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 that employers want. Certification addresses the needs of both of these groups.

An important part of preparing for certification involves practicing 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

MIMIC® Virtual Lab - Cisco

some commands set or change configurations and could impact network performance.

How can someone preparing for certification be certain that they are adequately familiar with all aspects of

*CiscoView configuring a Cisco Catalyst 8510 -- being simulated by MIMIC -- during a Telnet session.*

Applications:

Network Engineers: Training/certification

Training Organizations: Local/remote labs

Enterprises: Training the IT staff

Networking Vendors: Testing NMS apps

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.
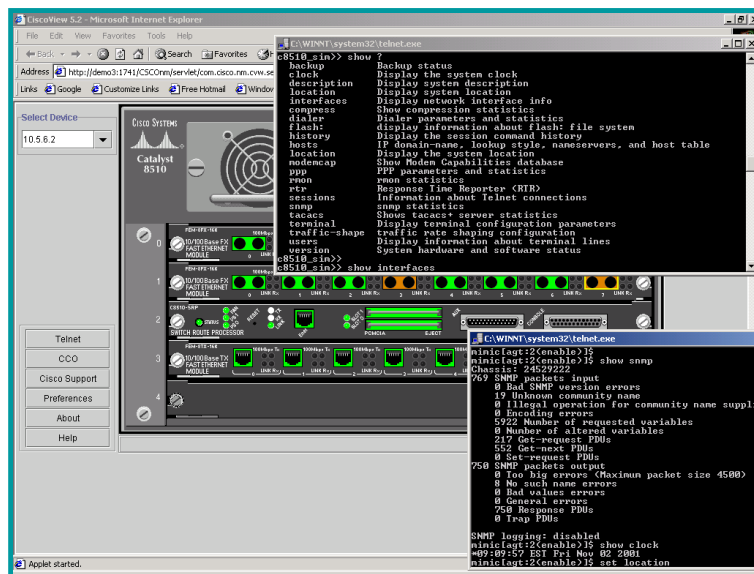
MIMIC Virtual Lab lets users interact with many different types of routers and switches. Within this environment, it is easy to change any device configuration using IOS commands through the command-line interface or by using a Cisco application, such as CiscoWorks. Most importantly, there is no need to worry about making a 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 them. When students practice realistic situations that model their working environments, they get the best learning experience. This is also inexpensive compared to buying a device or renting a lab.

MIMIC increases the possibilities of how training providers can address the needs for their students. Each student can be provided his or her own "virtual lab" in order 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 company sites and create the same environments that they use in their classrooms. 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!
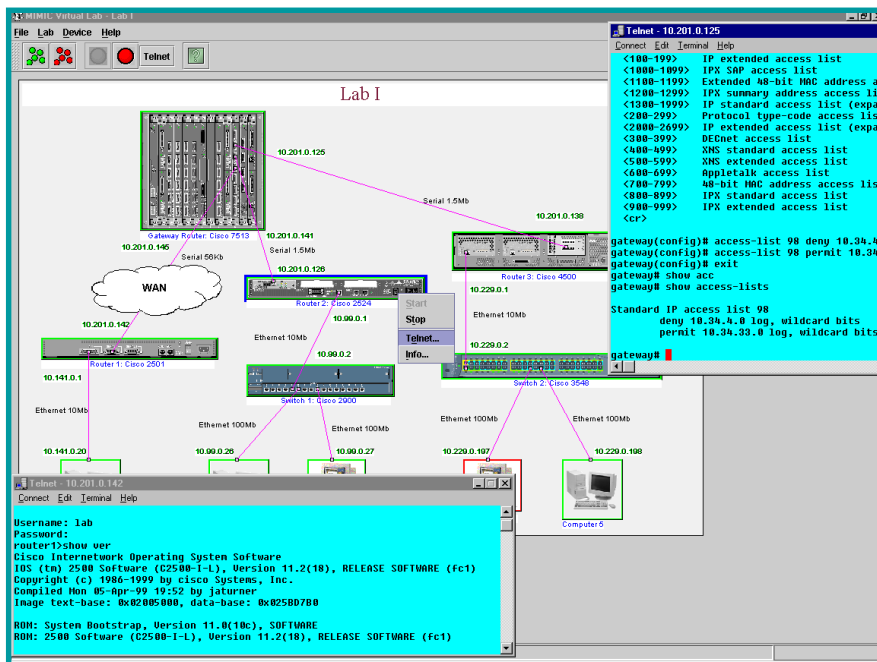

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MIMIC® Virtual Lab - Cisco

MIMIC Virtual Lab creates a real world lab environment with a network of Cisco routers and switches. It provides hands-on experience without buying expensive devices. It is for

- **Cisco routers 2501, 2524, 4500 and 7531**
- **Cisco Switches 2916, 3548**
- **Five end systems**
- **LAN, WAN and Serial links**

- Save/load configurations
- Boot from flash or TFTP
- Configuration of Cisco Routers and Switches
- Configure CDP, PPP, Frame Relay and OSPF protocols
- And many other functions required for certification.

▲ *MIMIC Virtual Lab GUI showing the network topology.*

Features

- Protocols supported – **Telnet, Cisco IOS, SNMPv1, SNMPv2, SNMPv3**
- View the topology map with connections and addresses
- Connect to each device using Telnet window from the GUI or from anywhere on the network like a real device
- Start or stop any device individually or in a group
- View the individual device or the entire topology configuration information
- Save the configuration at any point and start over again
- Troubleshoot by retracing the commands from the log
- Context sensitive help

Cisco NMS Applications: Any Cisco or third-party network management application can discover and configure all of these devices, just like real devices. For example, CiscoWorks or CiscoView will display the same topology map. All the changes done using IOS are visible via management applications and vice versa.

Next step: If you are interested in creating your own devices and topology, with MIMIC Simulator you can create a virtual lab with 10,000 devices. It also includes a recording tool to record devices and simulate them.

Supported platforms: Windows® NT/2000/XP.

beginners interested in familiarizing themselves with a complex environment and for intermediate or expert users to sharpen their skills and move to a higher level. It provides a safe environment to practice. You don't have to worry about bringing down the equipment/network and affecting other users.

MIMIC provides network engineers the ability to practice for certifications instead of just reading instructions. It enables training organization to give a lab to students for classroom training or e-learning courses.

The Lab

Students interact with routers and switches, just like the real devices:

- **Network of 11 devices**

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

IOS Commands: Supports a large set of IOS command for router and switch operations.

Device Operations: MIMIC Virtual Lab supports many operations, including:

- Logging in/out
- Get in to/out of different modes – User, Privileged, Configuration, Interface
- Set passwords, IP addresses, clock rates, hostname, bandwidth
- Assign routing protocols – RIP, IGRP
- Ping other devices on the network