NetLoad Inc.

634 Series Brief

Wire-Speed Traffic Mix
- 8 Gbit / sec
- HTTP/TCP
- UDP
- PCAP Replay
- Scaling for 16Gb/s+

TCP/HTTP Stateful Traffic Generation
- 445K Transactions/sec
- 20M+ Concurrent TCP flows
- Zero-transaction size support
- Variable POST and GET ratio

PCAP Replay Traffic
- Split PCAPs to emulate "stateful" traffic
- 100 Concurrent Files
- Timestamp with scaling or Wire-Speed

UDP Traffic
- Single packet or user-defined packet mix
- UDP IP Fragmentation support
- Controlled UDP Fragment Drop testing

Mobile Infrastructure Testing (Performer)
- Dynamically add/stop/delete
- 10K+ User Adds and Deletes per sec
- GTP-U Encapsulation
- User Bandwidth Allocation

Security Applications Test Support
- URL Filtering – 50M+ URL List Capacity
- Test HTTP Response for malicious URLs
- Firewall Filtering – Test FW performance

User Interface
- Web GUI
- REST API
- CLI

Flexible Configuration Options
- Basic Server/Client (op. VLAN)
- Virtual Router Server/Client (op. VLAN)
- Client-only / Server-only
- Proxy
- NAT
- Ping Response
- ARP support

Graphic Run-time Test Reporting
- TX and RX Mbits – Each Port
- Active Connections
- Total TX and RX Thru-put
- Total TX and RX Good-put

PCAP capture on all ports
- RX, TX, Error
- "Wireshark"-ready

Built-in Bandwidth Calculation
- Mbits -to- Connections/sec
- Connections/sec –to- Mbits

HTTP Payload Control
- Custom Payload Files
- Generated Patterns

Auto-Rate Feature
- Finds Optimal TCP/HTTP Connection Rate
- Time-saving Convergence Algorithm

Hardware
- 4 x 10M/100M/1GigE Cu or 4 x 1GigE Fiber
- 2 x 10M/100M/1GigE Cu Management
- 1 Console
- 2 x USB 2.0
- 1U Rack Mountable
- 100-240VAC 100W power w/switch
- 0°C-40°C Operating Temperature

Distributed Performance Test

As engineering organizations develop new networking products and push out new customer releases, the CapEx budgets of most departments generally cover functional unit tests at every integration point, but performance testing is not done until the final stage of the development process with fully integrated release candidate build. Any performance degradation found at this late stage in the release process adversely impacts both customer deliverables and the bottom line.

The solution is to distribute the performance test and perform some testing earlier in the development cycle, preferably at every integration point in the process.

Unfortunately the performance issues are only visible with extremely expensive high performance equipment that can push the product to full line rate and beyond. Until now this equipment was extremely expensive and out of reach for any volume deployments. Most organizations "buy what they can afford, rather than what they can use".

NetLoad Inc. enables a solution to this problem with technology that combines off-the-shelf Network Processing hardware with its patent-pending FW/SW to deliver an extremely high performance low cost solution. NetLoad Inc. solution helps detect most performance issues related to stateful processing by using a combination of generated TCP/HTTP and UDP traffic mix combined with PCAP Replay. In this case the 80/20 rule applies, where 80% of the performance-related issues can be identified with 20% of traffic complexity. HTTP and UDP are the protocols used throughout the web. With PCAP Replay, additional protocols added into the mix create a real-network traffic mix.

Security and Content Control

NetLoad Inc. offers a comprehensive URL filtering solution to test L4+ filtering and response.

Mobile Infrastructure Testing

NetLoad Inc. offers unique features for testing data throughput of mobile infrastructure components including ENBs, S-GWs/SGSN, and P-GWs/GGSN. NetLoad Dynamic User Mode with Bandwidth Allocation and GTP-U encapsulation, combined with external scripts emulating user control enable comprehensive performance testing of any device in the mobile infrastructure data path.
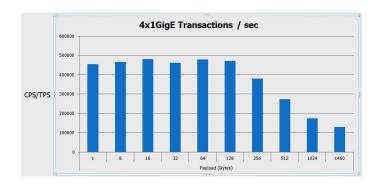
Graphical User Interface

NetLoad Inc. offers a comprehensive Web UI to manage all aspects of the system.

Performance Overview

NetLoad solution is extremely high performance. The system sustains 445K+ HTTP transactions/sec while maintaining 20M open TCP connections.