SPIRENT LANDSLIDE

DYNAMIC HOST CONFIGURATION PROTOCOL FEATURE

The Spirent Communications Landslide™ Dynamic Host Configuration Protocol (DHCP) performance test feature simulates a DHCP server. Landslide DHCP is part of the family of test applications and features available on Spirent's proven Landslide platform.

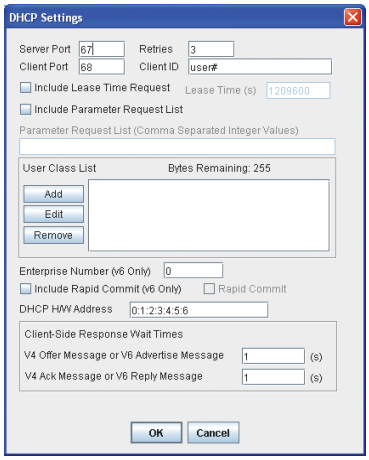
With the DHCP Server Emulation feature, you can add a DHCP Server Node test case to your test session to provide simple IP address allocation services to clients either directly or via a relay agent. Both IPv4 and IPv6 are supported. The server node maintains IP address pools that you define with the IP Pool Manager and, in response to requests, allocates addresses from the pools and manages client bindings. You can include the Renewal Time Value (T1) and Rebinding Time Value (T2) options in the acknowledgement messages to the client and define the maximum lease time supported by the node.

The server node only responds to messages sent to its IP address. All DHCP broadcast messages are ignored to prevent the node from inadvertently processing requests broadcasted by devices in the test network but outside the scope of the test.

With DHCP client support, available in several Landslide applications, DHCP is used by the emulated node to obtain an IP address from a DHCP server.

FEATURES AND 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 means there is no need to load software onto user equipment
- Emulation of multiple network elements for 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 so the user can 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
- DHCP Client Support—DHCP client support is available in the GGSN Nodal, IP Application Node and WiMAX test cases. You can configure the client to request a specific lease time, include the User Class option to request an address from specific address pools, and include a Parameter Request List. When multiple DHCP servers respond to a request, the client will always accept the first response and ignore subsequent responses.
- DHCP Server Emulation—With the DHCP Server Emulation feature, you can add a DHCP Server Node test case to your test session to provide simple IP address allocation services to clients either directly or via a relay agent. The server node maintains IP address pools that you define with the IP Pool Manager and, in response to requests, allocates addresses from the pools and manages client bindings.

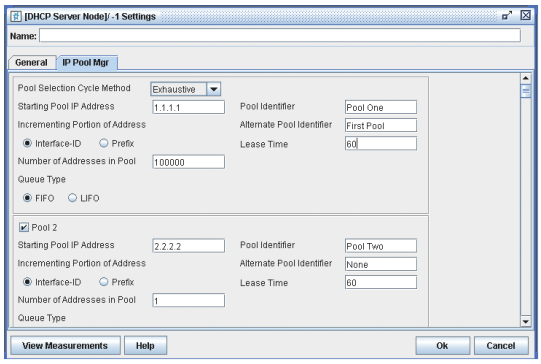


DHCP Client Settings

- You can include the Renewal Time Value (T1) and Rebinding Time Value (T2) options in the acknowledgement messages to the client and define the maximum lease time supported by the node. The server node only responds to messages sent to its IP address. All DHCP broadcast messages are ignored to prevent the node from inadvertently processing requests broadcasted by devices that are in the test network but outside of the scope of the test. User Class is the only DHCP option recognized by the node, and the node will always allocate an address from one of its pools for the maximum lease time regardless of whether a specific address or lease time is requested by the client.

APPLICATION

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



DHCP Pool Manager

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.spirentcom.com/gs or contact your Spirent sales representative.

TECHNICAL SPECIFICATIONS

- Landslide Test Server (without performance accelerator)
  - Up to 2,000,000 IP addresses
  - Up to 30 address pools
  - IPv4 and IPv6 addresses
- Landslide Test Server Ethernet ports
  - 4-port 10/100/1000Base-T NIC (P/N L-NIC-12)
  - 4-port 10/100/1000Base-SX NIC (P/N L-NIC-11)
  - Single-port 10 Gigabit XF SR NIC (P/N L-NIC-10)
- Physical Specifications
  - 3U, 19-inch rack-mount
  - 5.25” H x 16.53” W x 19.75” D
  - 31 lb. (14kg)
  - Operating environment: 5° C to 30° C
  - 100-240 V, 50/60 Hz, 6 A
- Referenced Standards
  - RFC 3315—DHCPv6
  - RFC 2131—DHCP

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.

ORDERING INFORMATION

DESCRIPTION	PART NUMBER
DHCP SERVER EMULATION Adds the DHCP server emulation to applications such as GPRS and Advanced/IP Data. Serial number or MAC ID of existing Landslide Manager required.	L-FT-006
PERFORMANCE ACCELERATOR LICENSE Improves test server data throughput and control plane performance for mobility test applications. Price per test server. S/N or MAC ID required.	L-FT-032-B

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