Overview

Developed by Spirent Communications™ to run on the AX/4000 Broadband Test System, the IS-IS Conformance Test Suite provides a comprehensive series of pre-defined test cases for checking the conformance characteristics of IS-IS implementations.

Each test case tests a logical unit of functionality and reports a pass, fail, or inconclusive result.

Spirent’s Test Suite Manager (TSM) software provides a Windows 95/98/NT/2000 graphical user interface for the test suite. The TSM allows users to set test parameters and selectively run test cases individually or in a batch operation. Test results appear in an on-screen window and can be saved to ASCII files for printing and off-line analysis.

IS-IS is a “link state” routing protocol that provides very functional, highly scalable solutions but adds complexity in its design.

The protocol's complexity is a big factor in determining interoperability and scalability. This is why it is vital for network equipment manufacturers and service providers to have a reliable tool that carefully tests compliance to RFC and ISO standards and ensures proper IS-IS implementation.

Key Features

- Level 1 and Level 2 adjacency operations, including establishment, maintenance, and deletion for point-to-point and broadcast operations
- IP extensions for adjacency establishment
- Level 1 and Level 2 adjacency independence for point-to-point and broadcast operations
- Designated IS election and resignation
- IS-IS update process integrity for point-to-point and broadcast operations
- IS-IS decision process operation
- IP extension summary address operation
- Manual routing information propagation
- Attach flag management
- Partition repair

Test Suite Manager Screen
Address summarization
External link operation
Adjacency state table operation, including maintenance, establishment, and deletion
OSI and IP authentication for link, area, and domain authentication
Level 1 and Level 2 routing ESH PDU handling/soliciting ES configuration Protocol error scenarios PDU encoding errors Timers jitter measurement Over 440 individual test cases

Conformance Standards

The IS-IS Conformance Test Suite assesses the router’s ability to conform to the following standards from the Internet Engineering Task Force (IETF):
- ISO/IEC 10589:1992-Intermediate system to intermediate system intra-domain routing information exchange protocol for use with the protocol for providing the connectionless-mode network service (ISO 8473)
- ISO/IEC 9542:1994-End system to intermediate system routing information exchange protocol for use in conjunction with the protocol for providing the connectionless-mode network service (ISO 8473)

This standard is only used for a PDU definition reference; it is not used for conformance purposes

Specifications

Users may choose between a 4-port or 2-port configuration.

Parameters
- Feature
- Type
- Timer
- Buffer
- Password
- Priority
- IP Address
- OSI Address
- MAX Address
- Control
- Log

Hardware Requirements
- One PC running Windows® 95/98/2000 or NT
- One AX/4000 mainframe or portable chassis
- One AX/4000 Ethernet/GPIB, GPIB, or GPS control module with the test suite option enabled in the controller software

One, two, or three of the following generator/analyzer test modules:
- 1 Gbps mAX IP Generator/Analyzer (P/N 500002)
- 1 Gbps mAX Generator/Analyzer (P/N 401400X)
- OC-48ML Generator/Analyzer (P/N 403504)
- 10 Gbps Generator/Analyzer (P/N 403100)

One of the following IP Layer 3 port interfaces per generator/analyzer test module:
- OC-12 Multilayer SM* (P/N 402320) OC-12 Multilayer MM* (P/N 402321)
- IP POS/ATM/FR OC-3 SM* (P/N 401384)
- IP POS/ATM/FR OC-3 MM* (P/N 401385)
- IP POS/ATM/FR OC-12 SM* (P/N 401382)
- IP POS/ATM/FR OC-12 MM* (P/N 401383)
- IP Ethernet 10/100 (P/N 401324)
- IP Gigabit Ethernet SM (P/N 401380)
- IP Gigabit Ethernet MM (P/N 401381)
- OC-48 ML 1310nm SM (P/N 403502)
- OC-192c 1310nm SM (P/N 403101)
- OC-192c 1550nm SM (P/N 403102)
- OC-192c VSR (P/N 403103)

Note: This test suite may be backward compatible with certain test modules having part numbers not listed above. Contact a Spirent Communications sales representative to inquire about compatibility with legacy equipment, information regarding bundling options, and a list of the most currently supported hardware.

*For IPoPPP and IPoATM modes

Software Requirements
- Test Suite Manager Version 3.60 or higher (P/N 402001). Use the latest version of the Test Suite Manager to take advantage of the latest enhancements. OSPF Conformance Test Suite software (P/N 402495), supplied on CD-ROM
- IP option on the generator/analyzer
- Technology license file (ttcn_license.dat)
- Authorization key for enabling the test suite option in the AX/4000 control module

Ordering Information

IS-IS Conformance Test Suite: (P/N 402495)

Spirent Global Services

Spirent Global Services provides a variety of professional services, support services and education services — all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at www.spirentcom.com/gs or contact your Spirent sales representative.