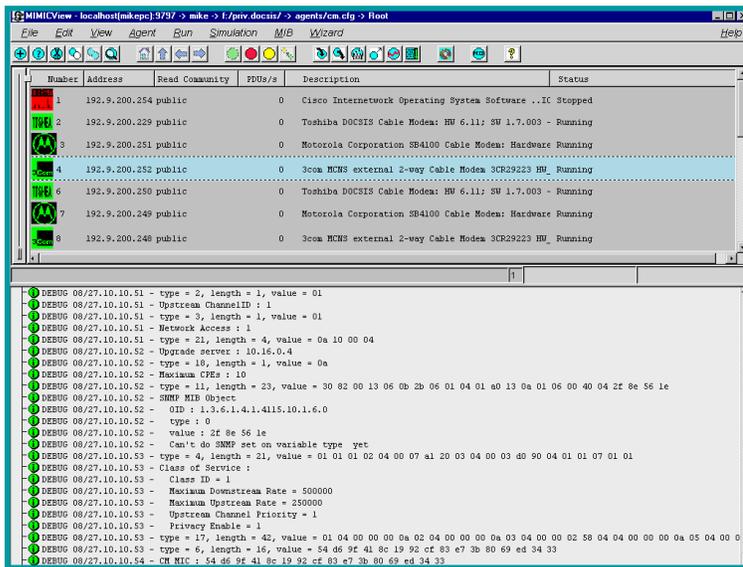


Application Brief: Cable Modem Industry



MIMIC View: Easily configure cable modem agents individually or in a group, each with its own device type, IP address, port and community.

For ISPs, trying to duplicate real-world scenarios can be difficult in a physical lab. For example, during

Some of MIMIC's applications

- Evaluation of NMS apps
- Set policies before deployment
- Operator/customer training
- Infrastructure planning
- Quality assurance
- Certification of applications

a power outage, thousands of cable modems go offline. When the power comes back, they all try to contact the service provider's CMTS in order to reacquire initial code and IP addresses, etc. This can cause

MIMIC Cable Modem Simulator

many challenges for the operators. Most importantly the management software must be ready for such an event and should be able to handle the increased load of events caused by this. In addition, the engineering staff also needs to be prepared for these issues prior a disaster takes place.

MIMIC can't fix the power outage problem but can easily assure that the management applications are up to the task and can prepare network engineers for such a situation. It can create a virtual lab populated with thousands of CM, CMTS and other networking gear. This can be a replica of the real network. The operators can simulate the same kinds of events, requests as real devices. So when the outage happens the engineers are not in the panic situation but they know exactly what to do. This can save the company lots of time money and energy. MIMIC also helps in assuring the scalability of cable management software. Cable operators can also

test the deployment of large-scale Operations Support System (OSS) using MIMIC. MIMIC can replace or add to large banks of cable modems, which would be cost prohibitive.

MIMIC allows CM and CMTS vendors to design, develop and test their products in a virtual and scalable network environment,

assuring that their management applications will work properly when deployed across heterogeneous environments.

MIMIC does all of this at a fraction of the cost to maintain a lab full of equipment. MIMIC ships with ready-to-use libraries of devices, networks and scripts for cable modems and CMTSs. This makes it easy to get started and customize the environment.

Gambit Communications, Inc.

Founded in 1995, Gambit Communications is a leader in network simulation tools 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 Cable Modem Simulator: Overview

Gambit Communications' MIMIC Cable Modem Simulator, the industry's first integrated simulation tool supporting DOCSIS™, takes the place of potentially thousands of individual hardware devices. ISPs, CM and CMTS vendors can simulate a virtual lab filled with thousands of CMs, CMTSs and other networking gear. In essence, it is a "Network In A Box".

MIMIC fully supports DOCSIS™ and SNMPv1, v2, v2c, v3, DHCP, TFTP and

MIMIC Protocol Support

MIMIC simulates the following components to approximate a CM end device:

SNMP agent: MIMIC simulates SNMP v1, v2, v2c, v3. CM units must support versions 1 and 3 of this protocol. SNMP performs a variety of functions, such as usage and performance monitoring, billing, fault detection and analysis, etc.

DHCP client: Simulates a scalable DHCP client. CMs dynamically obtain

MGCP media gateway: CMs have embedded Media Gateways that signal to controllers in the headends to establish, maintain and close audio/video sessions.

THE MIMIC PRODUCT SUITE

MIMIC Simulator: Simulates an entire network. Configurations are run-time customizable. MIMIC responds to queries on any of its configured IP addresses, so it is as if the NMS application is talking to actual devices.

MIMIC Recorder: Simulate the behavior of devices on a network by capturing a "snapshot" of the device in operation. The Simulation can then easily replay the entire network.

MIMIC Compiler: Import any SMI-compliant MIB and to extend the set of defined devices to support proprietary equipment.

MIMICView: A user-friendly GUI to manipulate the simulations.

MIMIC Shell: A command-line interface.

Discovery Wizard: Discover, record and simulate networks in a single step.

MIB Wizard: Import and compile multiple MIBs simultaneously.

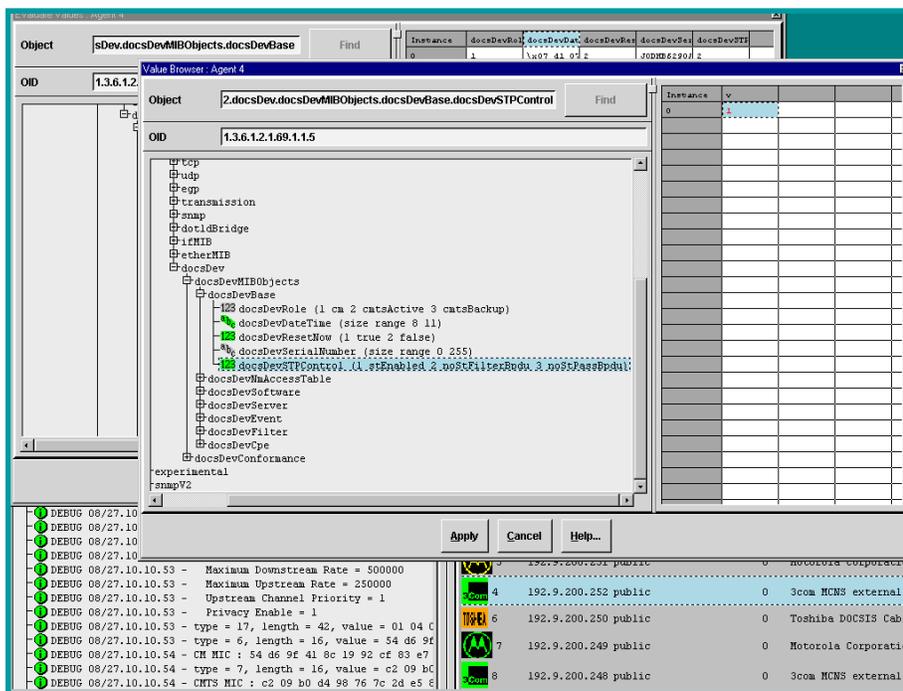
Simulation Wizard: Build a custom simulation quickly just by specifying the MIBs needed; seeding the simulation with values; specifying default values to use; or entering custom values.

Topology Wizard: Create topologies of devices, networks, their interfaces and interconnections.

Update Wizard: Provides notification of product updates and optional add-ons.

Libraries: Include devices from leading device vendors, like Cisco, Lucent, Nortel, and small and large networks, and over 1,200 MIBs.

Platforms: Supports Windows®, Solaris™ and Linux™.



MIMIC Value Browser: Users can easily change the values of DOCSIS™ MIB objects while running the Cable Simulator.

ToD. 10,000 devices in a single workstation, and an unlimited number of devices can be simulated by distributing it over multiple workstations. MIMIC also creates an extensible environment, allowing new devices and MIBs to be added to the simulation.

From an OSS standpoint, MIMIC is designed to simulate CM installations that are DOCSIS compliant and optionally support PacketCable specifications from CableLabs.

their IP Address from the service-provider's OSS.

TFTP client: Simulates a scalable TFTP client. CMs dynamically download their configuration information from the service-provider's OSS center.

ToD client: Simulates a scalable Time of Day client. CMs get the current time from the service-provider's OSS center.

The following component will be simulated using MIMIC to approximate a PacketCable compliant CM end device: