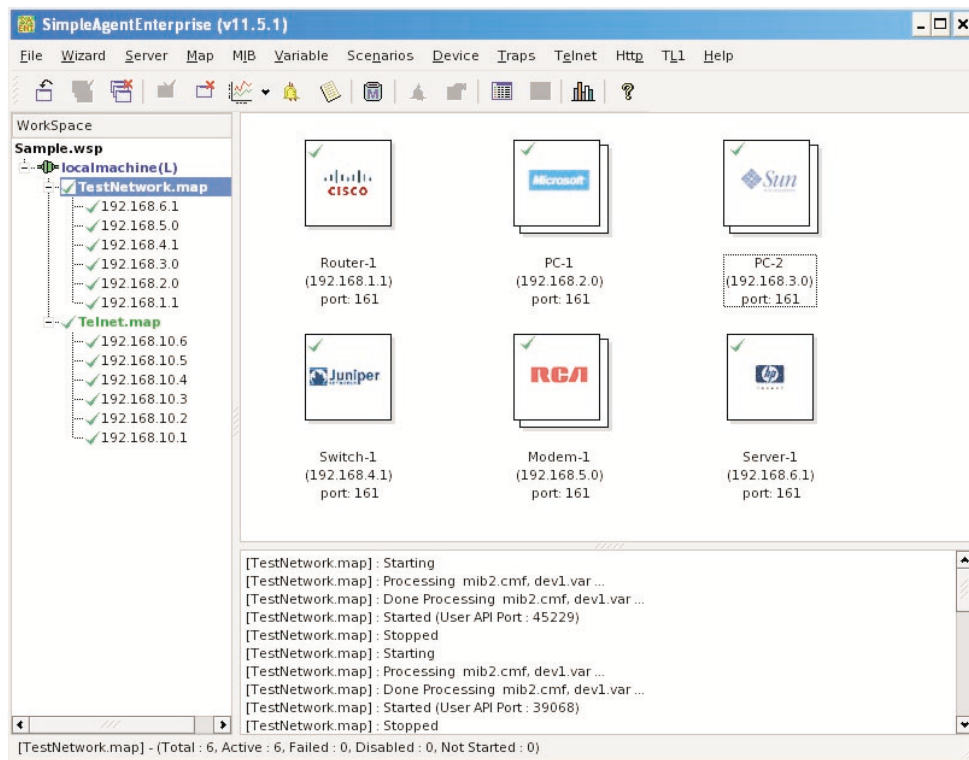# SimpleAgentEnterprise

Network Management Simulator

Fig1:
Screen shot of SimpleAgentEnterprise simulating a variety of different devices contained in various user defined networks

Overview:

SimpleAgentEnterprise is a network management simulator that simulates an **entire network** of LAN-WAN components made up of thousands of manageable devices. Using this tool, one can develop, test and demonstrate management applications without requiring stacks of expensive and bulky hardware.

Simulated devices support a variety of management protocols like **SNMP**v1,v2c,v3, **Telnet/CLI , SSH, TL1, HTTP/s, Netflow/sFlow/IPFIX, SOAP, REST, IPMI, TFTP & VMware's vSphere APIs.**

SimpleAgentEnterprise extends the capabilities of the popular **SimpleAgentPro** to simulate even larger number of devices. Its **64-bit** executable makes better use of the advanced CPUs now available. SimpleAgentEnterprise also allows one device context to be shared by multiple IP addresses.

Each simulated device can support its own SNMP MIBs, data, and IP Address. SimpleAgentEnterprise's unique ability to **create default variables** from a MIB or **learn variables** from an existing agent and its built-in support for dynamic values allows it to be setup quickly.

The use of **Tcl based scripting** allows for advanced modeling of agent behavior, trap generation, creation of error scenarios and expression of interrelationships between MIB variables.

Applications:

- **Development** teams can develop management applications even when the agent is incomplete or absent. A MIB definition file alone is enough to instantly allow SimpleAgentPro to simulate an agent which supports that MIB. Application development can now proceed in parallel with agent development, thus significantly shortening the "time-to-market".

- **Testing** departments can test management applications without requiring large inventories of testing devices in the lab. Even large networks with thousands of devices can be quickly simulated without requiring large budgets. Pre-deployment scalability testing as well as post-deployment disaster recovery scenarios can be easily carried out. Full control over variable values and generation of SNMP traps on demand enable more thorough testing of applications.

- **Sales** organizations can give demonstrations of management applications at customer premises or during trade shows without having to carry bulky equipment and spending hours configuring it.

- **Training** groups can give animated, mobile demos of different networking scenarios by setting up user defined Tcl scripts to generate traps, change interface status, create error conditions and even make the agents stop responding to SNMP requests. Costly hardware, installation and setup can be eliminated, and initial network environment can be easily restored after students have been trained on "set" requests.

Support for learning traps and syslog events from devices and replaying events to recreate error scenarios or trap storms is part of the product as are Telnet response learners and pre-learnt devices from Cisco, Juniper, Riverstone, Brocade, HP and many others.
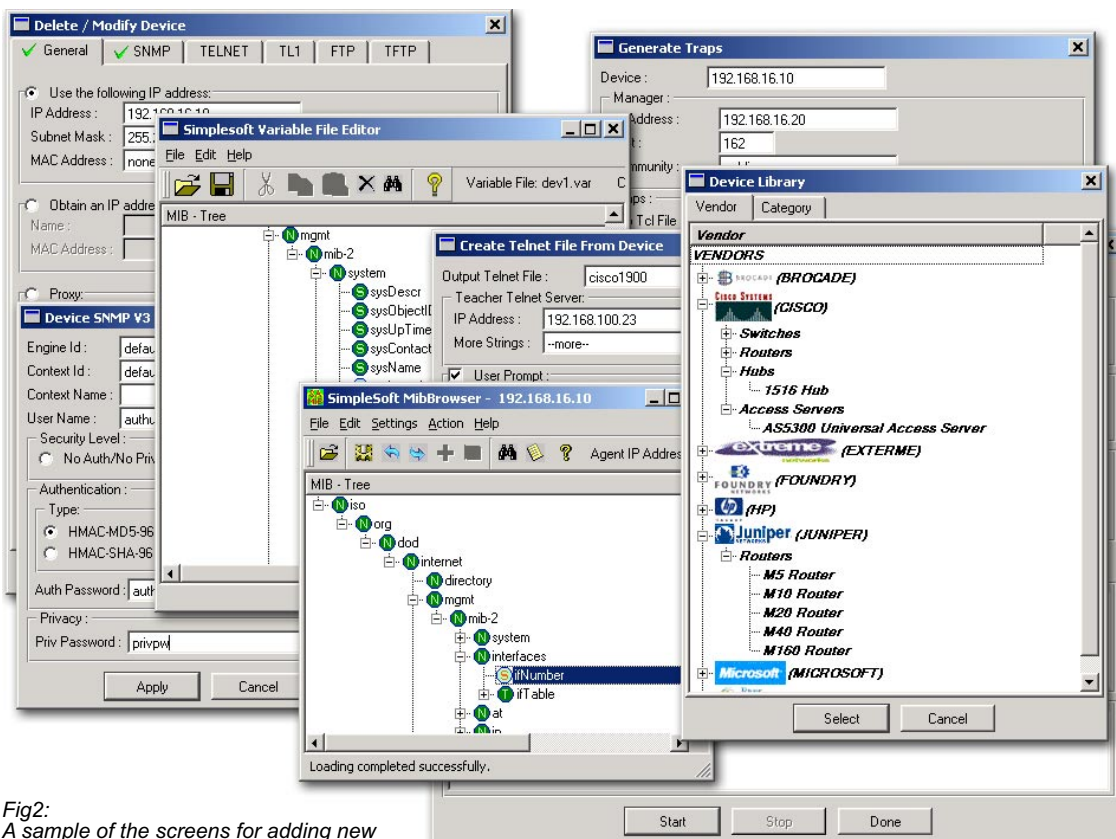
Fig2:
A sample of the screens for adding new devices, variable file editor, telnet learner, traps generator, MIB browser and device library.

Features:

- Controls the value returned for each variable. Built-in dynamism with value types like randomUp, clock, sequential, lastset and utilization.
- Allows editing of text based instance information to suit your needs.
- Generates any SNMP trap, syslog events or changes MIB data via Tcl scripts that get executed based on timers, user requests or within pdu processing.
- Supports SNMP dynamic row creation via RowStatus, EntryStatus and new instance methods.
- Provides the capability to learn traps from devices and re-generate them to multiple trap managers.
- Uses Tcl based scripting to better model agent behavior and interrelationships between MIB variables.
- Exposes APIs for user defined integration.
- Provides all the capabilities via command line interface.
- Supports management protocols like SNMP, Telnet/CLI, SSH, HTTP/s, SOAP, REST, Netflow/sFlow/IPFIX, TL1, IPMI, TFTP, FTP, & VMware's vSphere APIs.
- Includes MIB Browser and Topology Editor.
- Utilities available to manage distributed execution for large scale simulations.
- Keeps a log of requests in debug mode.
- Displays device vendor information in graphical thumb-nail view. Supports IPv4 and IPv6.
- Allows users to add their own devices to device library.
- Can support up to 50,000+ devices depending on available system resources and type of simulation.
- Includes Network discovery, Cable, HP OpenView, SNMPc, and CA Spectrum wizards for quick setup.

Benefits:

- Realistic estimation of the capabilities of management and provisioning services prior to large scale deployment of new technology and services.
- Assurance of high reliability of services by checking ability to recover from simulated disaster scenarios and training personnel to troubleshoot and fix problems.
- Shortened time-to-market by allowing development of management applications to proceed in parallel with agent development.
- Improved quality of management applications by testing error conditions and scalability with thousands of devices.
- Demonstration of capabilities of management applications in the absence of agents at trade shows, customer sites or in training classes.

Platforms Supported:

- 64-bit RedHat Enterprise Linux (5.x, 6,x)

Related SNMP Tools:

SimpleAgentPro: Network Management Simulator
SimpleSleuth: SNMP Vulnerability Tester
SimpleTester: Automated SNMP Agent Tester

SimpleSoft