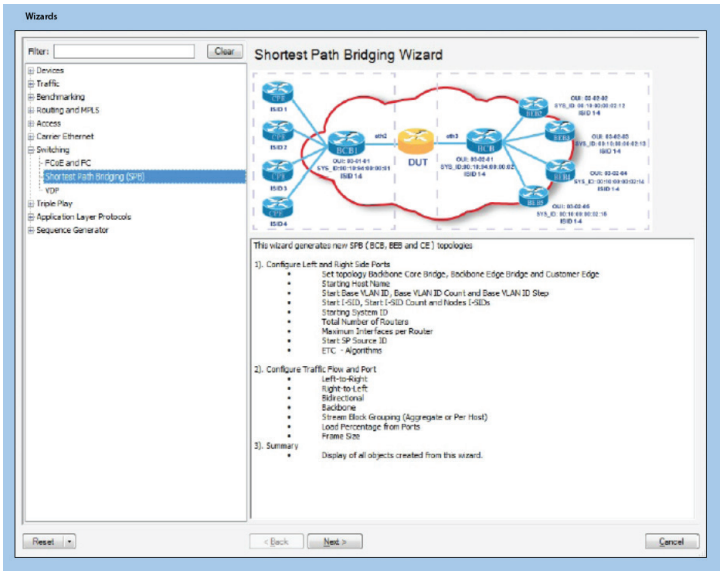
TestCenter™

Shortest Path Bridging Emulation

VIAVI's SPB emulation facilitates multiple SPB adjacencies, hundreds of SPB nodes, and thousands of SPB links emulated from VIAVI TestCenter to test the throughput scale of data center switches and fabrics. It can generate SPB traffic with 802.1ah MAC in MAC encapsulation, thousands of emulated ISIDs and MAC addresses. The SPB emulation package can further be used in combination with the Ethernet OAM Fault management performance and monitoring package to test 802.1aq SPB in combination with 802.1ag Connectivity Fault Management capabilities.



Applications

- Testing High Speed Ethernet Fabrics — end-to-end performance and scale of SPB fabrics by emulating hundreds of nodes and thousands of links to multiple SPB switches combined with end to end traffic benchmarking
- Testing Backbone Edge Bridges — SPBM ISID UNI and NNI Node/Link control plane scale combined with 802.1ah MAC in MAC throughput/queueput performance and latency
- Testing Backbone Core Bridges — SPBM NNI Adjacency, Node and Link control plane scale with Equal Cost Path data plane redundancy and performance

802.1aq Shortest Path Bridging (SPB) extends Layer 2 Ethernet networks with multipath and redundancy capabilities beyond classical Spanning Tree Protocols (STP). SPB enables virtualized data centers to scale to hundreds of switches creating multi-terabit cloud fabrics.

Features

- Report SPB Multi-path and Multi-priority Queueput per latest IETF draft specification with FCoE, unicast and multicast LAN traffic utilizing the TestCenter data center bridging benchmarking package
- Test the performance of multiple SPB equal cost paths, redundancy and impact of possible head of line blocking (HLOB) with nanoseconds accurate data plane latency
- Verify flooding, MAC learning and broadcasts over Shortest Path Bridging 802.1ah MAC in MAC data plane and spoofing prevention capabilities of SPBM Equal Costs Paths with Access Control Lists (ACLs)
- Verify SPB Adjacency, Node, Link and Service scale in CPU control and ASIC data plane components of switches and fabrics

Technical Specifications

- 802.1aq Shortest Path Bridging MAC (SPBM) BEB or BCB emulation
- Thousands of streams of 802.1ah traffic via Mac-in-Mac encapsulation on every individual port in the test
- IS-IS Emulation including emulation of Level 1, Level 2, Level 1/2 routers, ISI-IS ISID, and multiple areas per emulated routers
- Run multiple protocols concurrently on each port to test scalability and protocol functionality in the same test
- Log real-time exchange of control-plane messages and view IS-IS events and LSP routes in real-time
- View routes advertised by the IS-IS neighbor per emulated router and optionally save the routes to a file (txt or CSV) for later analysis

Supported Platforms

Supported on current TestCenter Platforms

Ordering Information

Product	Part Number
SPB (IEEE 802.1aq) Emulation	BPK-1182A
802.1AG/Y.1731 EOAM Fault Management	BPK-1059A
Data Center Bridging Test Package	TPK-1059
Related	
EVPN Emulation	BPK-1311A
FCoE/DCBX Emulation	BPK-1081A
LISP Emulation	BPK-1181A
OpenFlow Controller Emulation	BPK-1193A
OpenFlow Switch Emulation	BPK-1195A
TRILL Emulation	BPK-1187A
VXLAN Emulation	BPK-1310A

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