

CCNP Lab Suggestions

Ok, now that you are a CCNA, I don't have to explain to you why you need more than one router or each and every feature of the routers. So, let's get down to business. As you can guess, it all comes down to what your budget can afford. But first I want to clarify a few requirements of the new CCNP track.

1) 12.4 IOS is a requirement for the routers. So what does that mean to you? 2500 routers and the normal 2600 routers cannot support 12.4. So if you are looking to build a real CCNP lab, jump right to the 3640 or 2600XM series routers. They are the two most economical routers that will support 12.4. The 3640 is a modular router that comes with no ports, but has 6 network module slots you can put various Ethernet, Serial and Voice cards into. The 2600XM series has one open network module slot and two WIC slots. The nice thing about the 2600XM series is that it has a built-in 100mb Ethernet port! We also include a nm-4a/s module so you can do some of your frame relay labs on these routers. Finally, we make sure you have a few of these routers in your lab so you can build complex scenarios.

Now with all that said, that is the preferred way to start to build your CCNP lab from a router perspective. That does not mean that you have to throw out all of your 2500 and/or normal 2600 routers and start from scratch. We can incorporate them into your new CCNP lab environment, but you must realize that you may not be able to see every feature work on each router since some of your routers may be running 12.3 and other 12.4. The old saying that you get what you pay for is applicable in this situation. The larger your budget is, the more features you will get. It is just like buying a car. The more money you have, the more bells and whistles you get.

2) There are concepts on the test that require a router that supports ISR (Integrated Services Router) features. The 1841 is the most economical solution to support that feature set so we make sure that this router is included in your lab.

3) Much like the old CCNP exam, a requirement is for you to understand Layer 3 switching. We suggest the 3550 switch as that is the best switch for the money. I think you will find that this is an interesting module.

4) We also suggest two additional 2950 switches so you can do some of your QoS and other switching labs as you will really need a total of three switches. These are economically priced and will do the trick when you couple a pair of these with your 3550 switch.

5) A nice to have is a 2509 or 2511 access server. This way you do not have to keep moving the console cable from router to router. You can access all your routers and switches via the access server and connected octal cable. Again, this is not going to function in your lab, but it is nice to have to make your lab much easier to use.

Finally, they have recently removed the ISDN concepts in the CCNP track. So you will not have to build out an ISDN environment any longer for your CCNP track. However, keep in mind, ISDN is still covered in the CCNA course so you will need some routers that will support the ISDN features in your CCNA lab

Summary of Router Interfaces

Model	Ethernet	Latest IOS	Sync Serial (DB-60)	ISDN ² BRI ³ (RJ-45)	Async/Sync Serial Ports	NM Slots Available	Wan Slots Available
Cisco 2501	1 AUI 10mb	12.3.x	2	0	0	0	0
Cisco 2503	1 AUI 10mb	12.3.x	2	1	0	0	0
Cisco 2507	16 Pt Hub10mb	12.3.x	2	0	0	0	0
Cisco 2514	2 AUI 10mb	12.3.x	2	0	0	0	0
Cisco 2520	1 AUI 10mb	12.3.x	2	1	2	0	0
Cisco 2610	1 RJ-45 10mb	12.3.x	Optional	Optional	Optional	1	2
Cisco 2610XM	1 RJ-45 100mb	12.4.x	Optional	Optional	Optional	1	2
Cisco 2611	2 RJ-45 10mb	12.3.x	Optional	Optional	Optional	1	2
Cisco 2612	1 RJ-45 10mb	12.3.x	Optional	Optional	Optional	1	2
Cisco 2620	1 RJ-45 100mb	12.3.x	Optional	Optional	Optional	1	2
Cisco 2621	2 RJ-45 100mb	12.3.x	Optional	Optional	Optional	1	2
Cisco 1720	1 RJ-45 100mb	12.3.x	Optional	Optional	Optional	0	2
Cisco 1841	2 RJ-45 100mb	12.4.x	Optional	Optional	Optional	0	2
Cisco 3620	10/100 Optional	12.3.x	Optional	Optional	Optional	2	Optional
Cisco 3640	10/100 Optional	12.4.x	Optional	Optional	Optional	4	Optional

¹ AUI = attachment unit interface.

² ISDN = Integrated Services Digital Network.

Summary of Switch Features

	1912/1924	2912/2924	2950	3550
Port Speed	10/100MB	100MB	100MB	100MB
VLans	X	X	X	X
Trunking	X	X	X	X
Port Aggregation	X	X	X	X

Mirroring	X	X	X	X
ISL	X	X		
802.1Q		X	X	X
QoS			X	X
Layer 3 Switching				X
IOS Version	9.007	12.x	12.x	12.x