SPIRENT TESTCENTER

RFC 2544 BENCHMARKING TEST PACKAGE

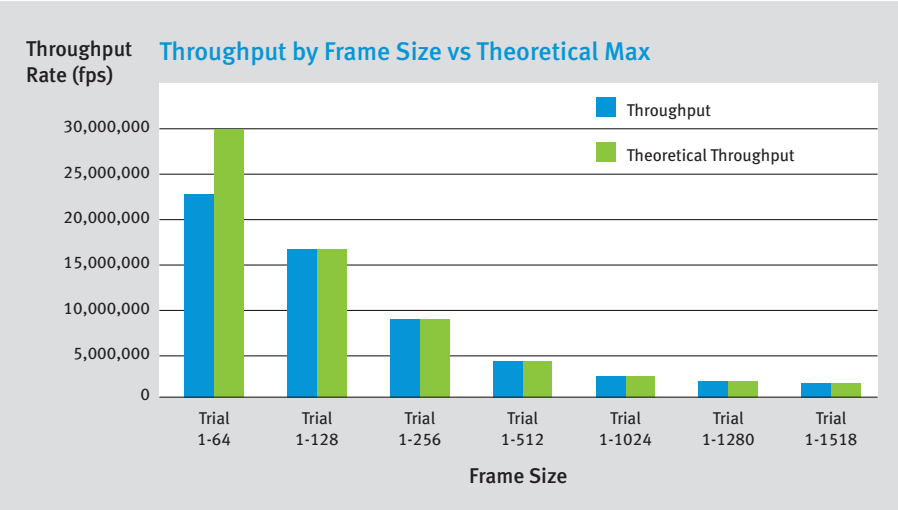
RFC 2544 is the industry leading network device benchmarking test specification since 1999. Utilizing Spirent TestCenter™ next generation architecture, RFC 2544 benchmarking can execute faster with nanosecond accuracy at 10 Gigabit, high-density scale.

FEATURES & BENEFITS

- Measure latency and iitter as part of Throughput in a single test
- All RFC 2544 tests over any topology including VLANs, MPLS and other available protocols on Spirent TestCenter
- Test performance in mixed IPv4 and IPv6 configurations
- Test with jumbo frames and verify low-latency and wire-rate
- Test performance of different IMIX distributions
- Measure impact of QoS/DiffServ and latency types, including LILO/LIFO/FIFO with jitter, latency and throughput in a single test
- Large port, full mesh tests through millions of available streams
- Reduce time-to-test through easy configuration wizards and fast execution
- Summary and comprehensive detailed results using the Spirent TestCenter Results Reporter

This package provides automated performance testing of L2/L3 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



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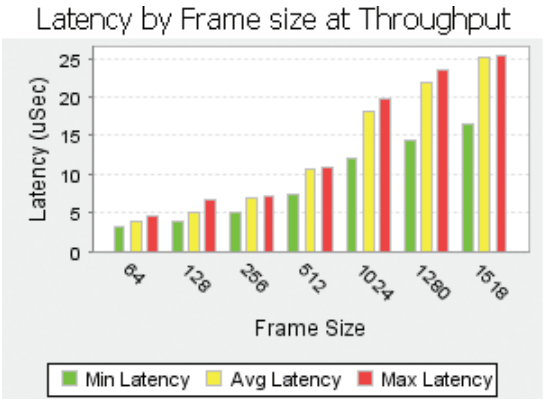

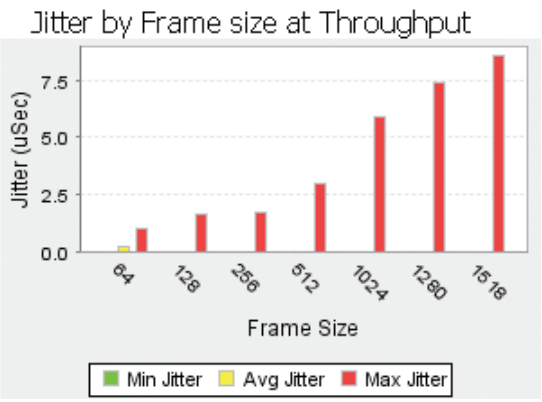

TECHNICAL SPECIFICATIONS

Key Tests

- Throughput
- Latency (LIFO, FIFO, and LILO) for store and-forward and cut-through DUTs
- Frame loss
- Back-to-back frames

Traffic Control

- Ports, MAC, and IP addresses can vary with step value
- Ethernet II frame support
- IP Next Protocol setting
- TTL (time to live) setting
- DiffServ Code Point (DSCP) with Class Selector or Assured/Expedited

Forwarding controls

- Multiple 802.1p,Q VLANs per port or subnet
- Customization of editable streams after using the wizard
- Optionally enable or disable streams

Test Control

- Stagger start
- Delay after transmission
- Traffic start delay
- Duration in seconds or by frame burst

Learning Parameters

- L2 learning
- Learning rate
- Repeat count
- Frame sizes same as stream or userdefined
- L3 learning (ARP-IPv4, neighbor discovery-IPv6)
- ARP rate via gap setting
- Cyclic flow ARP requests
- Retry count
- Delay before learning
- Per test, per trial and per frame size learning
- Learning verification

SUPPORTED MODULES & PLATFORMS

- TPK-1000 is supported on all Spirent TestCenter Ethernet modules

ORDERING INFORMATION

RFC 2544 Benchmarking Test Package: TPK-1000

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