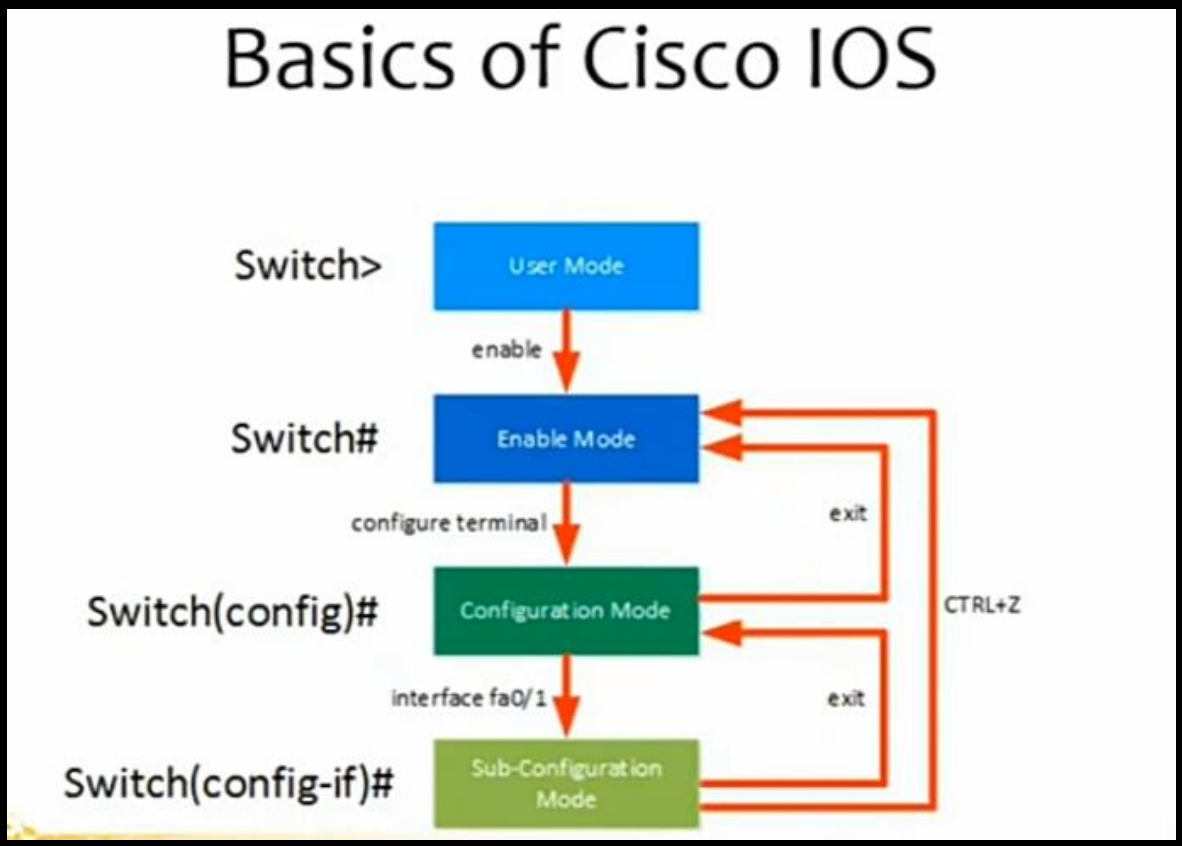
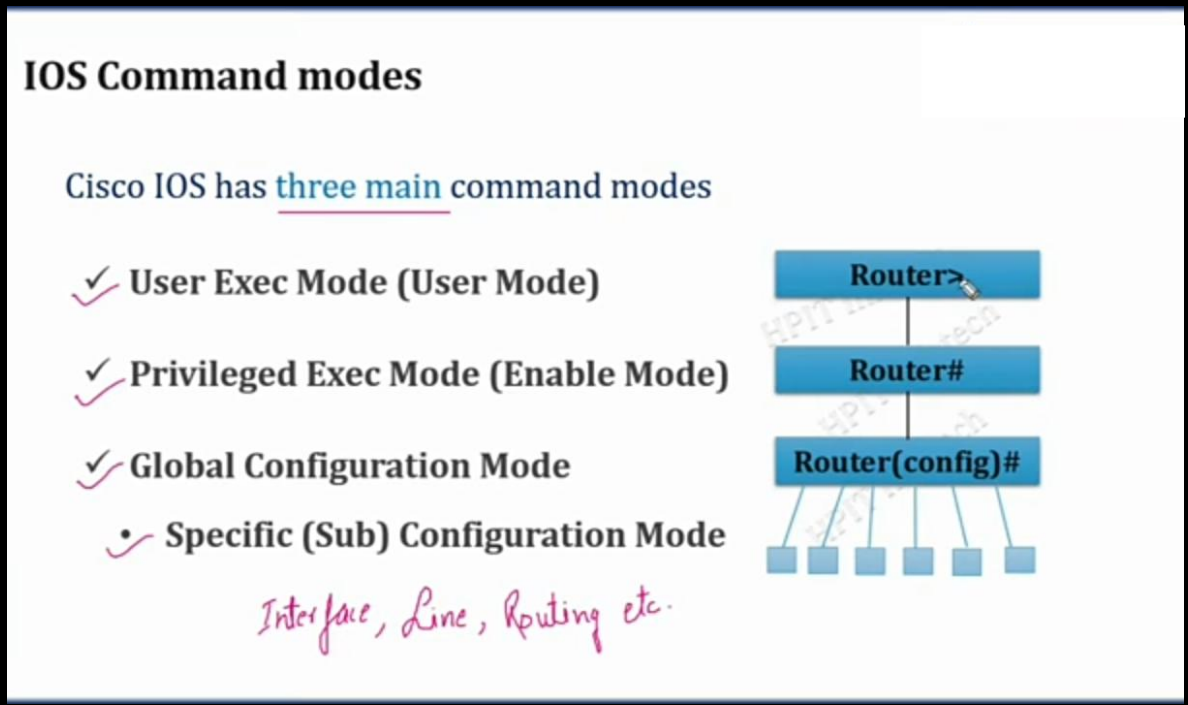
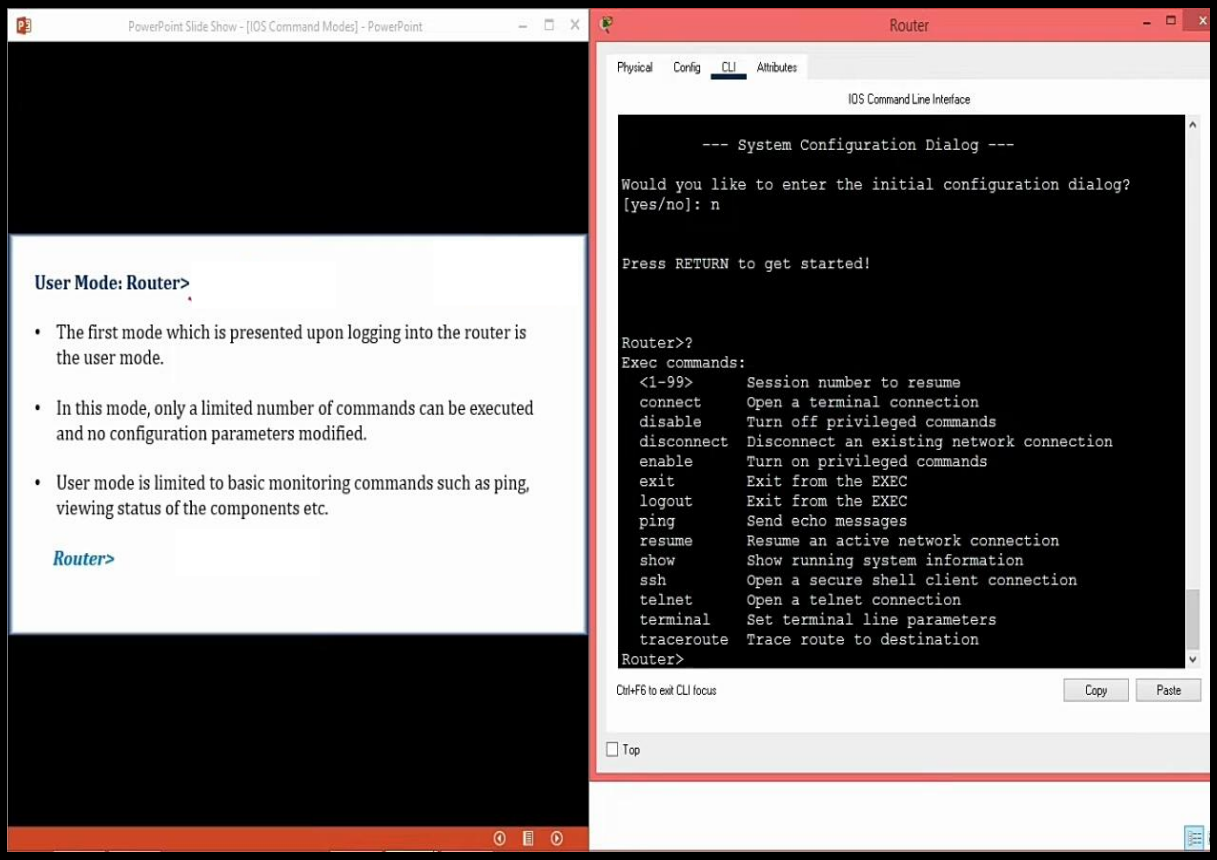
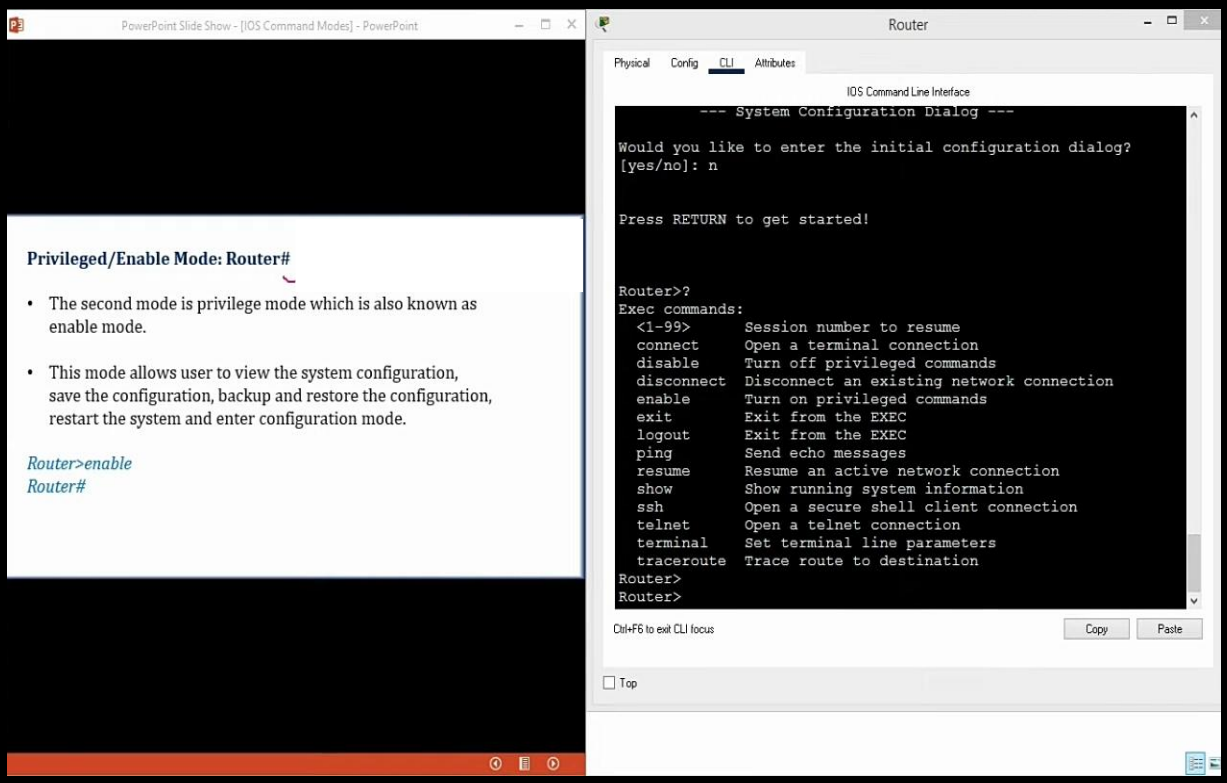
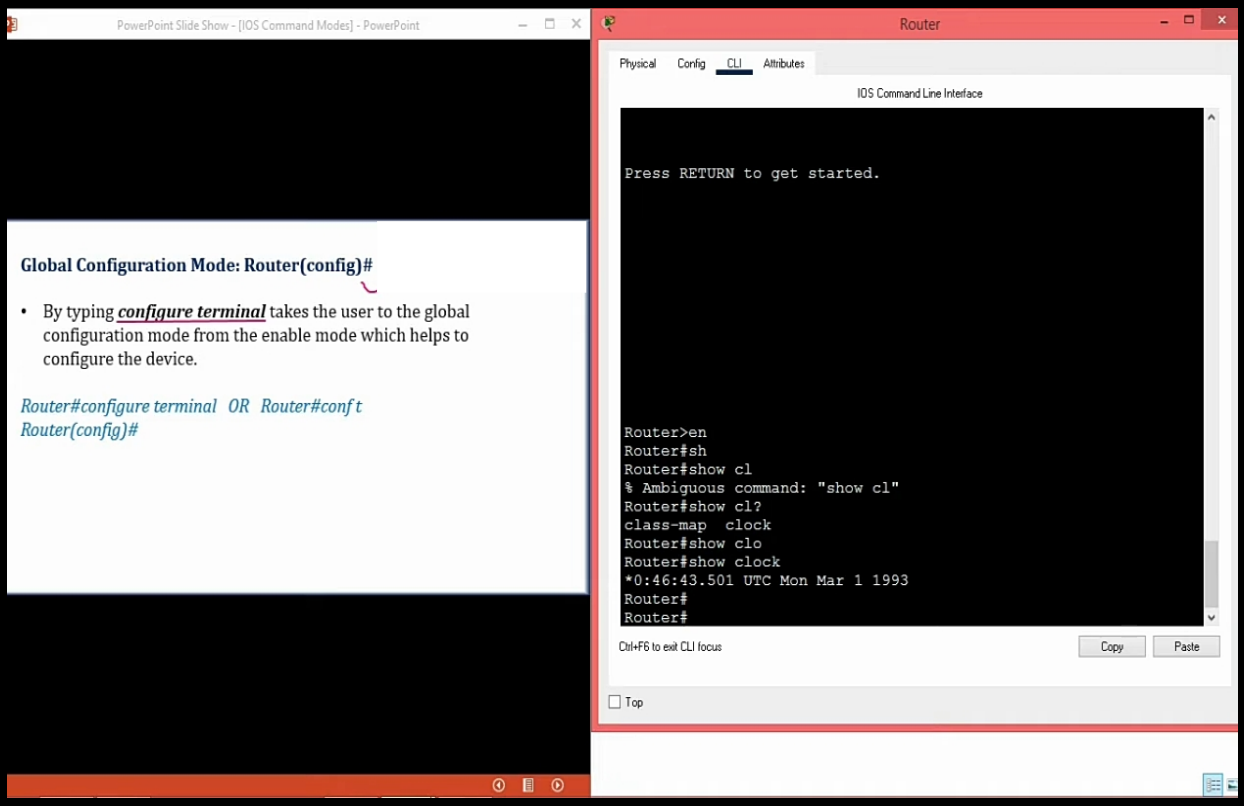
Managing Cisco IOS Files:

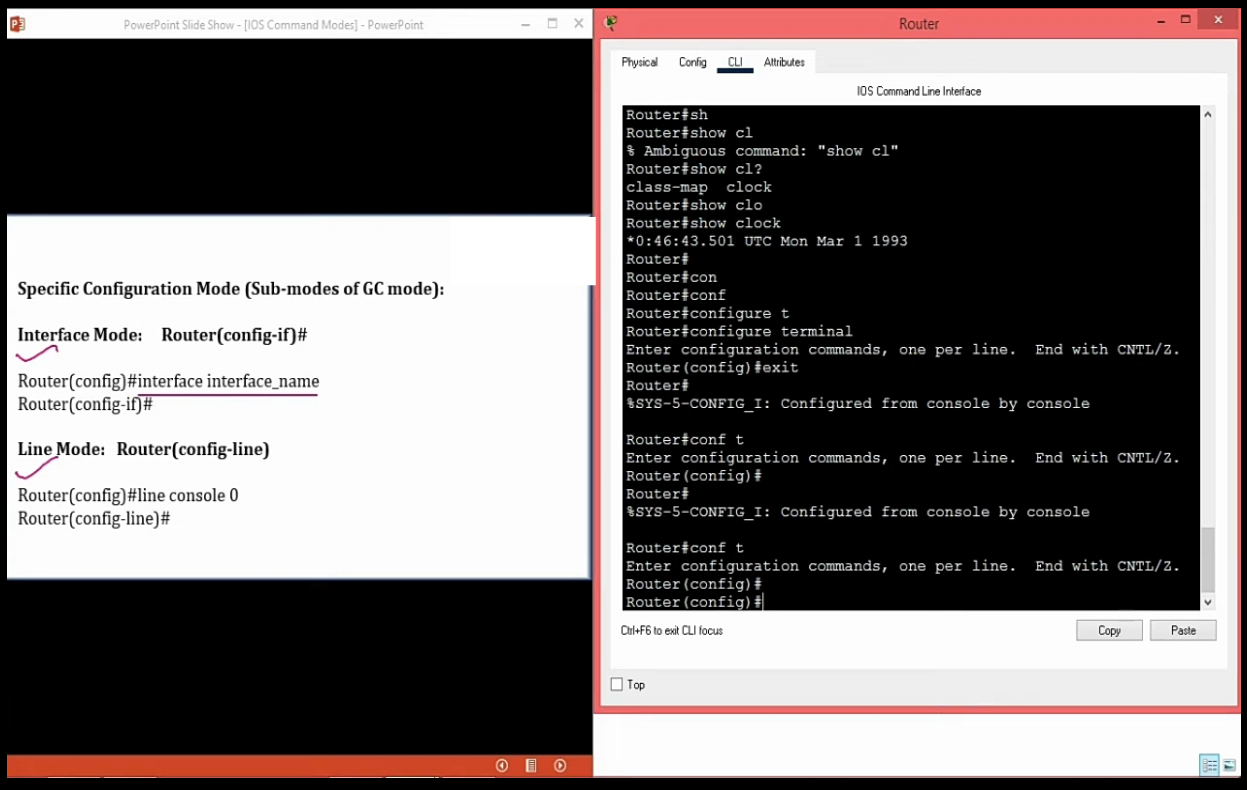


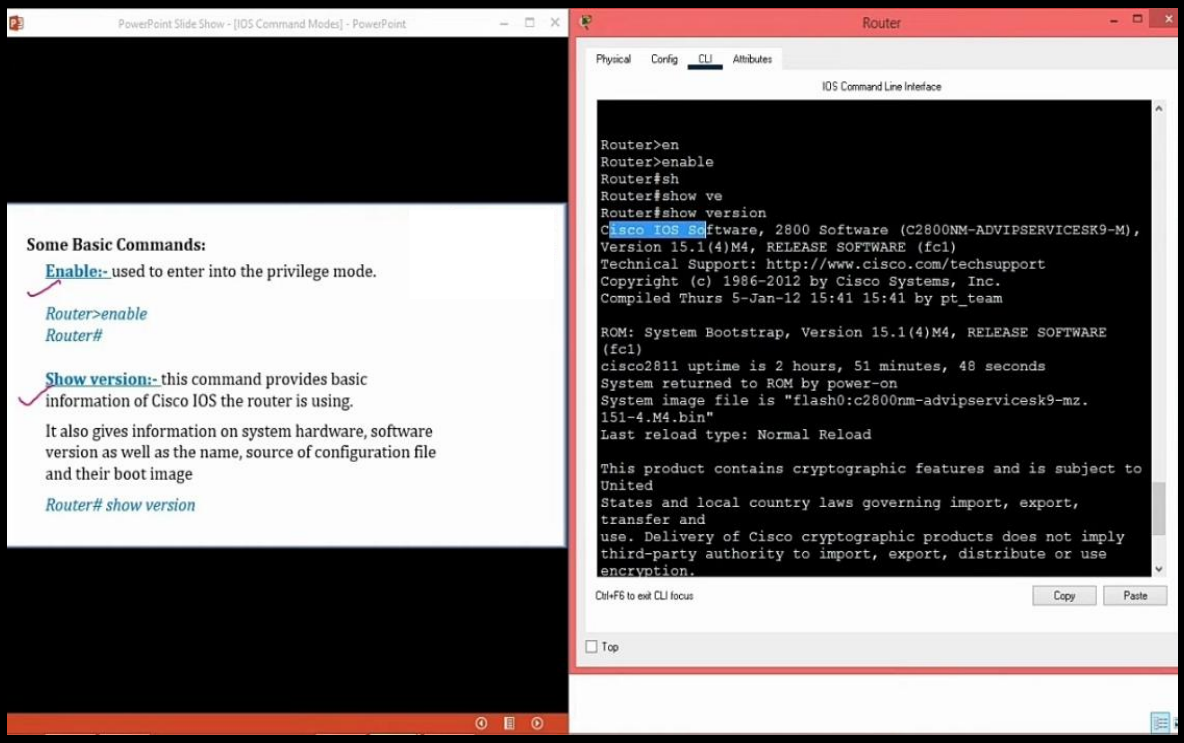


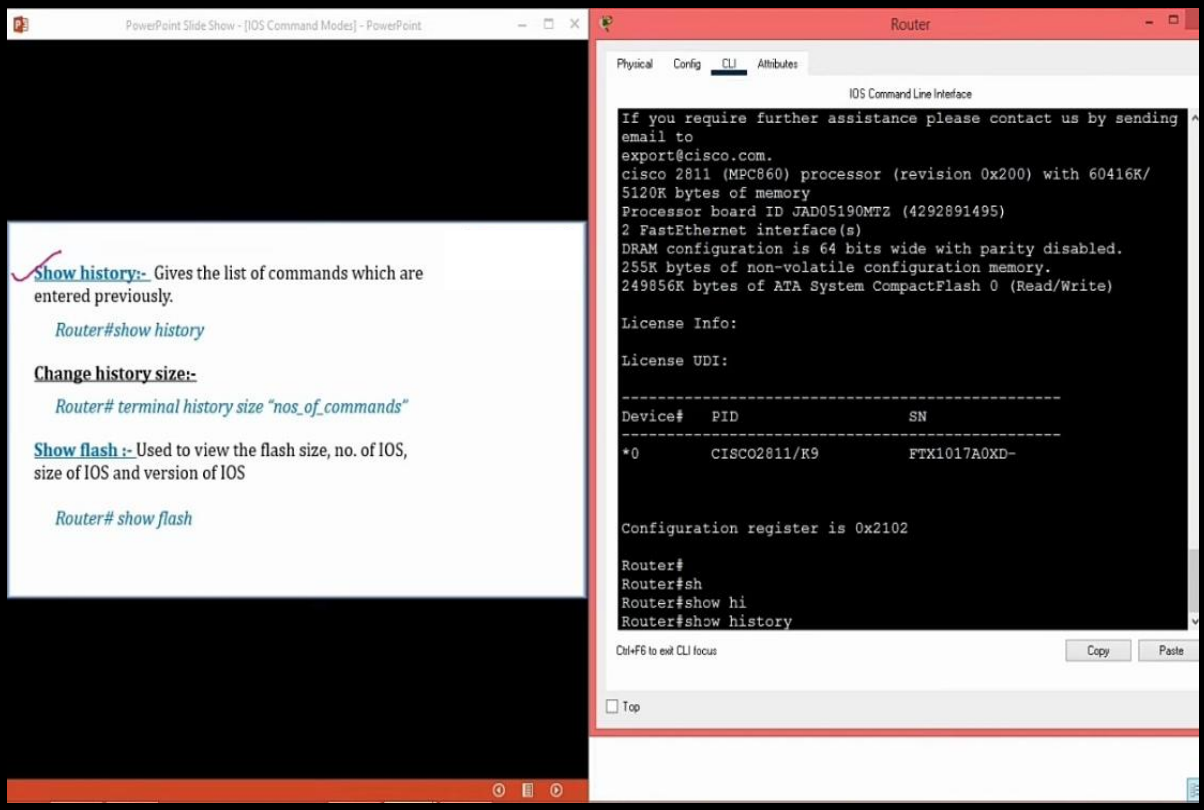

PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
User Mode: Router>
• The first mode which is presented upon logging into the router is the user mode.
• In this mode, only a limited number of commands can be executed and no configuration parameters modified.
• User mode is limited to basic monitoring commands such as ping, viewing status of the components etc.
Router>
Router
Physical Config CLI Attributes
IOS Command Line Interface
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: n
Press RETURN to get started!
Router>?
Exec commands:
<1-99> Session number to resume
connect Open a terminal connection
disable Turn off privileged commands
disconnect Disconnect an existing network connection
enable Turn on privileged commands
exit Exit from the EXEC
logout Exit from the EXEC
ping Send echo messages
resume Resume an active network connection
show Show running system information
ssh Open a secure shell client connection
telnet Open a telnet connection
terminal Set terminal line parameters
traceroute Trace route to destination
Router>
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

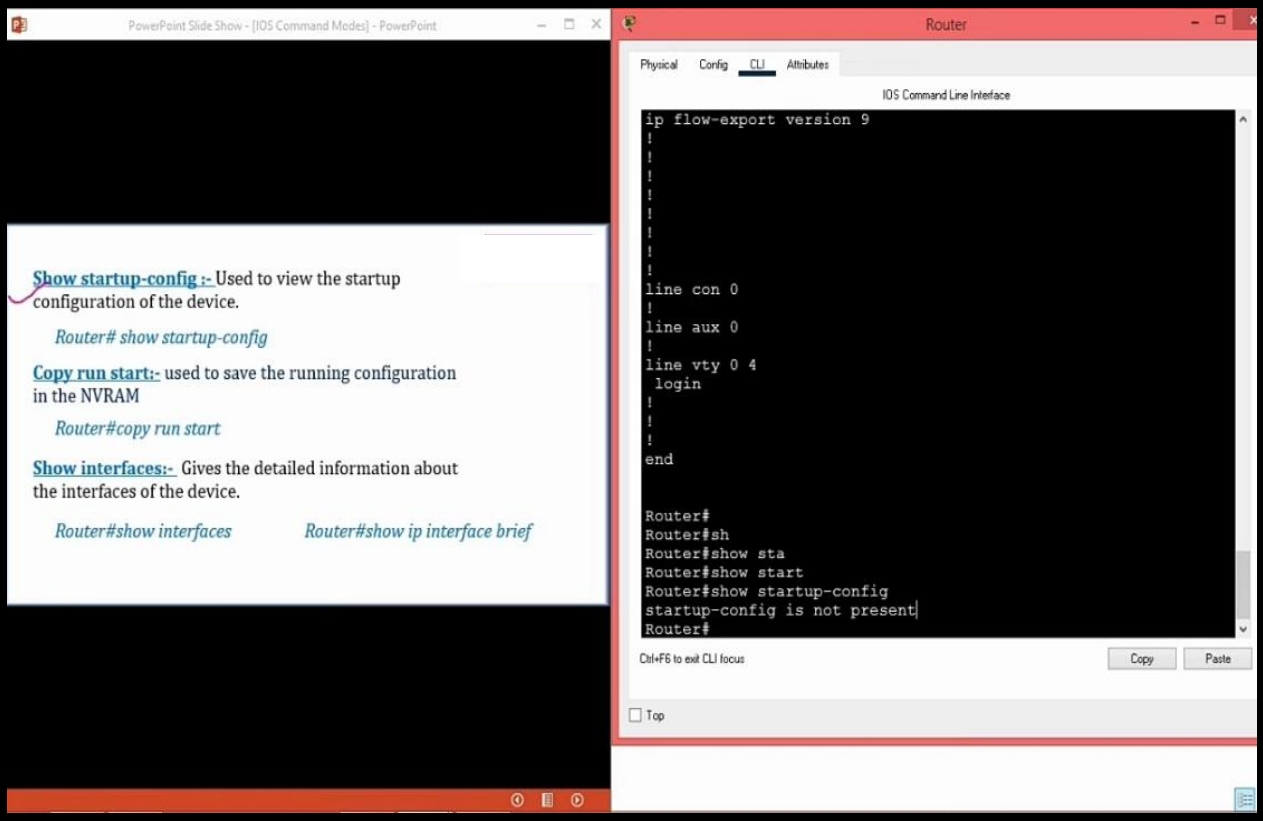

PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Privileged/Enable Mode: Router#
• The second mode is privilege mode which is also known as enable mode.
• This mode allows user to view the system configuration, save the configuration, backup and restore the configuration, restart the system and enter configuration mode.
Router>enable
Router#
Router
Physical Config CLI Attributes
IOS Command Line Interface
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: n
Press RETURN to get started!
Router>?
Exec commands:
<1-99> Session number to resume
connect Open a terminal connection
disable Turn off privileged commands
disconnect Disconnect an existing network connection
enable Turn on privileged commands
exit Exit from the EXEC
logout Exit from the EXEC
ping Send echo messages
resume Resume an active network connection
show Show running system information
ssh Open a secure shell client connection
telnet Open a telnet connection
terminal Set terminal line parameters
traceroute Trace route to destination
Router>
Router>
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

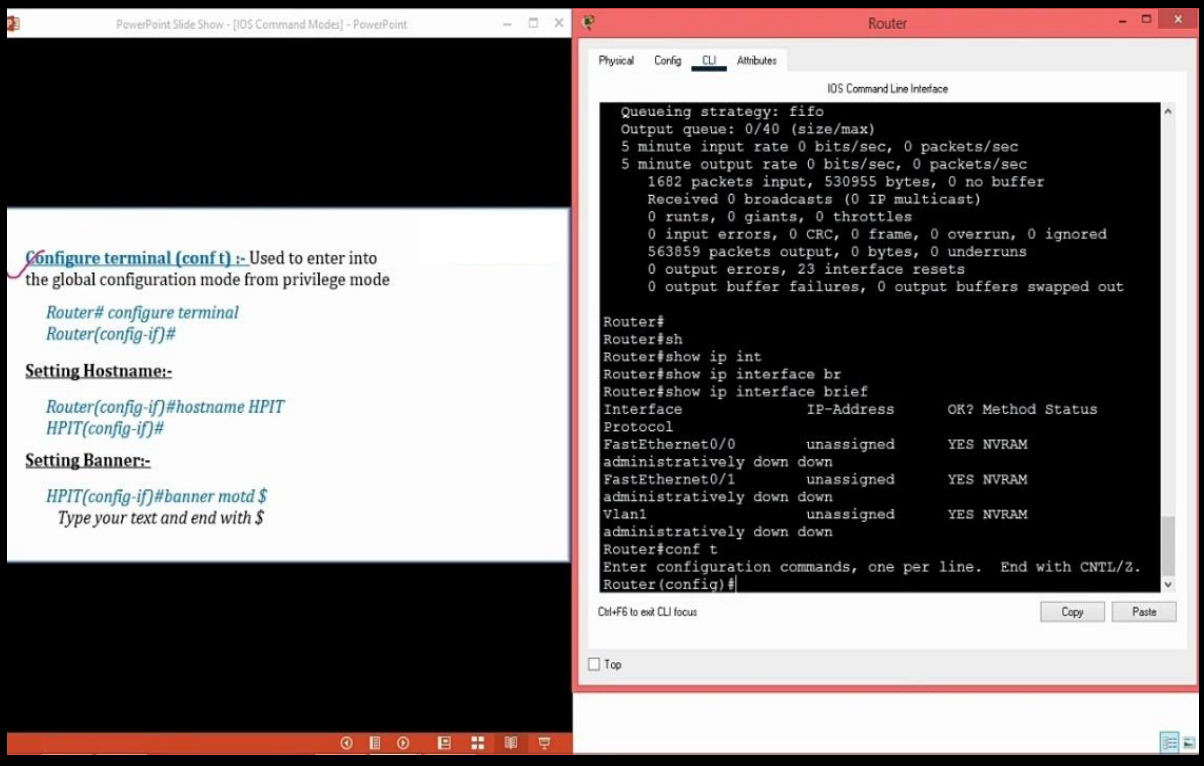

PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Global Configuration Mode: Router(config)#
• By typing configure terminal takes the user to the global configuration mode from the enable mode which helps to configure the device.
Router#configure terminal OR Router#conf t
Router(config)#
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>en
Router#sh
Router#show cl
% Ambiguous command: "show cl"
Router#show cl?
class-map clock
Router#show clo
Router#show clock
*0:46:43.501 UTC Mon Mar 1 1993
Router#
Router#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Specific Configuration Mode (Sub-modes of GC mode):
Interface Mode: Router(config-if)#
Router(config)#interface interface_name
Router(config-if)#
Line Mode: Router(config-line)
Router(config)#line console 0
Router(config-line)#
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router#sh
Router#show cl
% Ambiguous command: "show cl"
Router#show cl?
class-map clock
Router#show clo
Router#show clock
*0:46:43.501 UTC Mon Mar 1 1993
Router#
Router#con
Router#conf
Router#configure t
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Some Basic Commands:
Enable:- used to enter into the privilege mode.
Router>enable
Router#
Show version:- this command provides basic information of Cisco IOS the router is using.
It also gives information on system hardware, software version as well as the name, source of configuration file and their boot image
Router# show version
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router>enable
Router#sh
Router#show ve
Router#show version
Cisco IOS Software, 2800 Software (C2800NM-ADVIPSERVICESK9-M),
Version 15.1(4)M4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2012 by Cisco Systems, Inc.
Compiled Thurs 5-Jan-12 15:41 15:41 by pt_team
ROM: System Bootstrap, Version 15.1(4)M4, RELEASE SOFTWARE
(fc1)
cisco2811 uptime is 2 hours, 51 minutes, 48 seconds
System returned to ROM by power-on
System image file is "flash0:c2800nm-advipservicesk9-mz.
151-4.M4.bin"
Last reload type: Normal Reload
This product contains cryptographic features and is subject to
United
States and local country laws governing import, export,
transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use
encryption.
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Show history:- Gives the list of commands which are entered previously.
Router#show history
Change history size:-
Router# terminal history size "nos_of_commands"
Show flash :- Used to view the flash size, no. of IOS, size of IOS and version of IOS
Router# show flash
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
If you require further assistance please contact us by sending
email to
export@cisco.com.
cisco 2811 (MPC860) processor (revision 0x200) with 60416K/
5120K bytes of memory
Processor board ID JAD05190MTZ (4292891495)
2 FastEthernet interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)
License Info:
License UDI:
Device# PID SN
*0 CISCO2811/K9 FTX1017A0XD-
Configuration register is 0x2102
Router#
Router#sh
Router#show hi
Router#show history
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Show startup-config :- Used to view the startup configuration of the device.
Router# show startup-config
Copy run start:- used to save the running configuration in the NVRAM
Router#copy run start
Show interfaces:- Gives the detailed information about the interfaces of the device.
Router#show interfaces
Router#show ip interface brief
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
!
end
Router#
Router#sh
Router#show sta
Router#show start
Router#show startup-config
startup-config is not present
Router#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PowerPoint Slide Show - [IOS Command Modes] - PowerPoint
Configure terminal (conf t) :- Used to enter into the global configuration mode from privilege mode
Router# configure terminal
Router(config-if)#
Setting Hostname:-
Router(config-if)#hostname HPIT
HPIT(config-if)#
Setting Banner:-
HPIT(config-if)#banner motd $
Type your text and end with $
Router
Physical
Config
CLI
Attributes
IOS Command Line Interface
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
Router#
Router#sh
Router#show ip int
Router#show ip interface br
Router#show ip interface brief
Interface IP-Address OK? Method Status
Protocol
FastEthernet0/0 unassigned YES NVRAM
administratively down down
FastEthernet0/1 unassigned YES NVRAM
administratively down down
Vlan1 unassigned YES NVRAM
administratively down down
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

Managing Administrative Configurations

Assigning and Configuring Hostnames

- Change hostname:
- hostname Router1

Configuring IP Addresses and Interfaces

- Assign an IP address
- interface GigabitEthernet0/0
- ip address 192.168.1.1 255.255.255.0
- no shutdown

Setting Up a Default Gateway and Routing Basics

- Configure a default route
- ip route 0.0.0.0 0.0.0.0 192.168.1.254

Configuring Static and Dynamic Routing

- **Static Routing**
- ip route 192.168.2.0 255.255.255.0 192.168.1.2
- **Dynamic Routing (RIP)**
- router rip
- network 192.168.1.0

Logging and Monitoring Cisco Devices (Syslog, SNMP)

- Enable Syslog logging
- logging host 192.168.1.100

Erasing and Resetting Cisco Configurations

Clearing Running and Startup Configurations

- Reset running-config
- erase startup-config
- reload

Using the ‘write erase’ and ‘erase startup-config’ Commands

- Permanently erase configuration
- write erase
- reload

Reloading a Cisco Router or Switch

- Restart the device
- reload

Recovering from a Lost Password

- **Enter ROMMON Mode**
- **Reset password and reboot**

Restoring a Device to Factory Defaults

- Reset entire device
- write erase
- reload