

LEARNING THE BASICS ABOUT CISCO ROUTERS

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Accessing Your Cisco Device

There are 4 ways to Access your Cisco Device

1. Using the Console Port

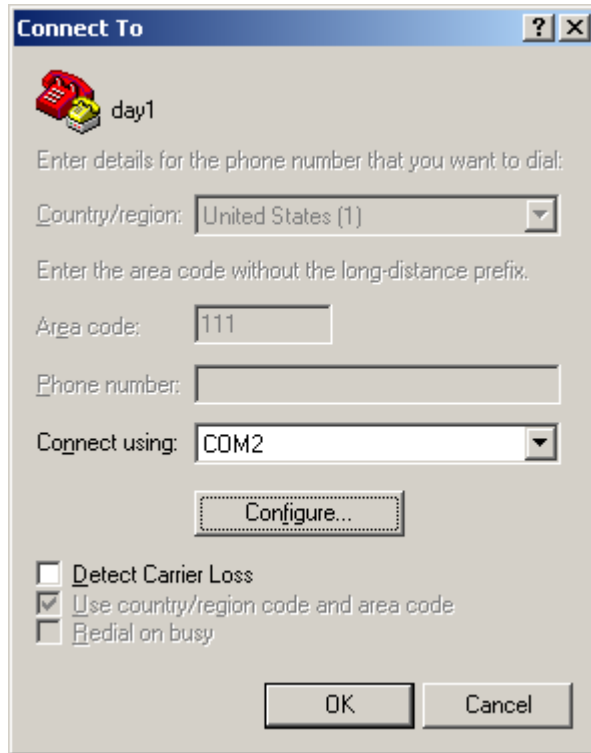
a. Start → Programs → Accessories → Communication → HyperTerminal

i. If HyperTerminal is not listed add it through Control Panel

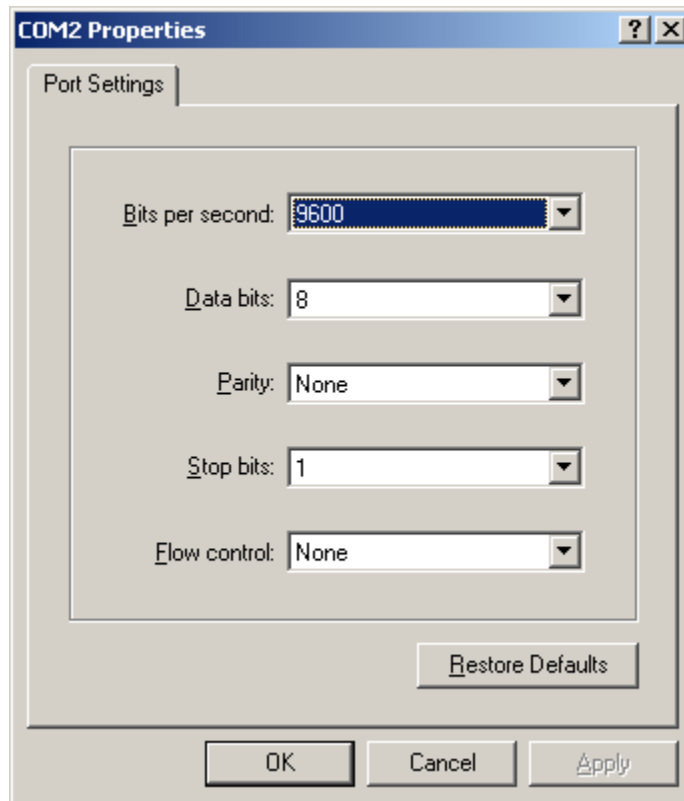
b. In the screen below enter a name: Day1



c. Next you will select the port—Usually the “com port”, which the Rollover Cables connects



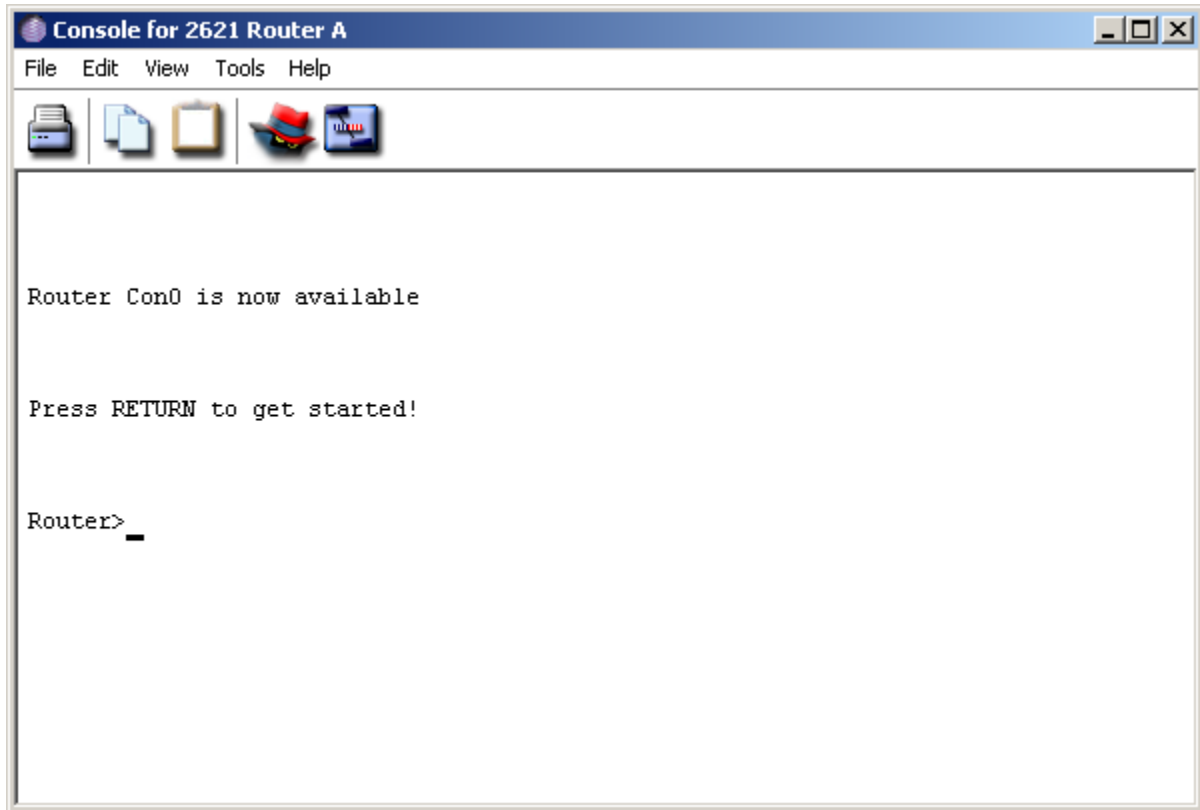
d. Next use exact setting in the diagram below and click on OK



You have just access the router via console port.....Go to
Section B----Setting up the router

Setting up the Router

After you connect using the console port you will see the following below



Note:

If your router boots up and the following below is displayed, then your router has entered Setup Mode

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

- CTRL + Z always take you back to enable mode
- Exit take you one mode back
- Tab key completes a command

Note: a clean router configuration always have the router name as Router

Router Modes

1. When you enter the router you will be in User Mode

Router>

Question:

- a. What are some of the limitation of User Mode
 - i. Cannot make changes to the router in this mode
 - ii. Limited use of command

2. Enable (Privilege) Mode

- a. To access this mode from user mode, type “enable or en”

Router#

- i. What happen you type the following commands in Privilege Mode?

disable	
quit	Problem on Packet Tracer
exit	
end	Problem on Packet Tracer
setup	
reload	

3. Enter Global Configuration Mode

a. First you must be in enable or privilege mode

b. Type the following:

```
Router#configure terminal
```

or

```
Router#config t
```

This will give the result

```
Router(config)#
```

Note: Almost all other modes can be accessed from Global Configuration

4. Line Configuration Mode

a. You must be in Global Configuration Mode

b. You can access three line configuration mode

i. Console

```
Router(config)#line console 0
```

Or

```
Router(config)# line con 0
```

This will be the result

```
Router(config-line)#
```


ii. Telnet, ssh, vty

```
Router(config)#line vty 0 4
```

This will be the result

```
Router(config-line)#
```

iii. Auxillary

```
Router(config)#line aux 0
```

This will be the result

```
Router(config-line)#
```

5. Router Configuration Mode: In this mode we configure our routing protocols

a. Must be in global configuration mode

If configuring the Routing Protocol RIP

```
Router(config)#router rip
```

This will give results below

```
Router(config-router)#
```

6. Interface Configuration Mode: In this mode we configure our interfaces:

a. Must be in global configuration mode

Note: To view your interfaces go to enable mode

Router#show ip interface brief

From any mode except privilege or user

Router#do show ip interface brief

Once you obtain your interface then you can access the interface mode

Router(config)#interface fastEthernet 0/0

or

Router(config)#int F 0/0

This will give results below

Router(config-if)#

Getting Help on Cisco Devices

In any command mode you can get a list of commands by typing a question mark (?)

Go to the following modes and type ?

Mode	List at least 3 commands
Router>?	1. 2. 3.
Router#?	1.

	2. 3.
Router(config)?	1. 2. 4.
Router(config-line)#	1. 2. 3. 4.
Router(config-router)#	1. 2. 3.
Router(config-if)#	1. 2. 3.

To obtain a list of commands that begins with a particular character sequence, type the character sequence followed by a question mark (?). For example (r?), (sh?)

Note: There is no space between the character and the question mark

Mode	List at least 3 commands
Router>s?	1. 2. 3.
Router#s?	1.

	2. 3.
Router(config)r?	1. 2. 3.
Router(config-line)#l?	5. 6. 7.
Router(config-router)#n?	4. 5. 6.
Router(config-if)#i?	4. 5. 6.

When would you apply what you have learned from the table above?

To a list of keywords, arguments or command that work with a specific command, type the command and question after. Make sure there is a space between the keyword and the question mark. For example

Router#show ?

Complete the table below

Modes	List at least one/two outputs
Router>ping ?	
Router#show ?	
Router(config)#router ?	
Router#configure ?	

Looking at errors

Error	Prompt examples	Reasons
Invalid Input (^)	Router#show ran	
Unrecognized command	Router#sha?	
Ambiguous Command	Router>te	

Using Help to change the clock time on your router

Router#c?

Router# clock ?

Router#clock set ?

Router#clock set 10:00:00 ?

Router#clock set 10:00:00 14 ?

Router#clock set 10:00:00 14 April ?

Router#clock set 10:00:00 14 April 2010 ?

cr-----Mean Enter

Verify that the time has been set

Router#show clock

Working with Basic Commands

Using the History Command

Up/Down arrow keys or CTRL +P, CTRL +N.

View your history

Router#show history

View history size

Router#sh terminal

What is your history size? _____

Change your history size

Router#terminal history size 25

Verify

Router#show terminal

To set back to default

Router#no terminal history size 25

Domain Lookup Command

Router(config)#no ip domain-lookup

Note: Eliminates whenever you type a command and have to wait for seconds/minutes 255.255.255.255

The Logging synchronous Command

Turns off interrupting when you are typing commands

Router(config)#line console 0

Router(config-line)#logging synchronous

Looking at show commands

Input the show commands in the router and explain the output

Commands	Explanations
Show version or sh ver	
Show flash or sh flash	
Show history	
Show interfaces	
Show interface f0/0	
Show ip interface brief	
Show controllers s0/0	
Show clock	
Show host	
Show users	
Show arp	
Show protocols	
Show run	
Show start	

Reflection:

1. What did you learn from this lab?
3. What were some of the challenges with this lab?
4. How did you overcome those challenges?
5. What ideas would you suggest (if any) to improve your learning experience in this lab?