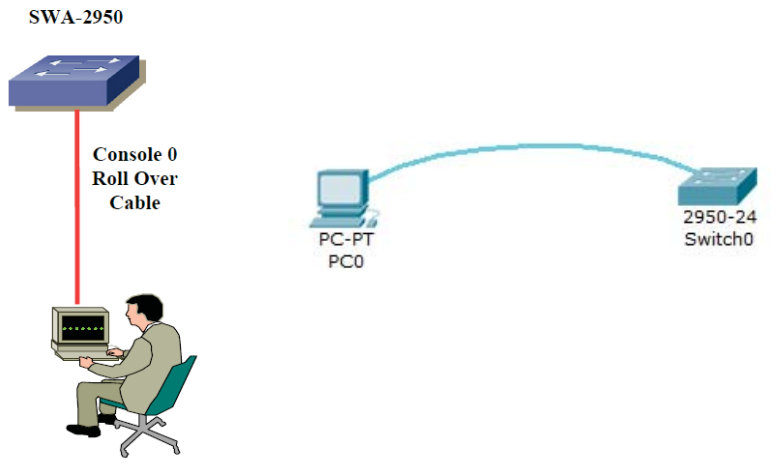
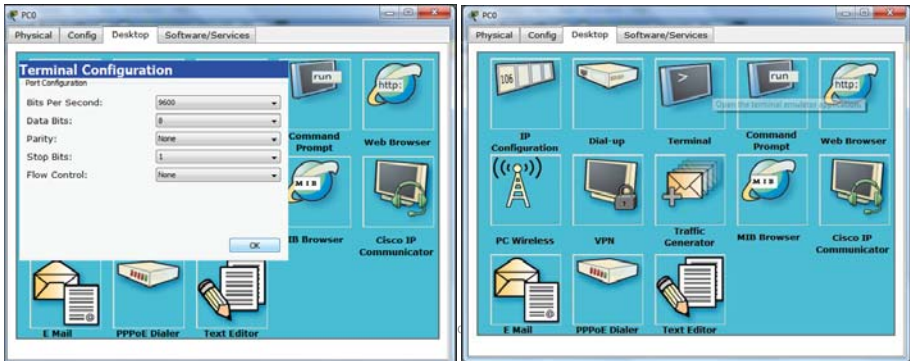
Lecture (01)
configuring and connecting 24 ports switch

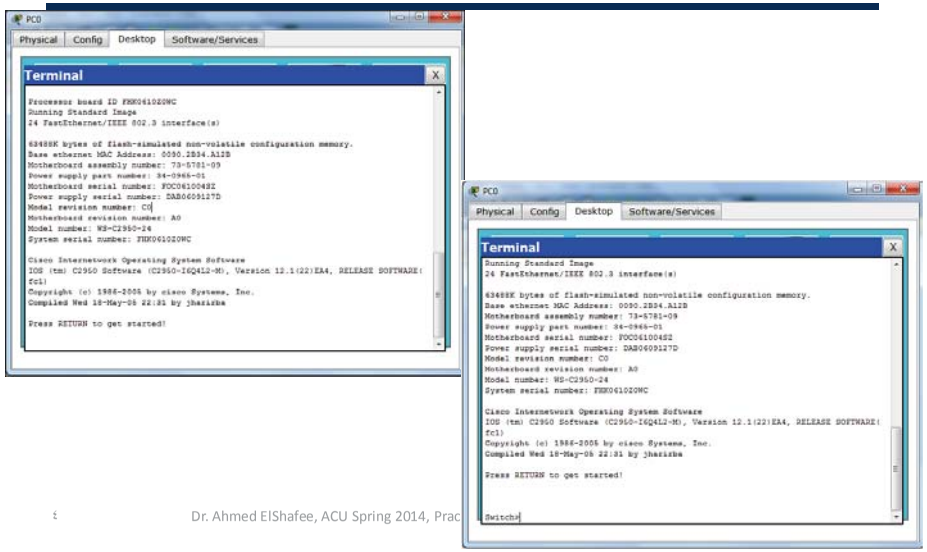
Dr. Ahmed M. ElShafee



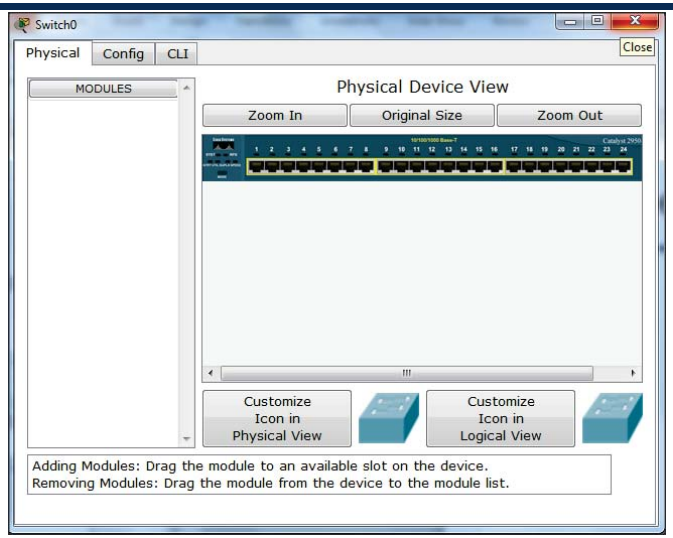
Step 1: connecting your PC to the Console Port.

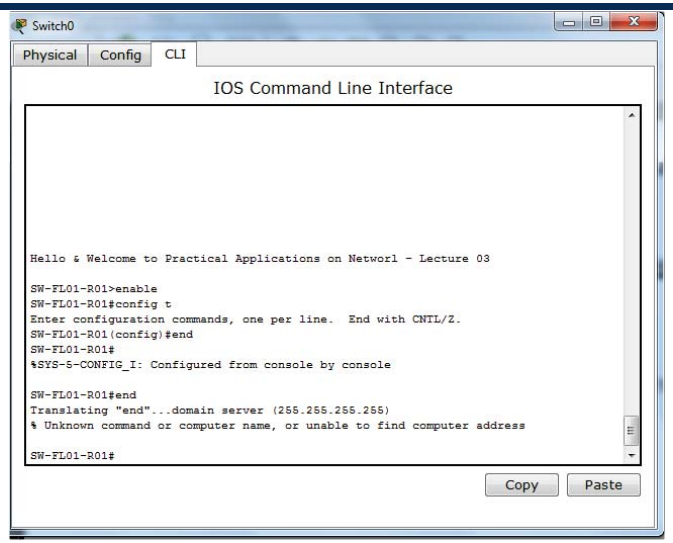
- Open HyperTerminal software
- Press RETURN to get started.
- Switch> (User Mode)





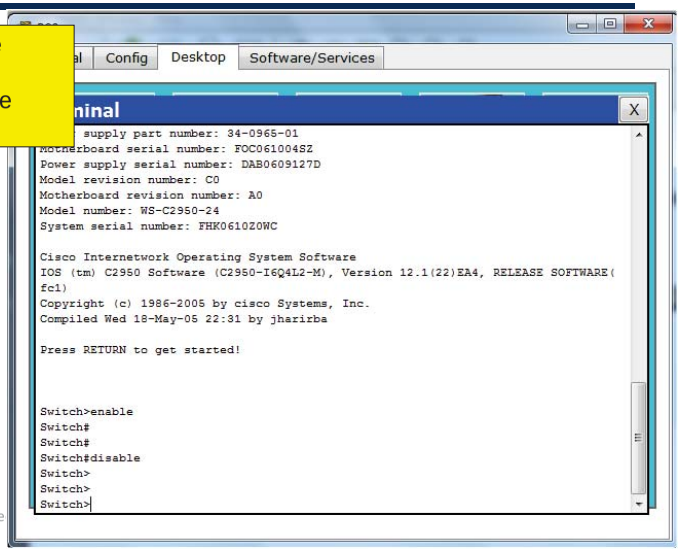
Step 1': open CLI from node

- 

- 

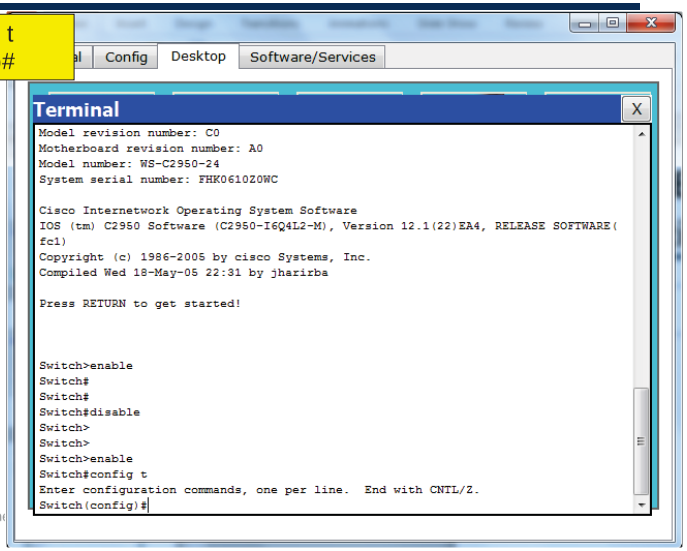
Step 2: To Enter Into Privilege mode/ Versa.

- Switch>enable
  Switch#
  Switch# disable
  Switch>



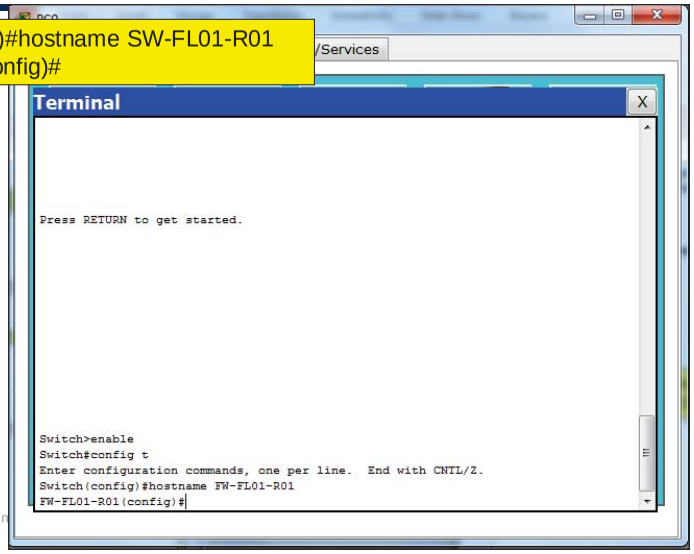
Step 3: To Enter Into Global Configuration Mode.

- Switch#config t
  Switch(config)#



Step 4: To change the Host Name of Switch.

- Switch(config)#hostname SW-FL01-R01
  2950-SWA(config)#



Step 5: Set the Message of the Day banner

- SW-FL01-R01(config) # banner motd #Hello & Welcome to Practical Applications on Networl - Lecture 03#

```
SW-FL01-R01(config)#banner motd #Hello & Welcome to Practical Applications on Ne
tworl - Lecture 03#
SW-FL01-R01(config)#
```

```
Hello & Welcome to Practical Applications on Networl - Lecture 03
```


Step 6: end configuration session

- SW-FL01-R01(config)# end
  SW-FL01-R01>

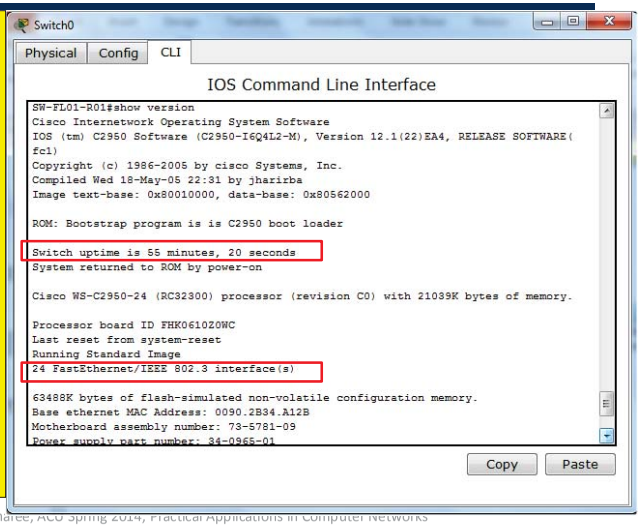
```
SW-FL01-R01#config t
Enter configuration commands, one per line.  End with CNTL/Z.
SW-FL01-R01(config)#end
SW-FL01-R01#
%SYS-5-CONFIG_I: Configured from console by console
```

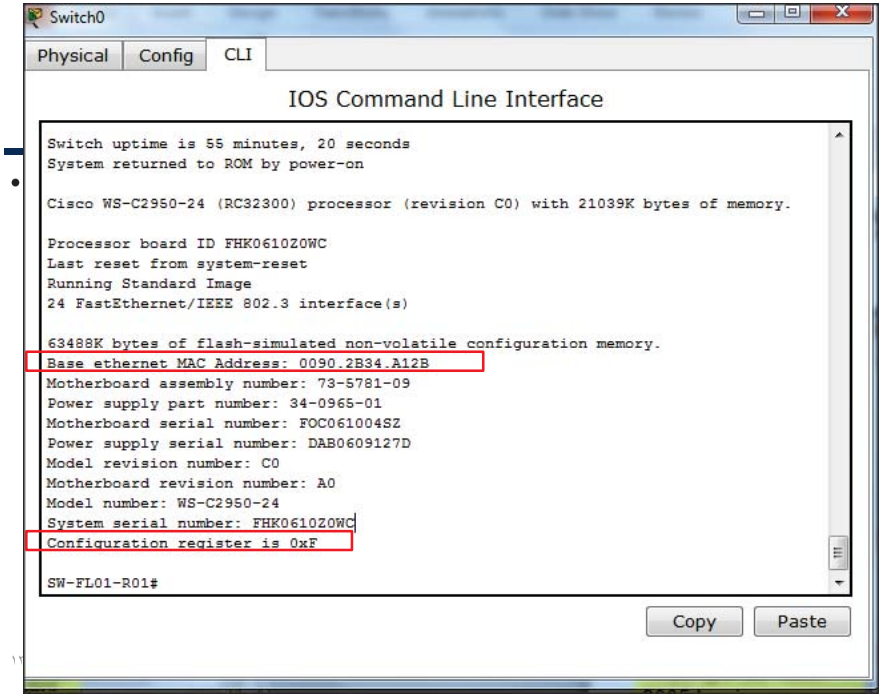

Step 7: version information of the switch

SW-FL01-R01#show version

Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4, RELEASE SOFTWARE(fc1)

Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled ….





Step 8: show the current configuration of RAM

SW-FL01-R01#show running-config
Building configuration...

Current configuration : 1056 bytes

```
SW-FL01-R01#show running-config
Building configuration...

Current configuration : 1056 bytes
!
version 12.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname SW-FL01-R01
!
!
spanning-tree mode pvst
!
interface FastEthernet0/1
```



```
Current configuration : 1056 bytes
!
version 12.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname SW-FL01-R01
!
!
spanning-tree mode pvst
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
 --More--
```

```
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface Vlan1
 no ip address
 shutdown
!
banner motd ^CHello & Welcome to Practical Applications on Networl - Lecture 03^
C
!
line con 0
!
line vty 0 4
 login
line vty 5 15
 login
!
!
end
```


Step 9: display flash information

SW-FL01-R01#dir
Directory of flash:/

1 -rw- 3058048 <no date> c2950-i6q4l2-mz.121-22.EA4.bin

64016384 bytes total (60958336 bytes free)

```
SW-FL01-R01#
SW-FL01-R01#dir
Directory of flash:/

    1  -rw-     3058048          <no date>  c2950-i6q4l2-mz.121-22.EA4.bin

64016384 bytes total (60958336 bytes free)
SW-FL01-R01#
```

Step 10: To give the IP Address of Management Domain Interface

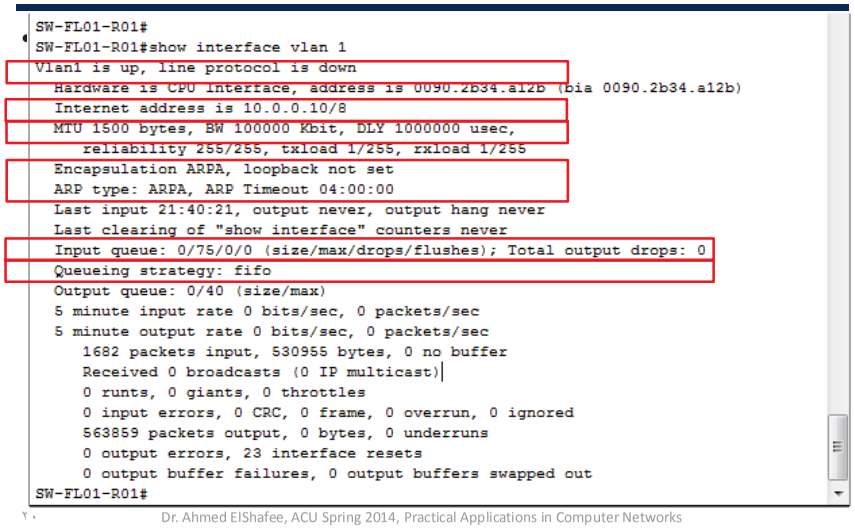
```
SW-FL01-R01#config t
Enter configuration commands, one per line.  End with CNTL/Z.
SW-FL01-R01(config)#interface vlan 1
SW-FL01-R01(config-if)#ip address 10.0.0.10 255.0.0.0
SW-FL01-R01(config-if)#no shutdown


%LINK-5-CHANGED: Interface Vlan1, changed state to up
SW-FL01-R01(config-if)#end
SW-FL01-R01#
%SYS-5-CONFIG_I: Configured from console by console

SW-FL01-R01#
```


Step 11: Display the information of All **IP** Interfaces on the switch.

```
SW-FL01-R01#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/1        unassigned      YES manual down                  down
FastEthernet0/2        unassigned      YES manual down                  down
FastEthernet0/3        unassigned      YES manual down                  down
FastEthernet0/4        unassigned      YES manual down                  down
....
....
FastEthernet0/23       unassigned      YES manual down                  down
FastEthernet0/24       unassigned      YES manual down                  down
Vlan1                  10.0.0.10       YES manual up                    down
```


Step 12: display management vlan (1) information

```
SW-FL01-R01#show interface vlan 1
Vlan1 is up, line protocol is down
  Hardware is CPU Interface, address is 0090.2b34.a12b (bia 0090.2b34.a12b)
  Internet address is 10.0.0.10/8
  MTU 1500 bytes, BW 100000 Kbit, DLY 1000000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 21:40:21, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     1682 packets input, 530955 bytes, 0 no buffer
     Received 0 broadcasts (0 IP multicast)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     563859 packets output, 0 bytes, 0 underruns
     0 output errors, 23 interface resets
     0 output buffer failures, 0 output buffers swapped out
SW-FL01-R01#
```



Step 13: display Ethernet interface information

SW-FL01-R01#**show interface FastEthernet0/1**
FastEthernet0/1 is down, line protocol is down (disabled)
Hardware is Lance, address is 00d0.ff3e.5701 (bia 00d0.ff3e.5701)
BW 100000 Kbit, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)


```
SW-FL01-R01#show interface FastEthernet0/1
FastEthernet0/1 is down, line protocol is down (disabled)
  Hardware is Lance, address is 00d0.ff3e.5701 (bia 00d0.ff3e.5701)
 BW 100000 Kbit, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Half-duplex, 100Mb/s
  input flow-control is off, output flow-control is off
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:08, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     956 packets input, 193351 bytes, 0 no buffer
     Received 956 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 watchdog, 0 multicast, 0 pause input
     0 input packets with dribble condition detected
     2357 packets output, 263570 bytes, 0 underruns
     0 output errors, 0 collisions, 10 interface resets
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out
SW-FL01-R01#
```


Step 14 : display information of switchport mode of operation of interfaces

SW-FL01-R01#**show interfaces switchport**
Name: Fa0/1
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: down
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
…
….


```
SW-FL01-R01#show interfaces switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: down
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: All
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
Appliance trust: none
```

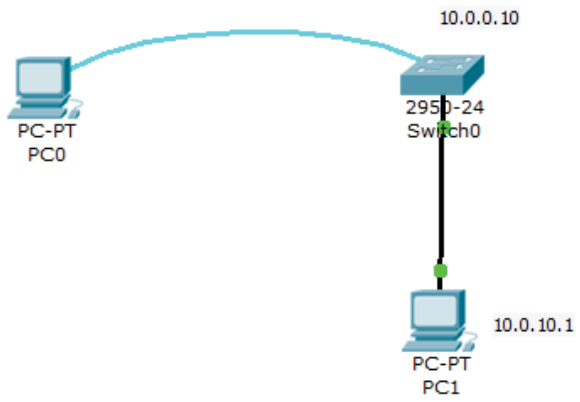
Step 15: save switch configuration into VROM

```
SW-FL01-R01>enable
SW-FL01-R01#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
```


Step 16: reboot your switch

```
SW-FL01-R01#reload
Proceed with reload? [confirm]
%SYS-5-RELOAD: Reload requested by console. Reload Reason: Reload
Command.

C2950 Boot Loader (C2950-HBOOT-M) Version 12.1(11r)EA1, RELEASE
SOFTWARE (fc1)
Compiled Mon 22-Jul-02 18:57 by miwang
Cisco WS-C2950-24 (RC32300) processor (revision C0) with 21039K bytes of
memory.
2950-24 starting...
….
….
….
```

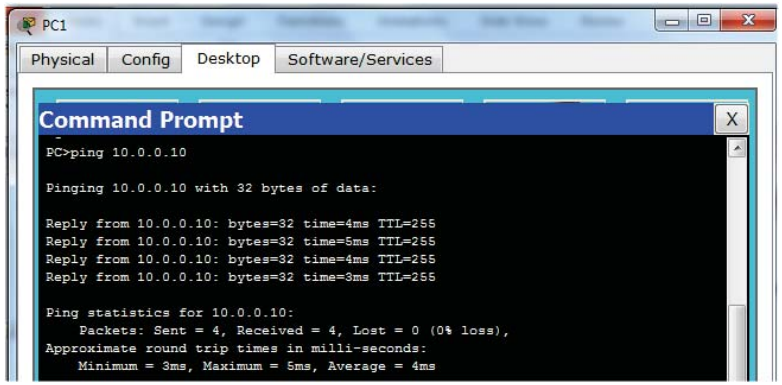

Step 17 : connect your first PC



Step 18: Configuring your PC

PC0	item	Configuration
	Gateway	-
	DNS	-
	Port status	On
	Band width	Auto
	Duplex	Auto
	IP	10.0.10.1
	Mask	255.255.0.0

Step 19 : check connectivity to switch



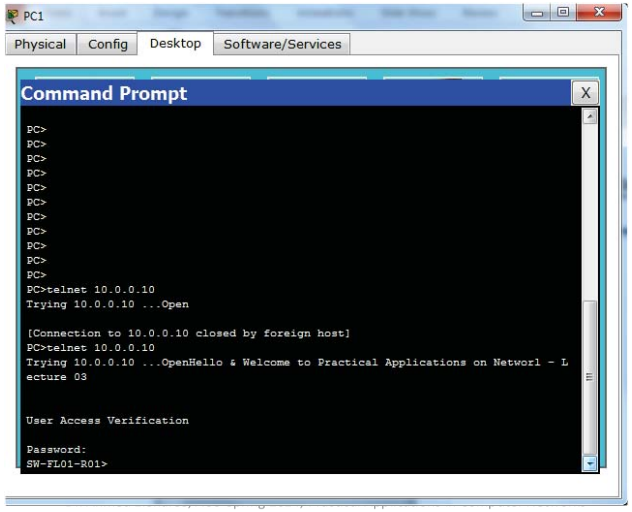
Step 20: enable

```
SW-FL01-R01#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SW-FL01-R01(config)#line vty 0 4
SW-FL01-R01(config-line)#password cisco
SW-FL01-R01(config-line)#login
SW-FL01-R01(config-line)#end
SW-FL01-R01#
%SYS-5-CONFIG_I: Configured from console by console
```

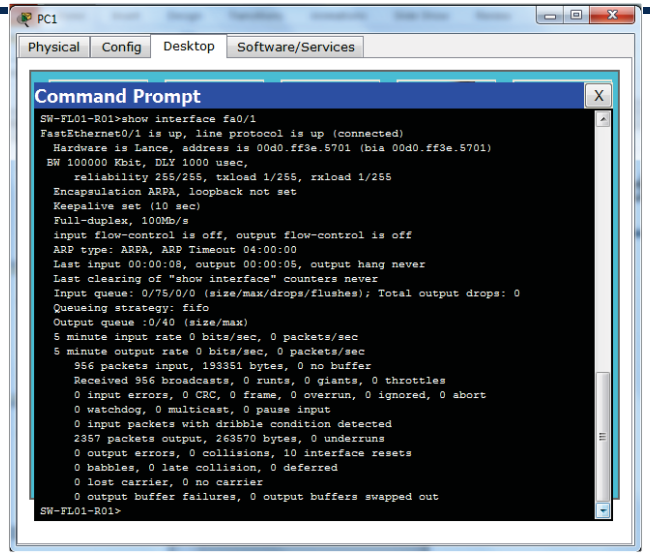

Step 21 : save configuration

```
SW-FL01-R01>enable
SW-FL01-R01#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
```


Step 22 : test telnet connection



Step 23 : show fa0/1 details



Step 24 : start configuring switch remotely

Thanks,..

See you next week (ISA),...