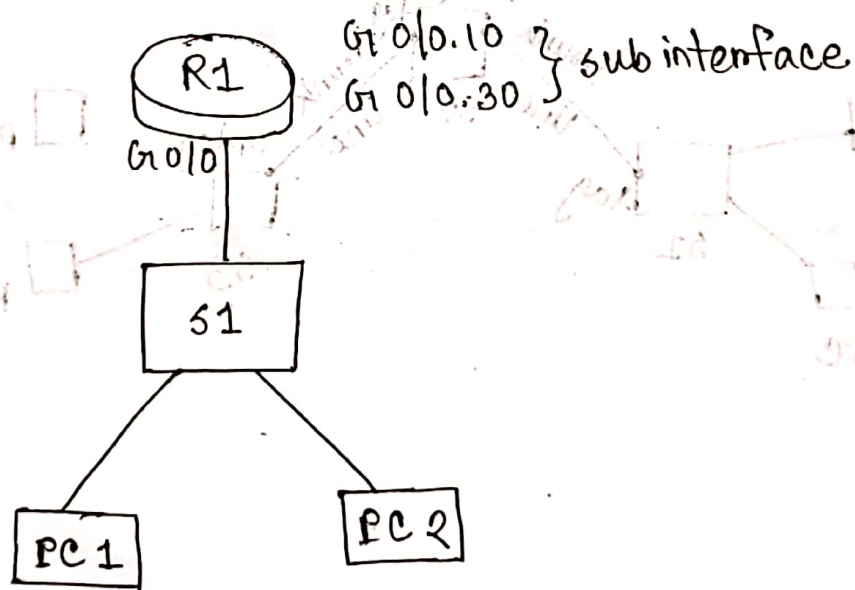

Fig: Router-On-a-Stick