

Xena RFC 2544

RFC 2544 Benchmarking Package

Specifications

Xena RFC 2544 Software Package

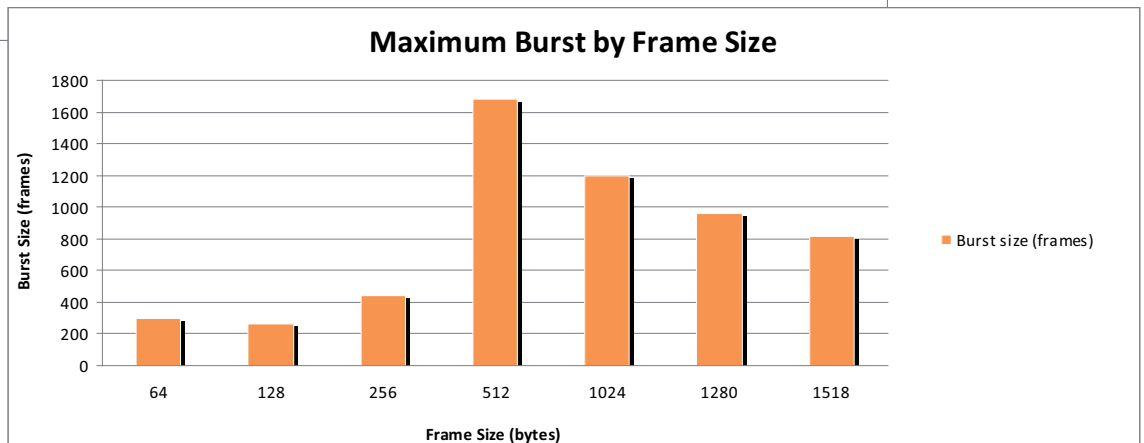
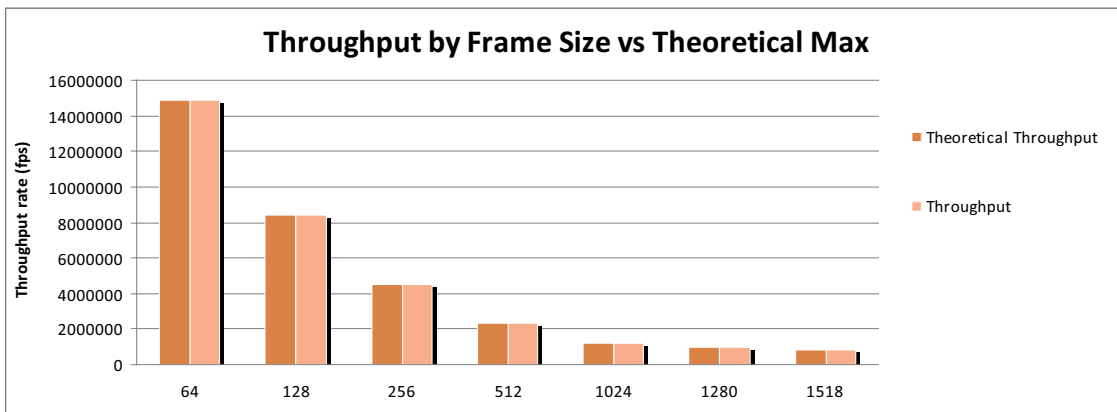
This package provides automated performance testing of L2/3 network devices per IETF RFC 2544, Benchmarking Methodology for Network Interconnect Devices. Included in this package are test cases for the following:

- Device Throughput by finding the maximum rate at which none of the offered frames are dropped
- Latency by measuring the minimum, average and maximum transmit delay
- Frame Loss rate throughout the entire range of rates and frame sizes
- Back-to-back frames processing of the network device

The test package is delivered as a MS Excel sheet which uses Excel's embedded Visual Basic for Applications (VBA) language to execute scripting command to the Xena testers. All results and graphs are stored in the Excel sheet, from where the user can easily print test reports and charts, and export test results.

Features and Benefits

- All RFC 2544 tests over VLANs and IPv4 protocols
- Test with jumbo frames and verify low-latency and wire-rate
- Large port count and full mesh tests, uni-directional or bi-directional testing
- Easy point-to-point, point-to-multipoint, and multipoint-to-point testing
- Reduce time-to-test through easy configuration and fast execution
- Summary and comprehensive detailed results
- Support for both standard and fully user defined test configuration



Specifications

RFC 2544	Features
Key Tests	Throughput Latency (FIFO, and LIFO) for store-and-forward and cut-through DUTs Frame loss Back-to-back frames
Traffic Control	Ethernet, VLAN, Q-in-Q, and IPv4 frame support Auto-generated test plans, or fully customized Automatic learning packets Custom field setting for any protocol
Learning Parameters	L2 learning Learning rate Repeat count Frame sizes same as stream Retry count Delay before learning Per test, per trial and per frame size learning
Test Topologies	Up to 5 chassis, 24/48 ports Full Mesh Point-2-Point, Point-2-MultiPoint, MultiPoint-2-Point Multi-port pair definitions, East/West Uni-directional or Bi-directional testing Testing between any combinations of port-speeds
Reporting	Printable summary reports Export of results in standard .CSV format Summary chart generation in standard Excel format for export
Supported Modules & Platforms	All Xena Ethernet testers and all port speeds from 100M to 10G, 40G, and 100G Requires MS Excel 2007 or Excel 2003

RFC 2544 - THROUGHPUT Test

Customer name: XENA
Customer service bandwidth (Mbps): 100.0
Service ID: 2048
Access ID: 10



Test duration (sec): 1.0
Number of pairs: 2
Number of trials: 2
Date: 20-Oct-2010
Time: 8:37 PM

Maximum port-pair throughput with no loss

Frame size	64	128	256	512
Maximum physical port speed (Mbps)	10000	10000	10000	10000
Configurable maximum speed (Mbps)	n/a	n/a	n/a	n/a
10000 Mbps maximum Rate (fps)	14880952	8445946	4528986	2349624
Passed rate (%)	100.0	100.0	100.0	100.0
	0.00	0.00	0.00	0.00

THROUGHPUT Test

Test duration (sec): 1
Number of pairs: 2
Minimum frame size (bytes): 64
Initial rate (%): 100.00
Maximum frame size (bytes): 64
Max. Rate (%): 0.10
Step frame size (bytes): 64
Max. Rate (%): 100.00
Packet size (method) (Step/IEEE): IEEE Standard
Resolution (%): 0.50
Custom Test Plan (y/n): No
Acceptable Loss (%): 0.00

Frame size (bytes)	Passed rate (%)	c0-to-fs (packets/sec)	c1-to-Bs (packets/sec)	Total (packets/sec)	Total Loss (packets)	Total Loss (%)
64	100.00	14880952	14880952	29761904	0	0.00
128	100.00	8445946	8445946	16891890	0	0.00
256	100.00	4528986	4528986	9057970	0	0.00
512	100.00	2349624	2349624	4699248	0	0.00
1024	100.00	1197212	1197212	2394420	0	0.00
1228	100.00	961538	961538	1923076	0	0.00
1518	100.00	812743	812743	1625486	0	0.00



Xena Networks ApS
Graabroedretorv 6-8, 3. sal
1154 Copenhagen K
Denmark
Phone: +45 7020 0823
Fax: +45 6980 3398

Xena Networks USA
945 Concord Street #1200
Framingham, MA 01701
USA
Phone : +1 508-358-0127
Fax : +1 508-342-7018

Sales contact:
sales@xenanetworks.com