



SimpleSoft

Simplifying

Network

Management

eSimpleTester™

Web Based SNMP Test Server

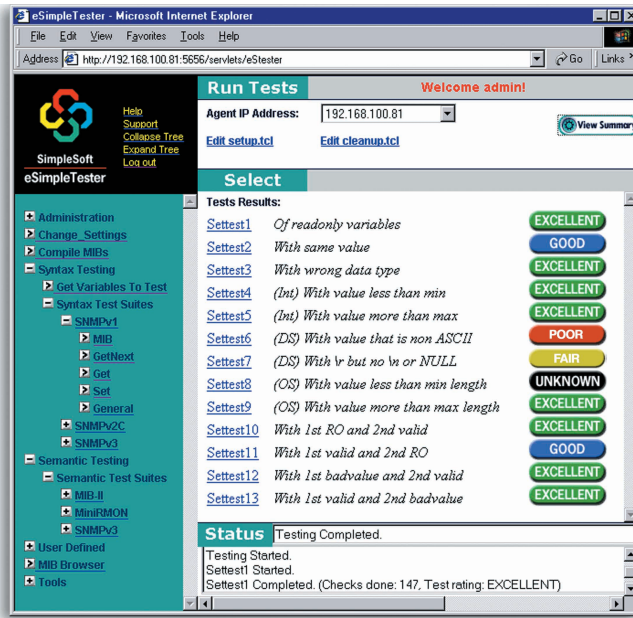


Fig 1:
A screen shot of the eSimpleTester running semantic tests.

Overview:

eSimpleTester is an easy to use, **web/XML based, multi-user, distributed SNMP test server** that **automatically** tests SNMPv1, v2c and v3 Agents. Licensed users can login to the eSimpleTester using their web browser and run tests from a central location. Each user can share MIBs and test scripts while retaining a personalized test environment. All types of SNMP Agents implementing one or more standard, experimental or private MIBs can be exhaustively tested, **within minutes**.

Managers and agents can communicate with one another because they share a common understanding of the data being exchanged (MIBs) and use the same mechanism to exchange that data (SNMP protocol). Hence to ensure interoperability, **an agent must be tested to check if its data matches the MIB definition, and if it adheres to the data exchange mechanisms (Get/GetNext/Set/GetBulk operations) specified in the SNMP protocol.**

But as the number of MIBs, MIB variables and instances supported by an SNMP agent grow, it takes weeks if not months, to manually test each variable using tools like a typical MIB Browser. This is where the **eSimpleTester** is most useful. The **eSimpleTester** is an “**SNMP Expert**” program that will intelligently interpret MIB files, SNMP protocol specifications, and all the MIB objects supported by the agent. Using this knowledge, it automates the testing process **to complete weeks worth of manual testing - in just minutes.**

The eSimpleTester includes syntax testing for any MIB, semantic testing for popular MIBs and other utilities.

The syntax tests check the access functions/method routines in an SNMP agent by sending hundreds of appropriate SNMP get/getnext/set/getbulk requests to the agent, and analyze the agent’s responses for both MIB and SNMP protocol compliance.

The semantic tests contain 800+ Tcl based scripts that check for the correctness of the underlying instrumentation for popular MIBs like MIB2, miniRMON and SNMPv3. The Tcl source for all the tests is included to provide samples for creating user-specific semantic validation test suites that can be easily added to the framework.

The other utilities include: MIB browser (that allows multiple varbinds to be set in one PDU), Trap checker application, RowStatus tester, and Script Generator and Script Runner for load and regression testing.

The eSimpleTester can work independently or within a larger test framework. This allows SNMP testing to be integrated with non-SNMP testing. eSimpleTester’s interfaces are well documented through Open APIs. The tests can also be conducted without the WebGUI via a scripting interface or a command line interface. The back-end worker processes have XML interfaces, and the test results file can be set up to be text, HTML, XML or comma separated.

eSimpleTester

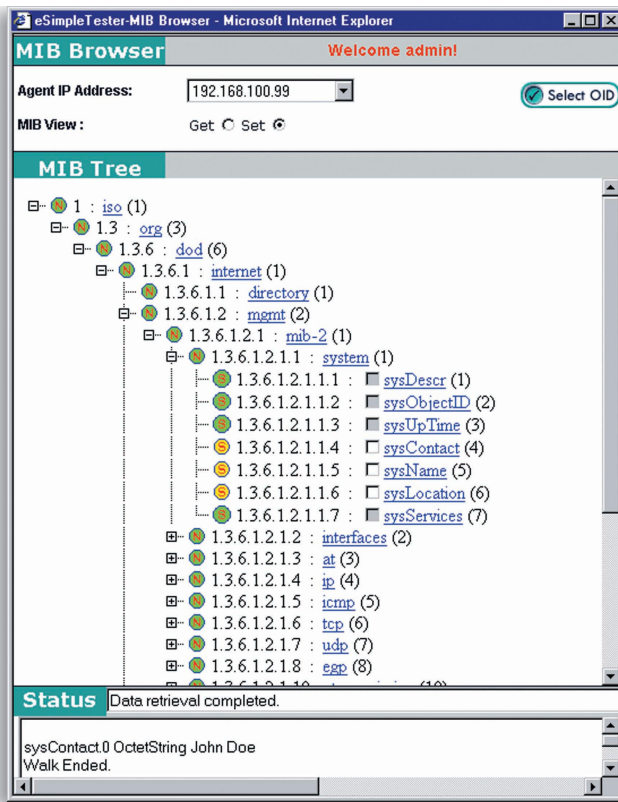


Fig 2:
A screen shot of the MIB Browser application showing the set view which allows multiple variables to be set at once.

Operation:

Only a few simple steps are required to test an agent. They are:

- 1 Load the MIBs supported by the agent using the built-in **MIB compiler**.
- 2 Specify the variables to be tested by using the built-in **MIB walker**.
- 3 Run any or all of the **predefined syntax tests** to check for conformance with the MIB definitions and SNMP specifications. The detailed reports pinpoint problem areas.
- 4 Create test scripts automatically using the built-in **Script Generator** and **RowStatus Tester**. Run these scripts in the built-in **Script Runner** for regression and load testing.
- 5 Check the implementation of popular MIBs by using the built-in **Semantic Checker** or use the samples provided to write and run your own semantic scripts.

Benefits:

- Reduced development, testing, support costs.
- Shortened "Time to Market".
- Increased customer satisfaction.
- Improved quality and interoperability.
- Implementation errors detected before deployment.

Features:

- Checks agent responses (and traps) for conformance with MIBs as well as SNMP protocol. (v1, v2c and v3)
- Checks MIBs for syntax errors.
- Automatically tests each MIB variable for get, getnext, getbulk and set operations.
- Includes 800+ semantic tests for popular MIBs like MIB-II, miniRMON, SNMPv3. Add-on suites for other MIBs available.
- Creates script files to be used for regression, load and "RowStatus" related testing.
- Provides detailed reports that pinpoint problems.
- Includes MIB Browser and built-in Tcl interpreter with SNMP, Telnet and Serial I/O extensions.
- Supports Diffie-Hellman, MD5, SHA and DES.
- Simple, intuitive, easy to use interface that runs in a web browser. Supports multiple users.

System Requirements:

The eSimpleTester requires:

- SUN Solaris 2.6, 2.7 or 2.8
- Windows NT/2000.

Web Browsers supported are:

- IE Explorer 5.5 on Windows
- Netscape 4.7 on Solaris.

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