



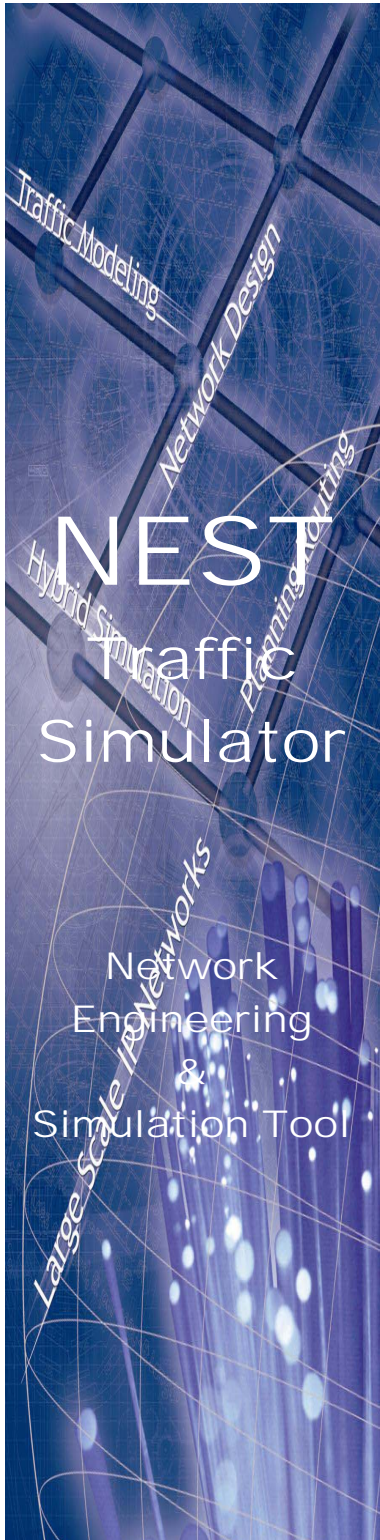
Plug-in Overview



NEST Traffic Simulator

Network Engineering & Simulation Tool

NEST Traffic Simulator & NEST IP-MPLS provide a powerful framework for designing new traffic sources, analyzing traffic logs, launching simulations and injecting traffic in test-bed platforms.



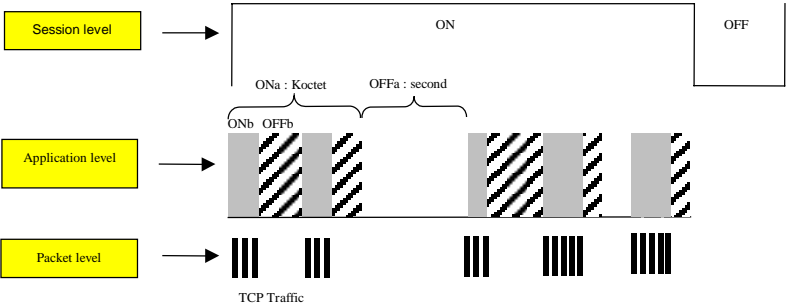
NEST Traffic Simulator provides a set of tools, easy to use, that will help a network engineer to simulate and predict accurately the Quality of Service of large scale IP-MPLS Networks.

Multimedia Traffic Analysis & Simulation in Large Scale IP-MPLS Networks is a key point for operators or service providers who are in charge to guarantee a high level of QoS. Heterogeneous traffics with variable rates and bursts such as Video Applications, ToIP, IPTV, High Rate Data Transfers, Rich WEB Applications, Correlated Traffic Patterns, in conjunction with highly time variable user call activity, makes difficult to predict network QoS. NEST Traffic Simulator is an innovative solution based on rigorous mathematical simulation models able to tackle this problem. It is currently comprised of several modules:

➤ **Source Modeler**

This module is aimed to build complex traffic sources for simulation or packet injection. It allows entering parameters for:

- **User session Level:** ON-OFF distributions ...
- **Application Level:** composed by any number of streams.
- **Streams:** independent packet generating processes can be combined within the same source model.
- **Stream synchronization:** allows creating inter-streams bursts, or simulating signaling packets in some applications.
- **Packet Level:** allows describing packet size distribution and transport protocols (UDP, TCP...).



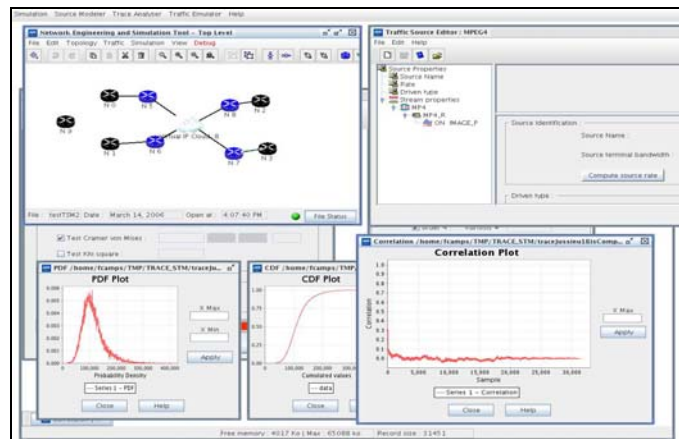
NEST Traffic Simulator Plug-in

NEST Traffic Simulator features unique Performance Evaluation & Testing Tools.

➤ Traffic Log Analyzer

This module is aimed to analyze traffic logs, compute statistics, and find the best source model for simulation:

- Distribution fitting, combination of multiple distributions ...
- Hurst, variance, correlations, short range and long range dependence models, EM algorithms ...

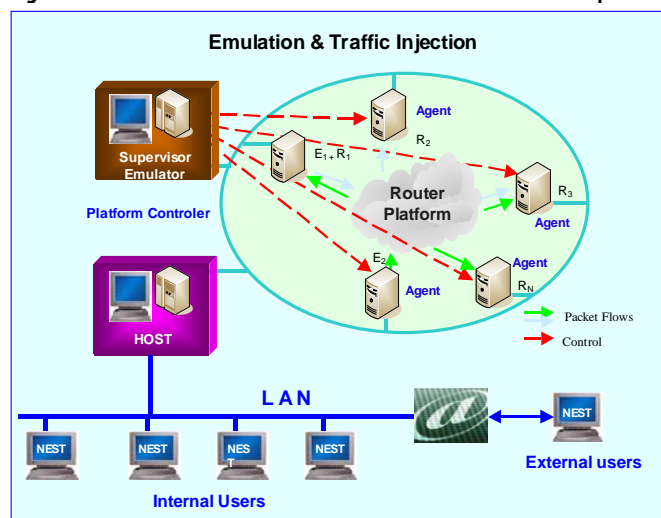


➤ IP Traffic Hybrid Simulator

It is based on a powerful engine allowing a full analytic model or a full event driven model or Hybrid simulation.

➤ IP-MPLS Traffic Emulation and traffic Injector

The same traffic sources simulated in NEST become real packets injected in a testbed IP-MPLS router platform.



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