

Application Brief: Cisco Certification

Cisco certification has become increasingly important for both companies and IT professionals. Companies invest a large amount of resources into their networks and want to ensure that the most qualified people manage them. IT professionals in turn must have the skill sets for which employers are looking. Certification addresses the needs of both of these groups.

An important part of preparing for certification involves being able to practice Cisco IOS and management commands. Anyone interested in becoming certified needs to have access to Cisco devices, but it is usually difficult to get access to different types of Cisco devices. It is also problematic when the available device is part of a production network or a test lab. The student may not be able to practice all commands, since some commands set or change configurations and could impact network performance.

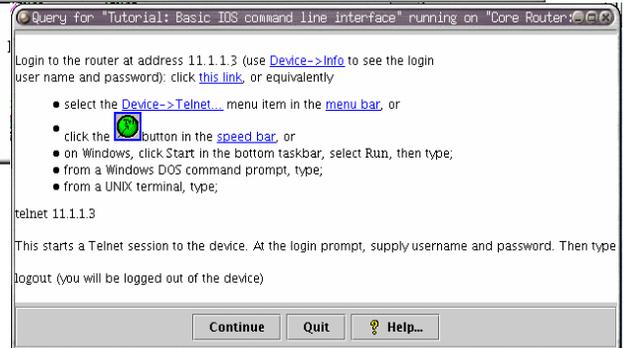
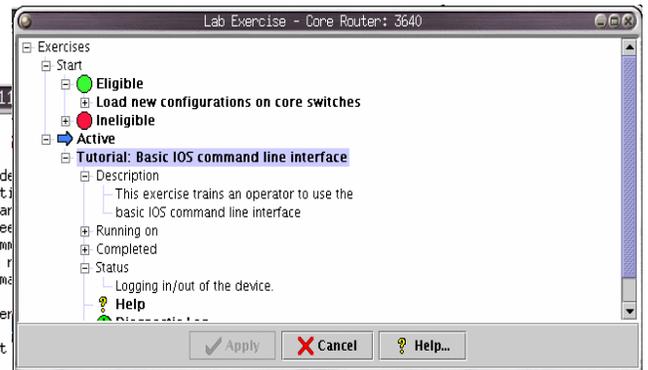
Exercise the lab using ready scenarios ▶

```
Telnet 11.1.1.3
core_r0# ?
Exec commands:
clear          Reset functions
configure     Enter configuration mode
connect       Open a terminal connection
copy         Copy from one file to another
debug        Debugging functions (see the 'debug help' command)
disable      Turn off privileged command execution
disconnect   Disconnect an existing connection
enable       Turn on privileged command execution
exit         Exit from the EXEC
help        Description of the interface
logout     Exit from the EXEC
no         Negate a command or set its defaults
ping      Send echo messages
reload   Halt and perform a cold restart
show    Show running system information
systat  Display information about terminal lines
telnet  Open a telnet connection
terminal Set terminal line parameters
traceroute Trace route to destination
where   List active connections

core_r0# show ip interface brief
```

▲ Cisco IOS commands for configuring simulated devices.

Online Tutorial for using Vlab ▶



management applications, such as CiscoWorks. Most importantly, there is no need to worry about making a

company sites and create the same environments that they use in their classroom instruction. And it doesn't end there. IT professionals seeking certification can even use MIMIC on their own computer or laptop in order to supplement classroom instruction, allowing them to practice anywhere and at any time.

Now with the benefit of MIMIC Virtual Lab, preparing for Cisco certification has never been easier!

MIMIC® Virtual Lab CCNA

How can someone preparing for certification be certain that they are adequately familiar with all aspects of IOS management? Whether a student wants to practice on a single device or on a network populated with many different types of Cisco devices, the answer is MIMIC Virtual Lab.

MIMIC Virtual Lab lets users interact with many different types of routers and switches. Within this environment, it is easy to change any device configuration using IOS commands

Applications:

- Network Engineers – Training / Certifications
- Training organizations – Local / Remote lab
- Enterprises – Training lab for the IT staff
- Networking vendor – Testing of NMS Apps

directly through the command-line interface or by using Cisco

mistake. Any device in the simulation can easily save the new state or return to its previous state without affecting anyone or anything else. This provides a comprehensive hands-on experience with the various IOS commands and how devices respond to these commands. When students practice with realistic situations that model their actual working environment, they get the best learning experience. This is also especially inexpensive compared to buying a device or renting a lab.

MIMIC increases the possibilities of how training providers can address the training needs for their students. Each student can be provided his or her own "virtual lab" in order to be able to work at his or her own pace. Training no longer needs to be offered only at the training provider's facility. Instructors can travel to

Gambit Communications, Inc.

Founded in 1995, Gambit Communications is a leader in network simulation solutions that enhance the productivity of network management developers and enterprise users while lowering their costs.



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Your Best Move to Effective Network Management

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MIMIC[®] Virtual Lab CCNA

MIMIC Virtual Lab creates a real world lab environment with a network of Cisco Routers and switches. It gives you hands-on experience on the devices without buying expensive equipment. It is for beginners interested in familiarizing themselves with the complex environment or for intermediate or expert users to sharpen their skills and move to a higher level. It provides a safe environment for practice. No need to worry about bringing down the equipment or network and affecting other users.

MIMIC gives Network Engineers the ability to practice for certifications instead of just reading instructions. It enables training organizations to give a lab to students with the classroom training or e-learning courses.

The Lab

Interact with the routers and switches, just like real devices:

- **Network of 7 devices**
- **Cisco Routers 2811, 3640 & 7206**
- **Four Cisco Switches 2950, 3550 (2) & 6500**
- **LAN, WAN, ISDN & Serial links**

Telnet in to any of these devices from local or remote machines as if you are connecting to real devices. Also, connect using Console. Any number of users can connect at a time. It fully supports Cisco IOS[®] software and SNMPv1, v2, v2c, v3.

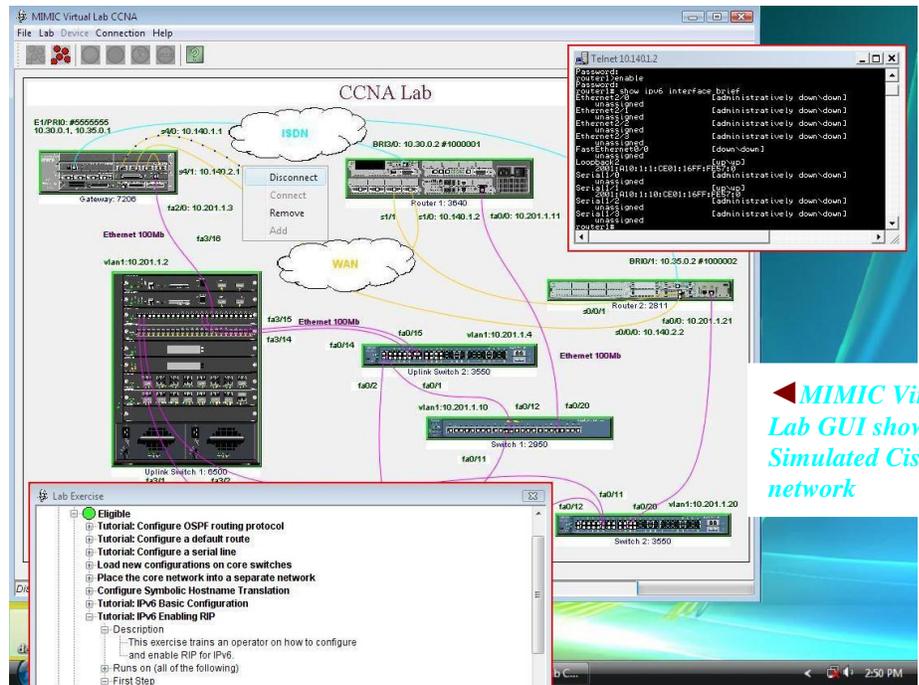
IOS Commands

A large set of IOS commands are supported for router and switch operations.

Device Operations

MIMIC Virtual Lab supports many operations, including:

- Logging in/out
- Get into/ out of different modes – User, Privileged, Configuration, Interface



◀ MIMIC Virtual Lab GUI showing the Simulated Cisco network

- Set passwords, IP address, Clock rates, hostname, bandwidth
 - Configure IPv6
 - Assign routing protocols – RIP, IGRP, EIGRP, OSPF, BGP, IS-IS
 - Ping/Telnet other devices on the network
 - Save/load configurations
 - Reload configuration using flash or TFTP
 - Configuration of Cisco Routers and Switches
 - Configure CDP, ISDN, PPP, Frame Relay ACL and NAT protocols
 - Configure VLAN; enable Rapid-PVST
 - And many other functions required for certification.
- real device
 - Start or stop devices individually or in a group
 - View configuration information for individual devices or the entire topology
 - Save the configuration at a good point and start over as many times as desired
 - Troubleshoot by retracing the commands from the log
 - Context sensitive help

Cisco NMS Applications

All of these devices can be discovered and configured using any of Cisco or third party network management applications, just like real devices. For example, you will be able to see the same topology map by using CiscoWorks or CiscoView. All IOS configuration changes are visible via management applications and vice versa.

Features

- Protocols supported –Telnet, Cisco IOS, SNMPv1, SNMPv2, SNMPv3, TFTP, SYSLOG
- View the topology map with connections and addresses
- Connect to each of the device using Telnet window provided in the GUI or remotely like a

Supported platforms

Windows Vista/XP/2003/2000
Linux

Next step

If you are interested in creating your own devices and topology, you can use MIMIC Simulator toolkit to create a virtual lab with 20,000 devices. It also includes recording tool to record devices and simulate them.