SPIRENT TESTCENTER

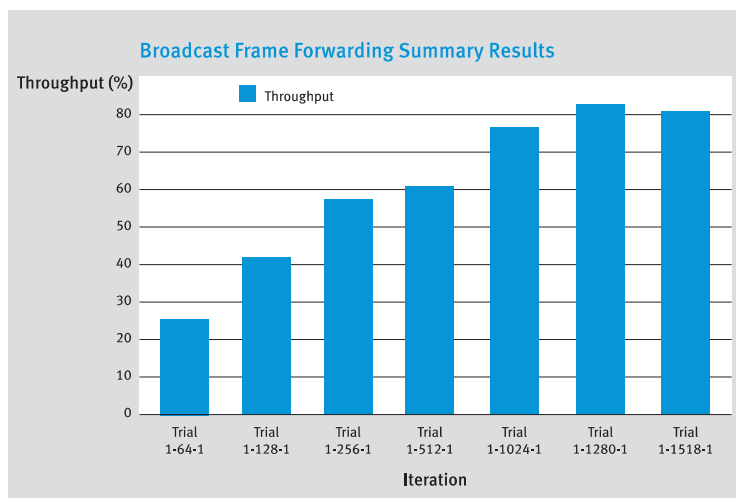## RFC 2889 BENCHMARKING TEST PACKAGE

Quickly obtain baselines of behavior on existing network devices and reveal the effects of newer technologies, all within a unique framework for better troubleshooting and customization of controls compared with those found in legacy solutions.

FEATURES & BENEFITS

- VLANs—Run RFC 2889 tests over VLAN-based topologies
- Jumbo Frames—Test with jumbo frames and verify low-latency and wire-rate
- Support large port, full mesh tests through a million plus available streams
- Reduce time-to-test through easy configuration and fast execution
- Easy access to summary and detailed results using Spirent TestCenter™ Results Report

This package provides pre-programmed tests per IETF RFC 2889, Benchmarking Methodology for LAN Switching Devices, which is the standard for initial performance testing of Layer 2 switches. Included in this package are test cases for the following:

- Determine device throughput, frame loss, and forwarding rates with fully meshed or other traffic configurations
- Determine how a device handles congestion
- Forward Pressure and Maximum Forwarding Rate
- Address caching capacity and Address learning rate
- Determine the behavior under error or abnormal frame conditions
- Determine Throughput and Latency when forwarding broadcast traffic

Broadcast Frame Forwarding Summary Results

Throughput (%)

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TECHNICAL SPECIFICATIONS

Key Tests

- Forwarding, including throughput and forwarding rates with a 10ns resolution
- Congestion control
- Address caching
- Address learning
- Error filtering
- Broadcast forwarding
- Broadcast latency
- Forwarding pressure
- Maximum forwarding rate

Traffic Control

- Ports, source and destination MAC addresses can vary with step value
- Ethernet II frame support
- Multiple 802.1p,Q VLANs per port

Test Control

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

Learning Parameters

- L2 learning (Ethernet sourcing)
- Repeat count
- Delay before learning
- Per test, per trial, and per frame size learning
- Learning verification
- Frame sizes same as stream or user-defined

SUPPORTED MODULES & PLATFORMS

- TPK-1001 is supported on all Spirent TestCenter Ethernet modules

SYSTEM REQUIREMENTS

Minimum PC, UNIX or Linux Requirements by System Size

- For Small Port System (2-25 ports)
  - Minimum Requirement—2.4 GHz Intel Pentium 4 processor (or equivalent), 512 MB RAM and 10 GB of free disk space
  - Recommended System—Intel Core™ 2 Duo E6300 processor (or equivalent), 2 GB of free RAM, 10 GB of free disk space

- For Medium Port System (26-75 ports)
  - Minimum Requirement—3 GHz Intel Pentium 4 processor (or equivalent), 2 GB of free RAM, 15 GB of free disk space
  - Recommended System—Intel Core 2 Duo E6400 processor (or equivalent), 4 GB free RAM, 100 GB of free disk space

- For Large System (76 ports and above)
  - Minimum Requirement—Intel Core 2 Duo E6400 processor (or equivalent), 3 GB free RAM, 100 GB free space on hard drive
  - Recommended System—Intel Core 2 Duo E6600 processor (or equivalent), 4 GB of RAM, 100 GB of free disk space

Spirent TestCenter Hardware Requirements

- Pentium® or greater PC running Windows® XP Professional SP2 with mouse/color monitor required for GUI operation (See Minimum PC Requirements section)
- One Ethernet cable and one 10/100/1000Mbps Ethernet card installed in the PC A SPT-2000A Spirent 2U Chassis and Controller, SPT-5000A Spirent 5U Chassis and Controller or SPT-9000A Spirent 9U Chassis and Controller
- Operating system languages supported: English, French, German, Italian, Japanese, Korean and Chinese (traditional and simplified)
- Operating systems supported: Windows XP SP2, Windows 2003 Server (32 bit), RedHat EL3 and EL5, Solaris 8.0 and 10.0

ORDERING INFORMATION

RFC 2889 Benchmarking Test Package: TPK-1001

AMERICAS 1-800-SPIRENT • +1-818-676-2683 • sales@spirent.com

EUROPE AND THE MIDDLE EAST +44 (0) 1293 767979 • emeainfo@spirent.com

ASIA AND THE PACIFIC +86-10-8518-2539 • salesasia@spirent.com

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