MIMIC® Virtual Lab - Enterprise

MIMIC Virtual Lab creates a real-world lab environment with networks populated with devices from different manufacturers. It provides access to the devices to evaluate new management products easily, yet exhaustively, prior to purchase and to customize them after purchase. MIMIC's unique feature, "Test Exercises," generates many real-world conditions, both negative and positive, for a thorough test environment.

MIMIC provides a safe environment to practice that will not affect the production network. You don't have to worry about testing scenarios that could bring down various devices or the entire network. This also makes it easier to train new hires. You can do all this without buying expensive equipment.

With Virtual Lab, you can create realistic simulations that will help to improve the management of your own network.

MIMIC Labs

Many pre-configured labs are included. You can load, modify or save each of them depending upon your own requirements. Once loaded, you can interact with different devices, such as routers, switches, hubs and end-systems, as if they were real devices. Each of the devices can be started, stopped and paused independently or in a group. Once started, they are visible on your network, and you can connect them using your management applications or with the Telnet protocol from any machine on the network. Cisco devices can be connected using Cisco IOS® software.

Test Exercises

Each lab comes with a set of test exercises, which let you create many pathological conditions in your simulated network. These are test conditions that would commonly be performed while evaluating or testing network management applications.

Sample network exercises

Heavily loaded network with many port activities.

Lightly loaded network with less activity.

Router (or sub-net) down generating many other actions.

Trap storm, which causes many MIB variables to increase significantly for multiple devices at the same time.

Random increases and decreases in the MIB variables (In, Out and Error octets) periodically (30 sec interval). Some devices showing retransmission errors.

Devices going down and coming up: Several devices issue Link Up/Down traps at the same time.
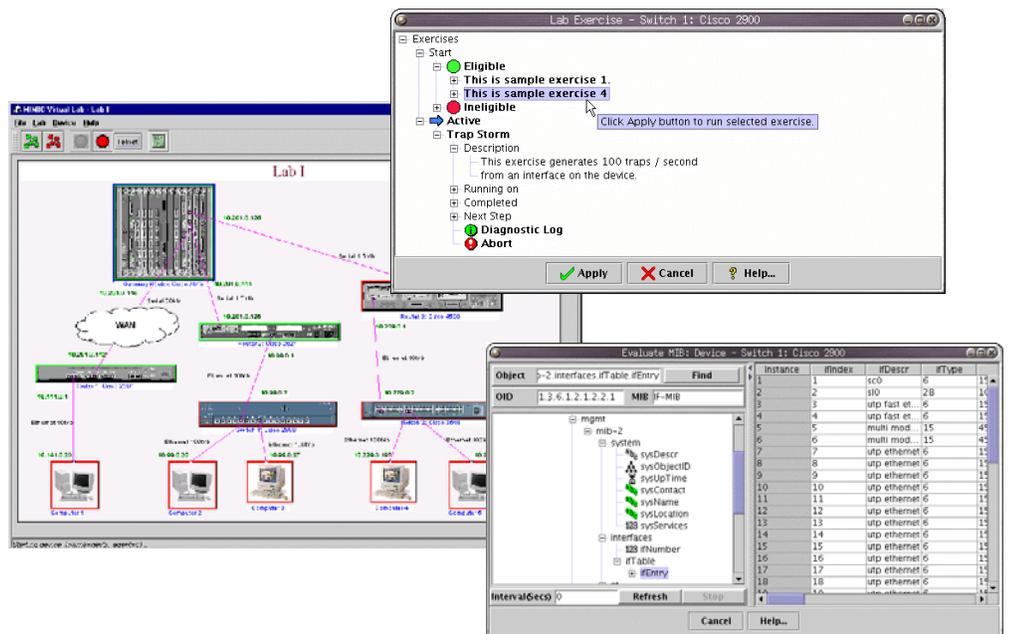
MIMIC Virtual Lab GUI showing the network topology, Exercise window and MIB browser

Sample device exercises

Device down.

Interface down.

Port parameters increment significantly.

Heavily loaded device with packet drops or delays.

Lightly loaded device.

Periodic load change - high/medium/light.

Trap storm.

Configuration changes: device variables, such as IP address and Mask.

Printer device: paper out trap.

Bad link – Drops every fifth packet.

NMS Applications

Discover and configure all simulated devices using any of SNMP-based network management application in the same way you manage your own network. For example, you can see the same topology map using HP OpenView, CA Unicenter or CiscoWorks for Cisco labs. All changes performed on any Cisco device using IOS are visible via management applications and vice versa.

Next step

Upgrade to MIMIC Simulator, and create your own devices and topology. With MIMIC Simulator, you can create a virtual lab with up to 10,000 devices. It includes recording tool to record devices or network and to simulate them.

Features

Load multiple labs, simulate them and switch between them

Protocols supported – **SNMPv1, SNMPv2, SNMPv3, TFTP, DHCP, MGCP, Telnet** and **Cisco IOS**

View the topology map with connections and addresses

Connect to each device using a management application or Telnet from anywhere on the network, just like real devices

Start or stop any device individually or in a group

Use Exercise feature for creating different network scenarios

MIB Browser to view MIB information for an individual device

Update Wizard to notify and to update automatically when a new version is released

View the individual device or the entire topology configuration information
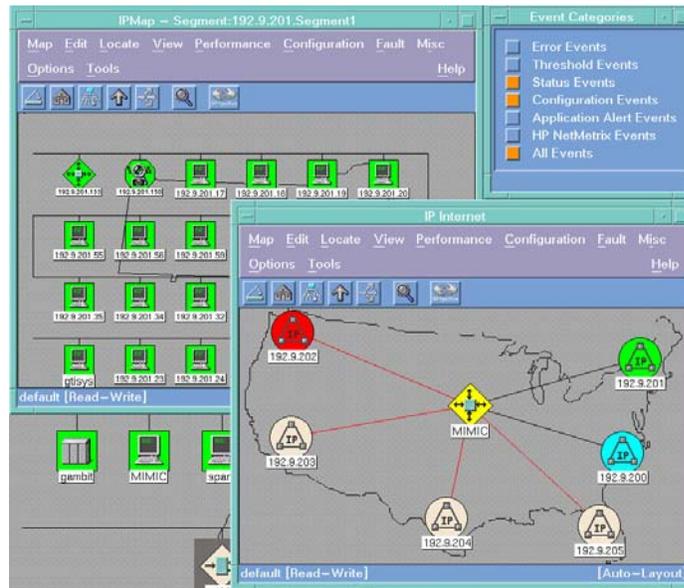
Context sensitive help

Supported platforms

Windows XP/2000/NT/2003

Until recently, the only way for IT professionals to evaluate enterprise management applications – either element managers or frameworks or value-added applications – was to obtain a demo copy and use it with their production network. Alternatively, they can have an extensive multi-vendor hardware test lab. Using the mission-critical production network for testing is very risky, whereas a test lab can become very costly and time and space consuming. The equipment needs setup, maintenance and regular updating. Current IT budget cuts require an alternative to the physical lab.

MIMIC Virtual Lab's simulation capabilities change all that. MIMIC simulated networks can expand the scope of an existing physical lab. Enterprises can enhance the lab environment by simulating scores of manageable devices, such as routers, hubs, switches, probes, workstations, cable modems and printers. Management applications can then be run against the "virtual lab". Enterprises are then free to evaluate the application. They can run tests using the simulated network, such as disabling virtual devices to see how the management application reacts. They are also free to experiment with additions and changes to the network to test features like inventory management without the worry about the impact to the production network.

MIMIC Virtual Lab

Using the applications in the virtual network environment gives enterprises a personalized, accurate appraisal of the software. It also provides an assurance that the software will perform to specifications. There is no more guessing whether an application will scale to meet their current and future needs. MIMIC allows them to play "what if" games with their network configuration to evaluate the application in possible, future scenarios. 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.

Generally in companies with a physical lab, there are multiple teams with different needs sharing the same lab. With MIMIC, every member of the organization can have his or her own network on his or her own machine all the time. This results in significantly greater efficiencies within an enterprise.

MIMIC Virtual Lab combines many simulated devices and connections. It includes many pre-configured exercises to

HPOpenView NNM shows a large network after connecting to MIMIC

introduce dynamic changes into the simulation, such as enabling/disabling interfaces, increasing or decreasing packet rates and changing the traffic pattern. You can send trap storms to make sure that your management system can handle all these events at the same time.

A particular device can be simulated in any number of scenarios, just as in the real world. For example, you can simulate an overburdened router by increasing input/output packet and error rates. You can make it a very faulty device by having it generate a trap storm. You can configure a network to be a heavily loaded, like 10 AM in the morning, or lightly loaded, like late in the night. A MIB browser is also included, which is useful in looking at the MIB values.

MIMIC Virtual Lab overcomes the budget and resource constraints by allowing users to set up extensive labs with software.

Applications
Enterprises – Ready-to-use lab: Eval, Test, Train
Network Engineers – Test and Train
Networking vendor – Develop, Test and Demo
Training organizations – Local/Remote lab

Enterprises can provide each IT professional, developer, tester, trainer and salesperson a private, virtual lab. The alleviation of the overhead and administrative headaches of physical equipment and an increase in efficiency are the end results. Therefore, MIMIC's applications within an enterprise are virtually unlimited. Some of the most common applications include **evaluation**

before deployment, disaster simulation, testing, operator training and infrastructure planning.

The implementation of a virtual lab within an enterprise, large or small, represents a significant value proposition. The bottom line for an enterprise is simple: simulation tools save both time and money by preventing network downtime.

Now with the benefit of MIMIC Virtual Lab, evaluation and testing of enterprise management applications have never been easier!