

Agilent RouterTester
Powered by QA Robot Technology

**MPLS Conformance
Test Suite (RSVP)**
E7867A
Technical Datasheet



Agilent Technologies automated RSVP conformance test suite provides comprehensive verification of signaling conformance to the industry's evolving RSVP standards.

Key Features

- **Comprehensive conformance testing to the IETFs evolving RSVP standards**
- **Fully automated stimulus-and-response test suite**
- **Controllable debug level for detailed diagnostics**
- **Clear verdict assignment for each test case**
- **Customizable test scripts**

Product Overview

The Agilent Technologies' RSVP Conformance Test Suite has been designed to quickly and comprehensively verify the conformance of network devices to the RFC 2205 and the various IETF drafts on the RSVP protocol, which have been listed in this document.

It provides more than 230 automated test cases, covering all key aspects of RSVP signaling conformance.

All test cases provide clear 'Pass' and 'Fail' verdicts. Flexible reporting and debugging features allows test engineers to identify the detailed course of errors.

The conformance software provides test engineers with access to test script source code, for easy test customization.

Router manufacturers and service providers can expect to achieve a higher confidence with regard to their signaling implementation with Agilent's automated RSVP conformance test software.

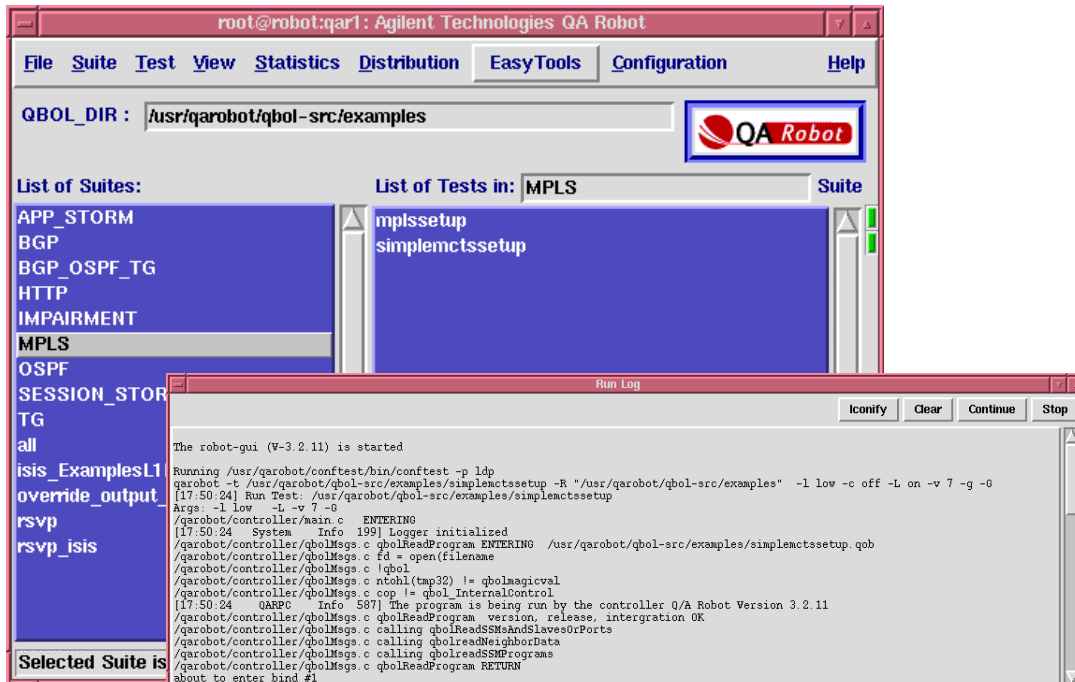
The RSVP Conformance Test suite is a complementary product to Agilent's RSVP Protocol Software, which can simulate RSVP label-switched paths (LSPs) at Internet-scale for comprehensive stress testing.

Applicable Standards

The RSVP Conformance Test Suite will provide verification of conformance to all key aspects of the following IETF drafts:

RFC 2205

- draft-ietf-mpls-lsp-tunnel-xx
- draft-ietf-rsvp-refresh-reduct-yy Please note that due to the evolving nature of the protocol, the version numbers on these drafts are changing, and the test suite will be regularly updated to keep it abreast of the latest versions.



Product Features

RSVP Conformance Tests

The suite provides automatic conformance verification to evolving RSVP signaling protocol standards through more than 230 test cases. All common signaling protocol behaviors can be verified including:

- Setup and Teardown of Path. State Block
- Setup and Teardown of Reservation State Block
- Reservations with SE and FF Styles
- Error Codes and Error Value Verification
- Port Usage
- Non RSVP Cloud Compatibility
- Setting up of LSP's
- Record Route Procedures
- Verification of Path and Reservation Messages
- Rerouting of LSP
- Robustness
- Constraint-based Routing
- Exchange of Hello messages
- Bundle Message Processing
- Message ID Object Processing
- Usage of Ack Messages
- Summary Refresh Procedures

For comprehensive definitions of test cases and individual scripts please refer to the RSVP Conformance Tests Pocket Guide.

Test Methodology

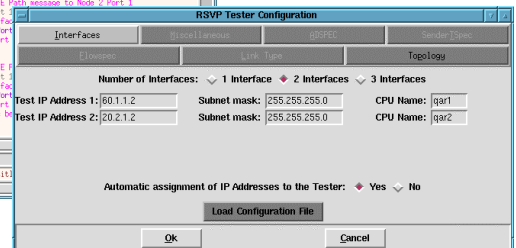
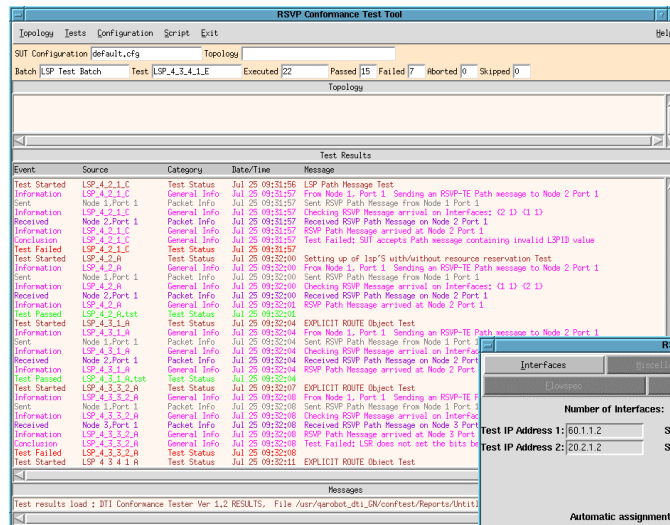
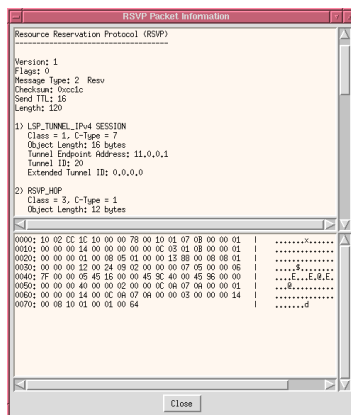
Agilent's conformance suite directly reflects the RSVP protocol specifications as detailed in RFC 2205 and other IETF drafts on the RSVP protocol listed in this document. Close alignment with these drafts will ensure your signaling implementations conform to the evolving RSVP industry standards and maximize interoperability.

Diagnostics

Clear verdict assignments for each test case run (such as 'Pass'/'Fail') can help quickly identify implementation errors. More detailed diagnostics can be used to pinpoint the course of any 'Fail' indicators.

It is possible to view the 'Pass'/'Fail' results from an entire test suite at a glance. Details of each test case can then be further analyzed to identify faults. Further details can be analyzed at the signaling protocol PDU level for both 'incoming' and 'outgoing' packets.

Test repeatability is achieved by saving test session setups and results. This allows quick regression testing of product enhancements and bug fixes.



MPLS Conformance Test Suite (RSVP)

Test Customization

All of Agilent's Conformance Test Suites provide users with open access to test scripts from all of the over 300 test cases.

Test engineers can easily edit the scripts to create their own customized test cases using Tcl. The QBOL scripting license is also included.

Complete RSVP Solution

Agilent's RSVP Conformance Test Suite when combined with the Agilent's RSVP Protocol Software provides the fastest and most comprehensive verification of your RSVP implementation available.

Technical Specifications

Behavior Tested	Applicable Standard
Setup and Teardown of Path State Block	RFC 2205
Setup and Teardown of ReservationState Block	RFC 2205
All types of Path and Reservation Messages	RFC 2205
Reservations with SE and FF Styles	RFC 2205
Error Codes and Error Value Verification	RFC 2205
Port Usage	RFC 2205
Non RSVP Cloud Compatibility	RFC 2205
Badly formatted messages and objects	RFC 2205
Setting up of LSP's <ul style="list-style-type: none"> • With/without resource reservations • Explicit Routed LSP's 	draft-ietf-mpls-rsvp-lsp-tunnel-xx
Record Route Procedures	draft-ietf-mpls-rsvp-lsp-tunnel-xx
Rerouting of LSP	draft-ietf-mpls-rsvp-lsp-tunnel-xx
Extended RSVP Error codes and Value Verification	draft-ietf-mpls-rsvp-lsp-tunnel-xx
Exchange of Hello messages	draft-ietf-mpls-rsvp-lsp-tunnel-xx
Bundle Message Processing	draft-ietf-rsvp-refresh-reduct-yy
Message ID Object Processing	draft-ietf-rsvp-refresh-reduct-yy
Usage of Ack Messages	draft-ietf-rsvp-refresh-reduct-yy
Summary Refresh Procedures	draft-ietf-rsvp-refresh-reduct-yy
Effect of Route Changes <ul style="list-style-type: none"> • Changes advertised by routing protocol 	draft-ietf-mpls-rsvp-lsp-tunnel-xx, RFC 2205

The RFCs 2209-2212 were referred to when developing the test suite.

Types of Label Switch Routers

- Ingress
- Egress
- Intermediate

Network Interface Types

- ATM 155 Mb/s, 622 Mb/s
- POS 155 Mb/s, 622 Mb/s, 2.4 Gb/s
- Ethernet 10/100, Gigabit

Routing Protocols Supported

- OSPF
- BGP
- IS-IS

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Agilent's RouterTester system

Agilent's RouterTester system offers a powerful and versatile test platform to address the evolving test needs of metro/edge platforms, core routers and optical switches. RouterTester provides Network Equipment Manufacturers and Service Providers with the industry's leading tools for wire speed, multiport traffic generation and performance analysis of today's networking devices.

Warranty and Support

Hardware Warranty

All RouterTester and QA Robot hardware is warranted against defects in materials and workmanship for a period of 3 years from the date of shipment.

Software Warranty

All RouterTester and QA Robot software is warranted for a period of 90 days. The applications are warranted to execute and install properly from the media provided. This warranty only covers physical defects in the media, whereby the media is replaced at no charge during the warranty period.

Software Updates

With the purchase of any new system controller Agilent will provide 1 year of complimentary software updates. At the end of the first year you can enroll into the Software Enhancement Service (SES) for continuing software product enhancements.

Support

Technical support is available throughout the support life of the product. Support is available to verify that the equipment works properly, to help with product operation, and to provide basic measurement assistance for the use of the specified capabilities, at no extra cost, upon request.

Ordering Information

To order and configure the test system consult your local Agilent field engineer.

United States:

Agilent Technologies
Test and Measurement Call Center
P.O. Box 4026
Englewood, CO 80155-4026
1-800-452-4844

Canada:

Agilent Technologies Canada Inc.
5150 Spectrum Way
Mississauga, Ontario
L4W 5G1
1-877-894-4414

Europe:

Agilent Technologies
European Marketing Organisation
P.O. Box 999
1180 AZ Amstelveen
The Netherlands
(31 20) 547-2323

United Kingdom
07004 666666

Japan:

Agilent Technologies Japan Ltd.
Measurement Assistance Center
9-1, Takakura-Cho, Hachioji-Shi,
Tokyo 192-8510, Japan
Tel: (81) 426-56-7832
Fax: (81) 426-56-7840

Latin America:

Agilent Technologies
Latin American Region Headquarters
5200 Blue Lagoon Drive, Suite #950
Miami, Florida 33126
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Fax: (305) 267-4286

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Agilent Technologies
19/F, Cityplaza One, 1111 King's Road,
Taikoo Shing, Hong Kong, SAR
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Fax: (852) 2506-9233

Australia/New Zealand:

Agilent Technologies Australia Pty Ltd
347 Burwood Highway
Forest Hill, Victoria 3131
Tel: 1-800-629-485 (Australia)
Fax: (61-3) 9272-0749
Tel: 0-800-738-378 (New Zealand)
Fax: (64-4) 802-6881

www.agilent.com/comms/RouterTester

