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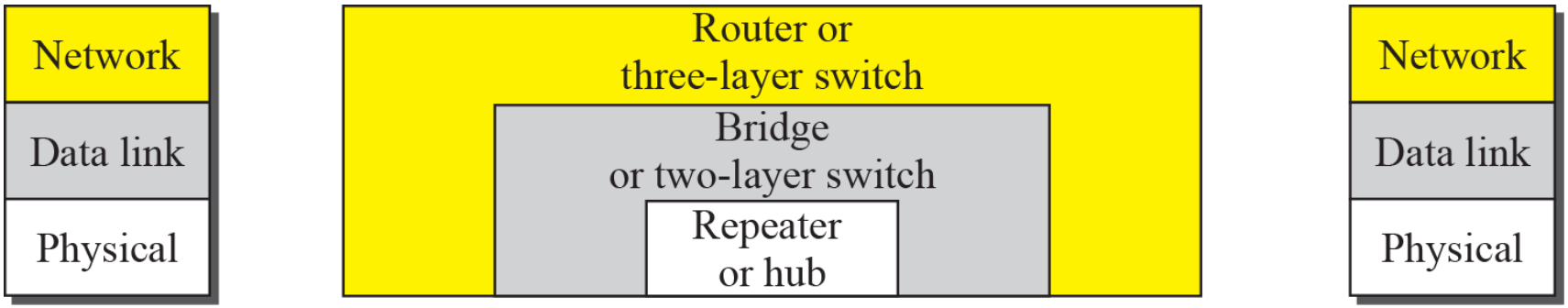
Connecting devices



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Internetworking Essentials CSE307

- **Lab 1**

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Poll 1

- Router is also Known as

a) Three Layer Switch

b) Two Layer Switch

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Hub

A hub forwards every bit; it has no filtering capability.

A router is a three-layer (physical, data link, and network) device.

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A router connects independent LANs or WANs to create an internetwork (internet).

Hub example

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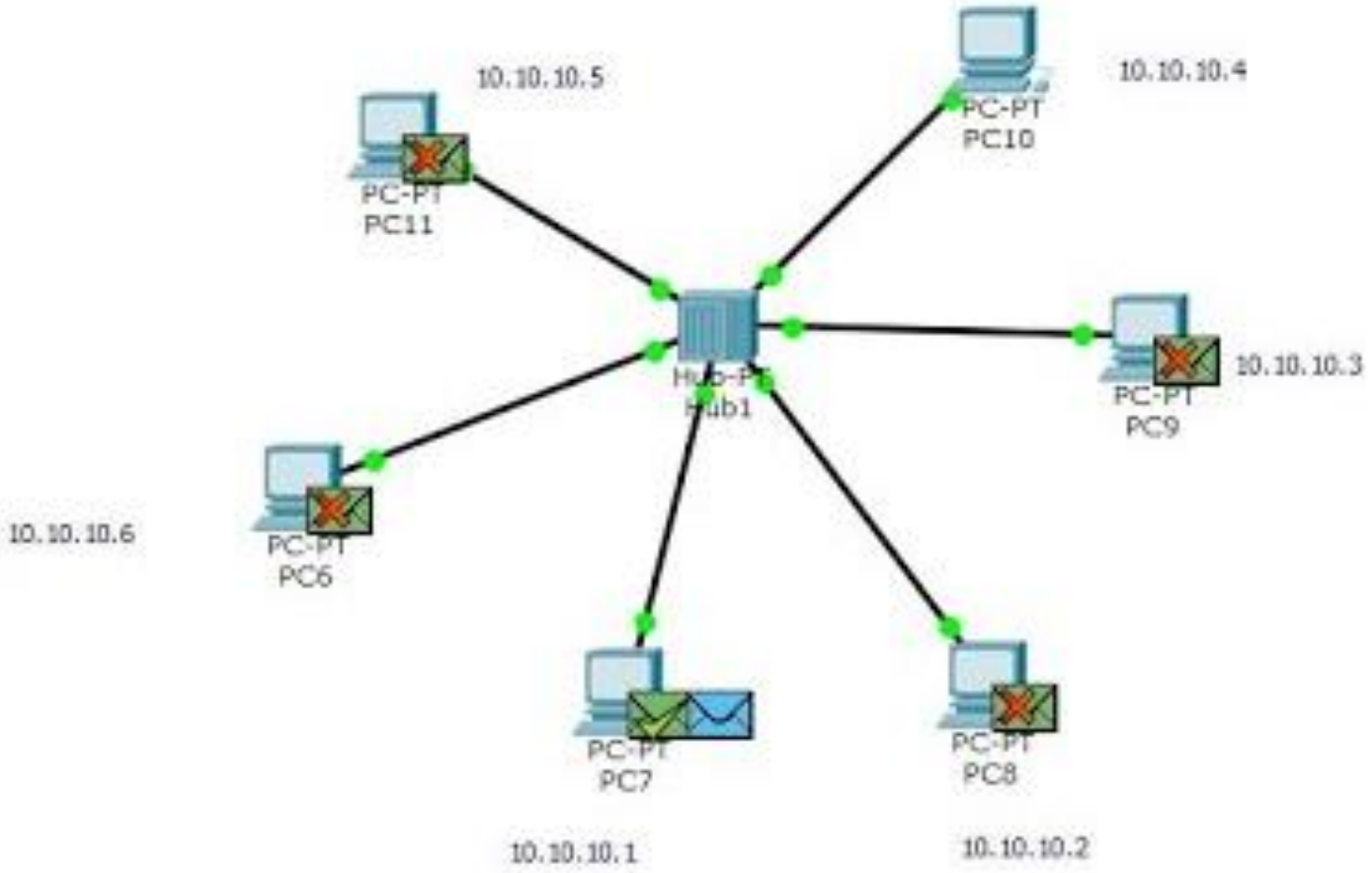

Switch example

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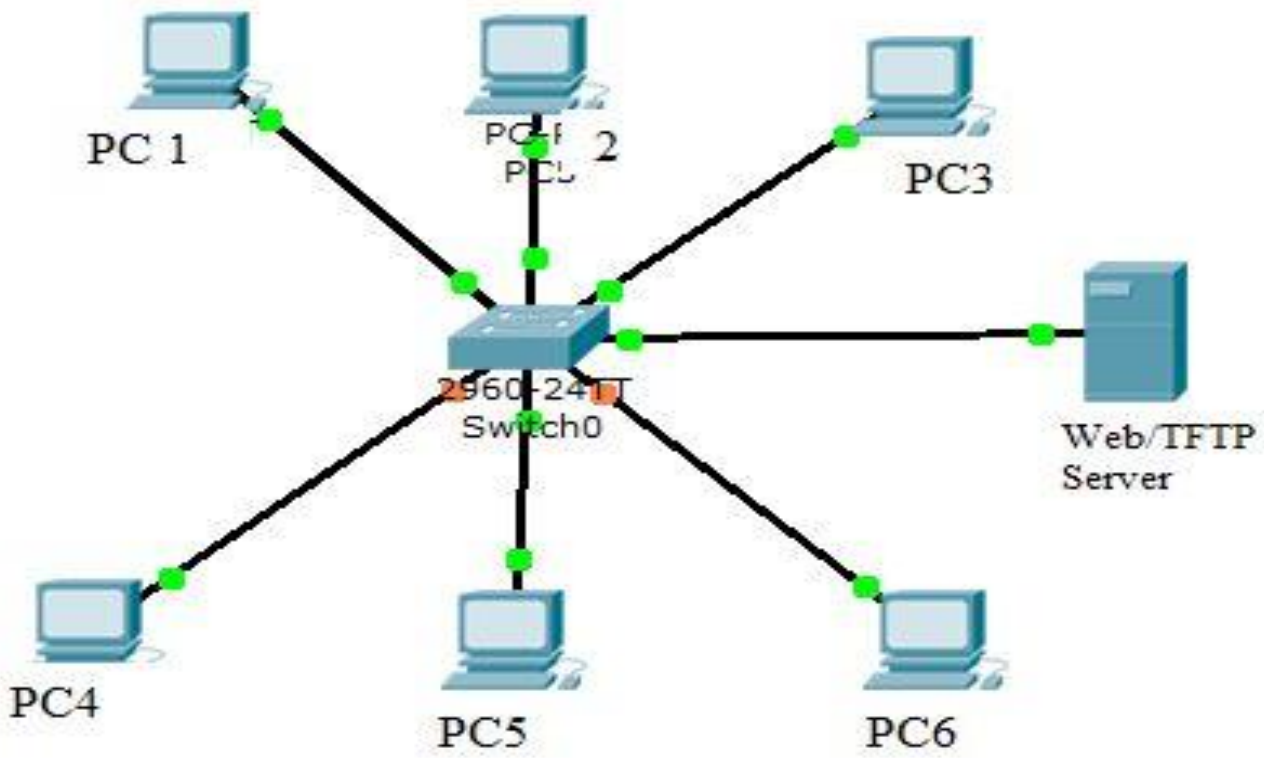

Routing example

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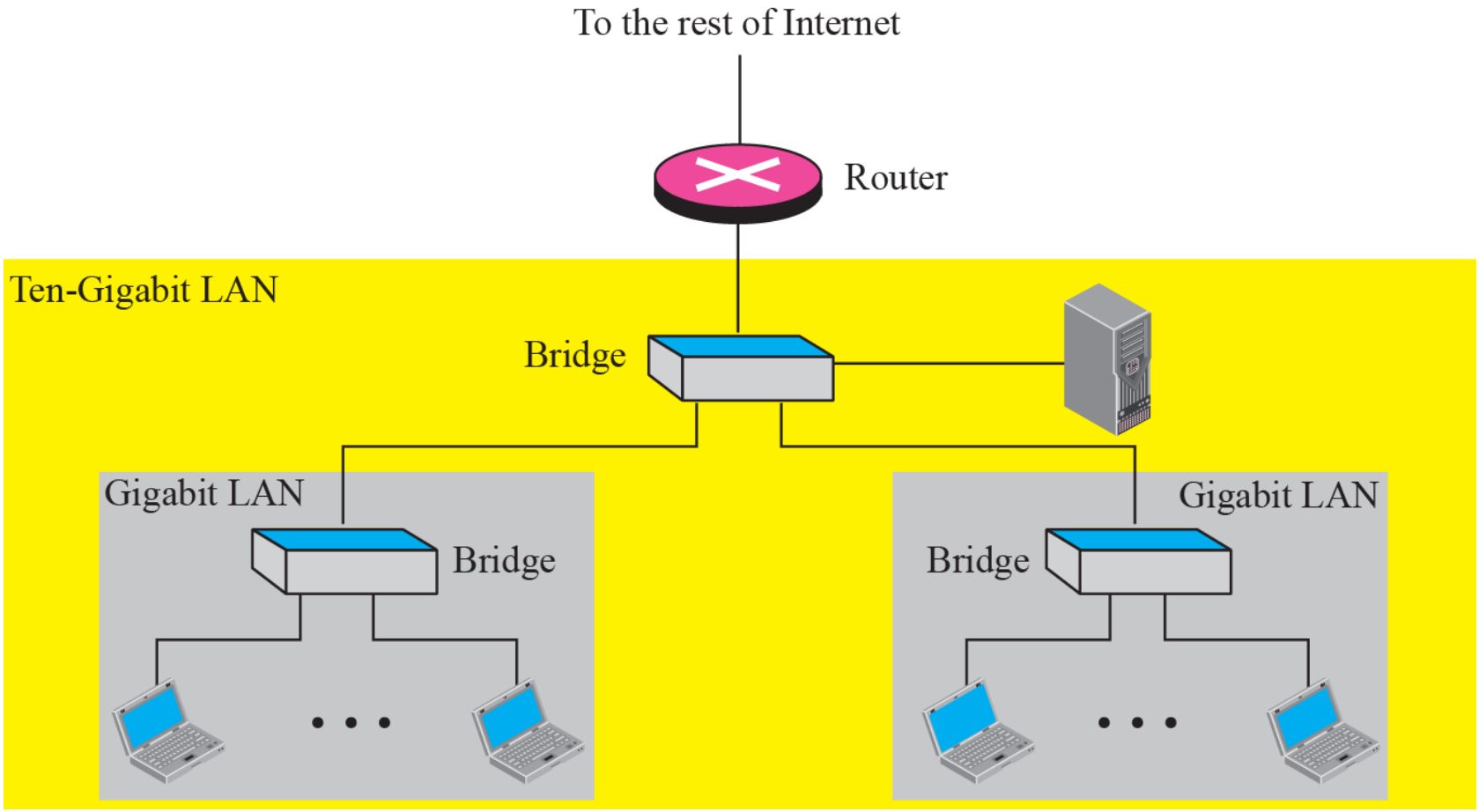

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Hub

- Broadcast
- More collision
- Connect same networking device

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Poll 2

- Hub works at which layer

a) Data link layer

b) Physical layer

c) Network layer

d) Transport layer

Switch

- Switch is intelligent device
- Learning the address
- Forwarding
- Work on mac address

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Poll 3

- switch is also Known as

a) Three Layer Switch

b) Two Layer Switch

c) One layer Switch

Router

- Connect different networks
- Routing

Poll 4

- Router is used to connect different type of networks

a) True

b) False

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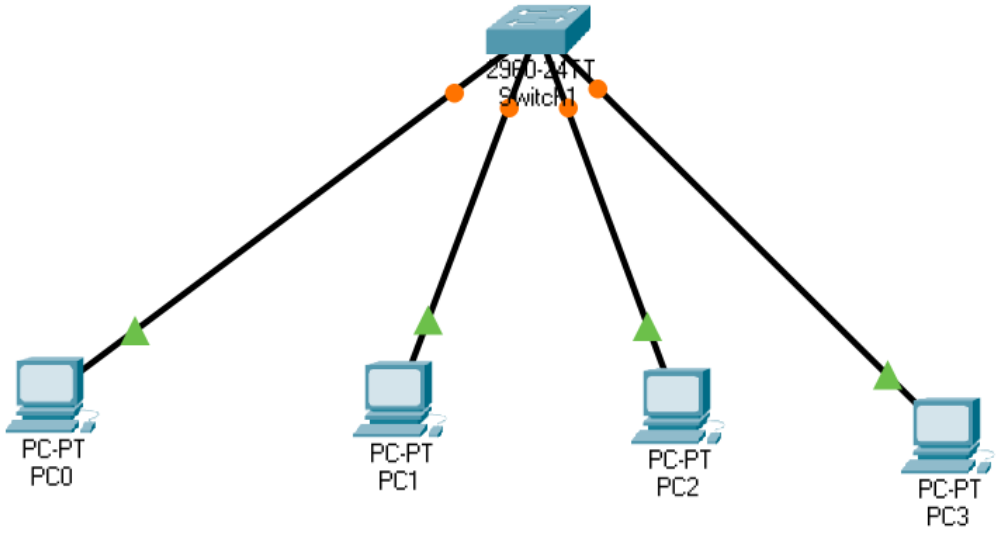
Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 390, y: 356 [Root] 06:31:00



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device

Reset Simulation | Constant Delay | Captured to: (no captures)

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters | Show All/None

Time: 00:07:59.514 PLAY CONTROLS: Event List Realtime Simulation

Automatically Choose Connection Type

Scenario 0 New Delete Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete

14°C Fog 12:20 PM 1/10/2022

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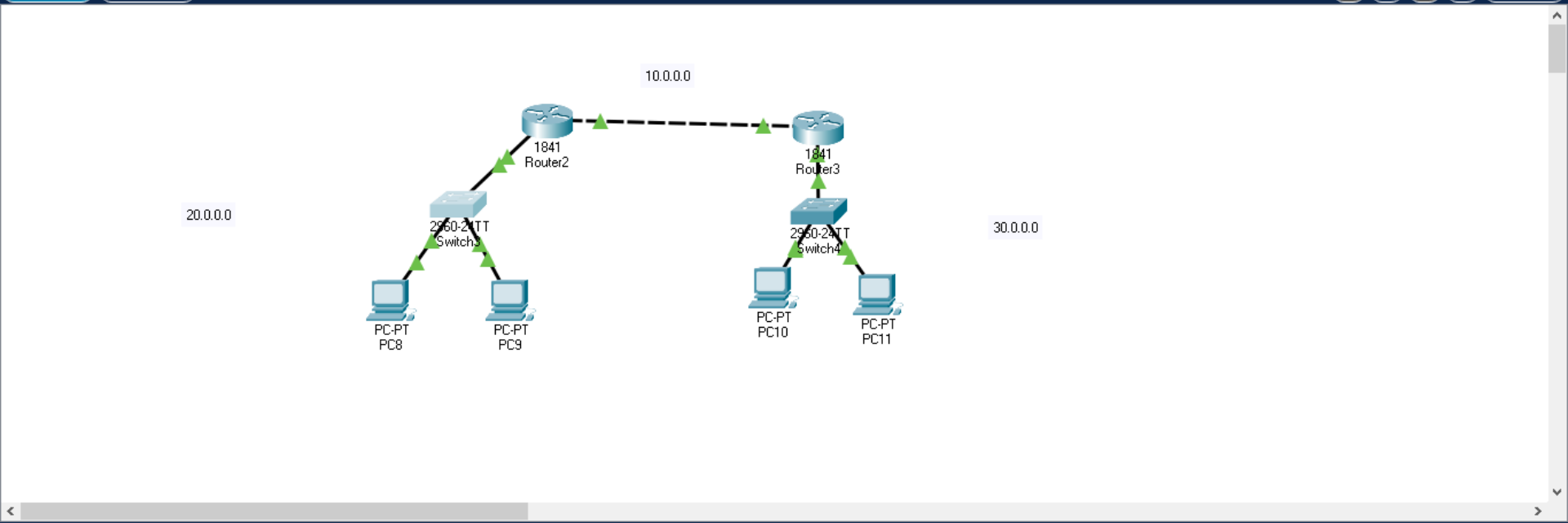
Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 930, y: 387 [Root] 22:34:30



Time: 00:40:16 Realtime Simulation

Copper Cross-Over

Scenario 0 New Delete Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	D
	Failed	PC8	PC10	ICMP		0.000	N	0	(edit)	(d
	Failed	PC8	PC10	ICMP		0.000	N	1	(edit)	(d
	Successful	PC8	PC10	ICMP		0.000	N	2	(edit)	(d

11°C Fog 10:47 AM 1/14/2022

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PC Command promopt

- Packet Tracer PC Command Line 1.0
- C:\>arp -a
- No ARP Entries Found

ARP(Address resolution protocol)

- C:\>arp -a
- Internet Address Physical Address Type
- 10.0.0.4 0007.ec28.a5e9 dynamic

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Switch CLI

- command-line interface (**CLI**)
- Switch>en
- Switch#show mac-add
- Mac Address Table
- ----------
- Vlan Mac Address Type Ports

  ---- ---------- ------- -----

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```
--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en
Router#?
Exec commands:
  <1-99>      Session number to resume
  auto        Exec level Automation
  clear       Reset functions
  clock       Manage the system clock
  configure   Enter configuration mode
--More--
```

```
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#

Router(config)#hostname CSE307
CSE307(config)#
CSE307(config)#exit
```

- CSE307>show ip interface brief
- Interface IP-Address OK? Method Status Protocol
- GigabitEthernet0/0/0 unassigned YES unset administratively down down
- GigabitEthernet0/0/1 unassigned YES unset administratively down down
- GigabitEthernet0/0/2 unassigned YES unset administratively down down
- Vlan1 unassigned YES unset administratively down down