

SPIRENT AVALANCHE

LAYER 4-7 TESTING ON SPIRENT TESTCENTER

IPv6 TESTING WITH AVALANCHE

Today's networks and end clients are transitioning to IPv6 addressing at ever increasing rates. Avalanche provides a full breadth of IPv4 and IPv6 addressing options along with access, applications protocol and attack traffic for a robust solution set for testing IPv6 protocols and applications.

APPLICATIONS

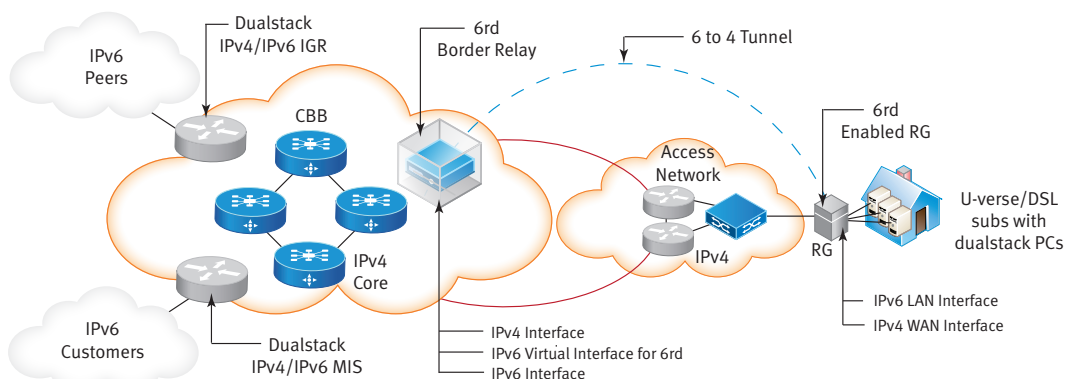
- Test performance and capacity of fully statefull IPv6 traffic and transactions
- Analyze NAT64 devices and services at load
- Create a wide range of hyper-realistic user transaction and statefull flows over IPv6 including HTTP, SSL, FTP, Video, VoIp, Attacks, customer user traffic, and much more
- Verify DS-LITE services for testing IPv4 directly over IPv6
- Test 6RD for rapidly deploying IPv6 unicast service to IPv4 sites
- Test encrypted IPv6 traffic over IPv6
- Establish IPSec tunnels at high rates and bandwidth
- Test fully created transaction from access via application transactions from millions of emulated IPv6 users

Being IPv6-ready requires a fair amount of testing through the entire development life cycle from Conformance, Functional and Performance testing. IPv6 with 128bit addressing provides networks with enough addresses for the foreseeable future but can impact performance, scale and application responses.

Spirent Avalanche™ provides a comprehensive set of realistic user protocols and the ability to create user application scenarios that mimics actual applications in the real world for both IPv4 and IPv6 traffic at unprecedented levels of scale and performance.

FEATURES AND BENEFITS

- Generate vast amounts of IPv6 layer 4-7 traffic to test the capacity, performance and resiliencies of network devices and services
- Test the effect of IPv6 address on multicast and time sensitive traffic such as VoIP and SIP along with inline standardized subjective voice and video quality scoring
- Test IPv4 to IPv6 bridging and transition devices with Avalanche's advanced client and server emulation capabilities.
- Measure application latency and response time when IPv6 addressing is used to determine any effect on user quality of experience or network accessibility.
- Use DS-LITE capabilities to test encapsulated dual stack IPv4/IPv6 services, capacities, and performance.
- Use the 6RD option for the testing of networks and applications under extreme transitions to IPv6 addressing in carrier and service provider environments



6rd Overview

TECHNICAL SPECIFICATIONS

IPv6 General Features

- Support for IPv6 addressing for Avalanche L4-7 protocols:
 - HTTP, HTTPS, SSL, Unicast, Multicast, FTP, SIP, SMTP, POP3, Telnet, RTMP
- SAPEE for custom imported traffic
 - Includes over 70 premade application protocols such as BitTorrent, Gtalk, SQL and others
- DNSv6
- VLAN support
- Full IPsec tunnel setup and bulk encryption for IKEv1 and IKEv2
- User specified static IPv6 routing
- User controlled Fragmentation
- User controlled transmit and receive traffic impairment functions

DS-LITE – Dual-Stack Lite Software

- Dual stack support based on RFC-6333
- Supports all Avalanche supported protocols the same as single stack IPv6*
- Encapsulate IPv4 packets over IPv6 (e.g. HTTP over TCP over IPv4 over IPv6).
- Avalanche supports DS-Lite both on client side and server side for end to end testing
- Simple to use, can be added to existing test cases

6RD – IPv6 Rapid Deployment

- Avalanche support both 6RD and 6to4, both on client side and server side
- Encapsulate IPv6 packets over IPv4 (e.g. HTTP over TCP over IPv6 over IPv4)
- 6RD is as a superset of 6to4
- IPv6 address will be calculated under 6RD RFC conditions or from user assigned subnet addressing

*IPSec and GTP are not supported with DS-Lite

Statistics

- IPv6, DS-LITE and 6RD provide comprehensive real-time and post test analysis allowing you to pin-point application response, performance and capacity issues quickly.

ORDERING INFORMATION

- IPv6, DS-LITE, and 6RD are independent licensable options and are available for all current Avalanche hardware configurations and our Avalanche virtual software based solutions.
- Please contact your Spirent sales representative for more information.

SPIRENT 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.spirent.com or contact your Spirent sales representative.

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