Cisco Router Modes

Introduction

From my personal experience, I have noticed that the lower end routers (600-1400) use different commands than the mid to upper range routers (1600 and above). The commands we are going to talk about here cover most aspects of the 1600, 1700, 2500, 2600, 3600 series. Most are the same, but there are always a few variations to these commands depending on the interfaces your router has, IOS version, and the type of WAN protocols they support.

Because there is such a wide range of interfaces on a router and also alot of different versions of the Cisco IOS, I decided to stick to an example where our router is running IOS version 12 and has one IDSN S/T (without NT terminator) interface and one Ethernet interface. That's a total of 2 interfaces. I understand that this is quite a specific example, but it would take an enourmous amount of time and effort to cover all cases.

Now, when you power up a Cisco router, it will first run a POST test to ensure all hardware is ok, and then look into the Flash to load the IOS. Once the IOS is loaded, it will then check the NVRAM for any configuration file. Since this is a new router, it won't find any, so the router will go into "setup mode".

Setup Mode

The setup mode is a step-by-step process which helps you configure basic aspects of the router. When using this setup mode, you actually have 2 options:

1) Basic Managment Setup, which configures only enough connectivity for managment to the system.

2) Extended Setup, which allows you to configure some global parameters and interfaces.

It should be noted that when you are prompted to enter a value at the console prompt, whatever is between the square brackets [ ] is considered to be a default value. In other words, if you hit enter without entering anything, the value in those brackets will be set for the specific question.

I'll try to keep this as simple and straightforward as possible.

Cisco routers have different configuration modes (depending on the router model), and by this I mean there are different modes in which different aspects of the router can be configured.

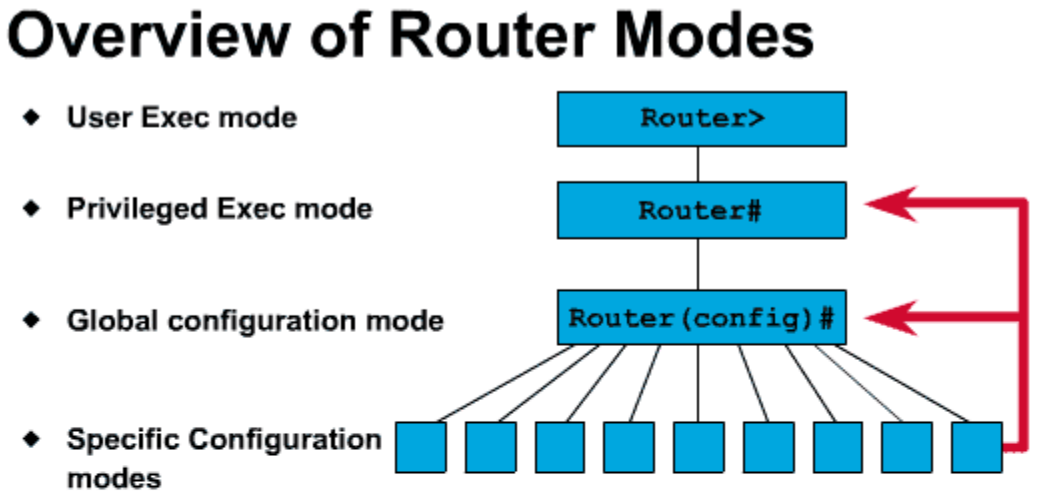
These are :

1) User Exec Mode (>) - Click to select

2) Privileged Mode (#) which has as a subset, the Global Configuration mode - Click to select

To be able to get into either User Exec or Privileged mode, you will most likely need a password. This password is set during the initial configuration of the router or later on. Once in Privileged Mode, you can then enter Global Configuration Mode (password not needed to enter this mode) to then futher configure interfaces, routing protocols, access lists and more.

The picture below shows you a quick view of the modes. Notice the red arrow, it's pointing towards the Global Configuration Mode and Privileged mode meaning that some of the specific configuration modes can be entered from Global Configuration Mode and other from Privileged mode:



Configuration Mode	Prompt
Interface	`Router(config-if)#`
Subinterface	`Router(config-subif)#`
Controller	`Router(config-controller)#`
Map-list	`Router(config-map-list)#`
Map-class	`Router(config-map-class)#`
Line	`Router(config-line)#`
Router	`Router(config-router)#`
IPX-router	`Router(config-ipx-router)#`
Route-map	`Router(config-route-map)#`

I have given each mode its own separate page to avoid squezing all the information into one huge page. This makes it easier for you to read.