



"MIMIC combines all the tests tools in one to provide a complete solution for our different level of testing."

Balaji Subramanian, Principal Software Engineer



*EMC Smarts discovered MIMIC simulated devices and events.* 

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MIMIC SNMP, NetFlow, CLI Simulator creating a virtual lab with thousands of devices.

## Dell/EMC performs complete testing using MIMIC Simulator

EMC Smarts delivers critical data center management insights that empower IT operations teams to deliver service assurance for applications and services. Smarts monitors the availability and performance of physical and virtual networks, storage environments, and servers.

## **Challenges:**

Since Smarts is a comprehensive product that includes many different technologies, it needs a wide-range of tools to test it thoroughly. Smarts applications monitor and manage a variety of devices using management interfaces like SNMP, command line interfaces (CLI) and NetFlow. Prior to using MIMIC Simulator, they used some in-house and commercial tools to test applications. They could create a few of the needed test scenarios for each of those interfaces, but it was hard to integrate all the protocols within the same scenarios. There was a definite lack of testing using the CLIs from different vendors, such as Cisco IOS and Juniper JUNOS.

EMC also needed to test scalability against thousands of devices, with many ports (50,000+). They needed to support a variety of vendor devices and certify them. They really needed an enterprise grade solution to improve testing. They decided on using **MIMIC SNMP**, **NetFlow and Telnet/SSH Simulator** for all of their testing needs.

## Solution:

EMC has many copies of MIMIC Simulator. There is a team of 60 engineers using MIMIC for scalability, performance, feature and regression testing. Using MIMIC, they are able to simulate a lab with thousands of switches, routers, firewalls, load balancers, and hosts from Cisco, Juniper, F5, Riverbed and many other vendors. They can also recreate their customer provided scenarios to support them better, and certify newer devices with Smarts.

The test team uses MIMIC's user-friendly GUI in addition to the scripting interface. They are able to write scripts in any languages they want; they can easily change simulations dynamically and create interesting scenarios like interface down or core router down and test disastrous conditions. They are able to query simulated devices using SNMPv1, SNMPv2c and SNMPv3 commands, and verify the same information using CLI (Telnet/SSH). They can get the system configuration using Cisco IOS commands, and then get the same information using SNMP. They can also generate the NetFlow (v5, v9, IPFIX, NBAR) traffic. Since all of these are integrated in MIMIC, they see very consistent data, just like real devices.

## Using MIMIC Simulator, EMC is able to perform complete testing of Smarts applications, from scalability, interoperability, performance to regression testing.