



LANDSLIDE

AAA DIAMETER APPLICATION

Spirent's Landslide™ AAA Diameter Performance Test Application is the only high performance test tool that simulates an AAA Diameter client using the Diameter protocol for 3G/4G networks. Landslide AAA Diameter is part of the family of test applications available on Spirent's proven Landslide platform.

SOLUTION OVERVIEW

Landslide AAA Diameter provides a comprehensive test system that emulates a Diameter client interacting with an AAA Diameter server for authentication, authorization and accounting functions. By emulating the key client functions, Landslide AAA Diameter provides real-world emulation of millions of authorization and accounting transactions. Landslide AAA Diameter also supports Extensible Authentication Protocol (EAP) to provide support for additional authentication methods. Current EAP methods supported include: MD5, GTC, AKA, SIM, MSCHAPV2 and TLS. EAP allows for the easy addition of authentication methods as required.

Additionally, Landslide AAA Diameter can be combined with the IP Data Test application to run any of the supported advanced data types directly over IP for cases where IP address allocation from a AAA Diameter server is desirable. This combination of applications can also be used for testing an AAA proxy device. In this case, all the advanced data test capability is available from within the same test case.

APPLICATIONS

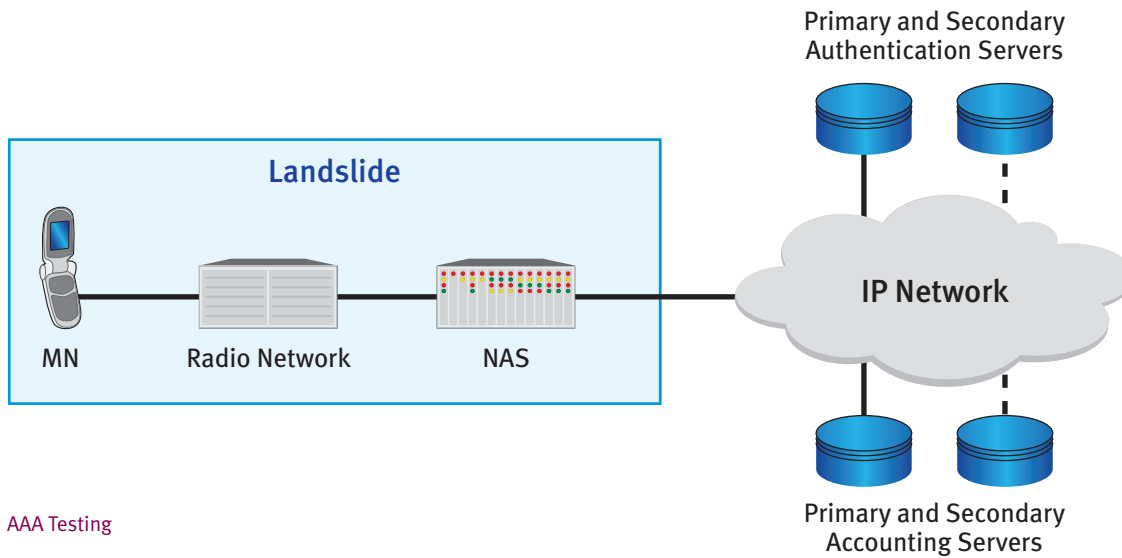
- Validate system scalability and identify capacity limits
- Measure call/data performance
- Characterize system before trial/delivery
- Identify performance ceilings
- Enable accurate capacity planning

FEATURES & BENEFITS

- Realistic, real-world simulations allow equipment vendors to accurately specify the performance characteristics of their equipment under real-world conditions
- Simultaneous control and user plane allows service providers to measure the performance of their network and to validate new features and services in the lab
- Unmatched scalability for the user to simulate subscriber loads ranging from a small rural town to the largest metropolitan city
- Standard Web browser interface so there is no need to load software on to user equipment
- Emulation of multiple network elements allows the user to test in a variety of network topologies providing more effective utilization of lab equipment and reducing capital expenditure and ongoing support costs associated with a test lab
- Automation control for the user to run many test cases simultaneously or serially on multiple Landslide test servers, creating real-world scenarios for heavy load and long-duration stability tests
- TCL Interface for the user to control/monitor the Landslide from a higher level management system, making it possible to compile specific test reports for both the emulation (Landslide) and the device under test
- AAA Server testing so service providers can measure the performance of their AAA Diameter servers and validate the servers' ability to handle the traffic generated within next-generation networks

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AAA Testing

The AAA test application provides comprehensive Authentication, Authorization and Accounting (AAA) testing in a 3G/4G environment using the Diameter protocol. The Network Access Server (NAS) and AAA servers exchange the messages necessary to negotiate mobile user connection requests, authenticate the mobile user, assign an IP address to the mobile user, determine the service that will be supplied to the mobile user, and maintain accounting information. Testing of authentication and/or accounting servers is supported as well as primary, secondary and round-robin (up to 10 SUTs in a pool) server configurations.

- AAA Diameter Server Emulation is an optional feature which allows Landslide users to add AAA Diameter server emulation to the Landslide test system. This emulation removes the need to configure and maintain an actual AAA Diameter server and removes that node as a potential bottleneck while measuring DUT/SUT performance.

- AVP Editor -- Landslide AAA Diameter features a powerful, easy-to-use graphical user interface that allows a test operator to quickly set up test sessions. The user may select optional Attribute Value Pairs (AVPs) from any of the libraries. The user also has the ability to create custom libraries, defining the vendor, vendor type, format, and value of any additional attributes desired using the AVP editor. The user can select which optional attributes will be included in each message type and define the field values for each attribute.

AVP Editor

TECHNICAL SPECIFICATIONS

- Test Activities
 - Capacity Test
 - Session Loading
- Landslide Manager
 - Up to 125 user accounts
 - Up to 48 simultaneous users
 - Up to 32 Landslide test appliances
- Landslide Test Server (without performance accelerator)
 - 400,000 simultaneous sessions
 - Generate up to 1,500 transactions per second
 - Up to 3 simultaneous users per test appliance
 - Emulate up to 1,000 NAS devices
- Landslide Test Server Ethernet ports
 - 4-port 10/100/1000Base-T NIC
 - 4-port 10/100/1000Base-SX NIC
 - Single-port 10 Gigabit XF SR NIC

- Referenced Standards
 - RFC 3588 Diameter Base Protocol
 - RFC 4005 Diameter Network Access Server Application

The listed specifications were used as reference material in the development of this application. This does not necessarily imply full implementation of all requirements within the referenced specifications.

See Page 4 for Ordering Information, Descriptions and Part Numbers.

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ORDERING INFORMATION	
DESCRIPTION	PART NUMBER
LANDSLIDE AAA DIAMETER TEST SYSTEM Includes Landslide Manager, Test Server and AAA Diameter Test Application. Allows testing of Diameter server authentication and accounting capability.	L-KIT-1010
LANDSLIDE TEST SERVER WITH AAA DIAMETER Landslide Test Server with AAA Diameter Test Application. Must be purchased as an expansion to a AAA Diameter Test System.	L-TS-1010
LANDSLIDE AAA DIAMETER TEST APPLICATION Adds Landslide AAA Diameter Test Application to an existing Test System.	L-APP-010
AAA DIAMETER SERVER EMULATION Adds AAA Diameter server emulation capability to a CDMA2000, GPRS, or other Landslide Test System.	L-FT-010
LANDSLIDE IP DATA APPLICATION Adds IP Data Test Application to an existing Test System.	L-APP-007
IPSEC ACCELERATOR CARD Provides four channels of hardware accelerated IPsec processing to a Test Server. Requires L-FT-004 and L-FT-032-A or L-FT-032-B.	L-ACC-004
DYNAMIC IPSEC EMULATION Adds IPsec emulation to an existing Test System. Requires L-ACC-004 per Test Server.	L-FT-004
DATA THROUGHPUT ACCELERATOR LICENSE Improves Test Server data throughput for Landslide Test Applications.	L-FT-032-A
PERFORMANCE ACCELERATOR LICENSE Improves Test Server data throughput and control plane performance for mobility Test Applications.	L-FT-032-B

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/gs or contact your Spirent sales representative.

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