SCALABLE Releases QualNet 7 and EXata 5 Software Upgrades

– Latest versions of the award-winning network simulation platforms add key new features for modeling large enterprise networks and federating with other simulation systems –

Culver City, CA (23 October 2013) -- SCALABLE Network Technologies, Inc. (SCALABLE), the leader in network modeling and simulation technology, announced today the availability of new versions of the QualNet® and EXata® simulation platforms. The QualNet 7 and EXata 5 releases include new functionality for accurately modeling large enterprise networks, including support for Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS) hostnames and IPv6 addressing. In addition, a new Federation Interfaces Library is available which supports High Level Architecture (HLA) 1516, enabling easier integration and synchronization with other simulation systems.

QualNet is a network simulation platform that enables engineers and planners to create high fidelity “virtual” models of networks – comprised of the routers, switches, servers, access points, radios, antennas, computers and any other equipment, plus the protocols used to move information flows across the network – and then execute a wide range of realistic “what if” behavioral and operational scenarios in a highly cost-effective manner. Network simulation speeds up design and development time and helps optimize the overall communications environment.

EXata is a simulation platform with all of the functionality of QualNet, plus a real-time network emulation interface that lets live hardware integrate seamlessly with the simulated virtual network models, and live applications to run across the virtual environment. This emulation capability allows users to test and evaluate new equipment and applications at an enterprise scale without the risks and costs of acquiring and maintaining a large physical lab facility or proving ground. EXata also supports the inclusion of cyber vulnerabilities and cyber defense elements into the network models, which can then be subjected to a wide range of cyber attacks. This enables the network design and the expected applications performance to be evaluated for resiliency to cyber attack.

“Since our founding over 14 years ago, SCALABLE has been focused on delivering state-of-the-art network simulation solutions to commercial, governmental, educational and military institutions world-wide”, stated Andy Mazzarella, SCALABLE CEO. “We continue to invest development resources in order to maintain our technical superiority with regard to the scale and performance we offer the network planning and operations community. These latest upgrades to our QualNet and EXata platforms demonstrate our commitment to providing tools that help make mission-critical and business-critical networks more effective, more efficient and more secure.”
New Functionality

The QualNet 7 and EXata 5 releases include new functionality, issue resolutions and performance enhancements. Significant new elements include:

- **IPv6 Emulation Support:** Emulation support for IPv6 networks; the Packet Sniffing Interface and Internet gateway also support IPv6.

- **IGMPv3 Support:** Version 3 of IGMP (RFC 3376) adds support for "source filtering"; that is, the ability for a system to report interest in receiving packets only from specific source addresses sent to a particular multicast address to support Source-Specific Multicast (SSM).

- **DHCP Model:** Dynamic address allocation for IPv4 is added with support of DHCP (RFC 2131). DHCP is built on a client-server model, where designated DHCP servers allocate network addresses and deliver configuration parameters to DHCP clients. Major features are:
  - Permanent Allocation: DHCP server assigns a permanent IP address to a client.
  - Dynamic Allocation: DHCP assigns an IP address to a client for a limited period of time.
  - Manual Allocation: A client’s IP address is assigned by the network administrator, and DHCP is used simply to convey the assigned address to the client.

- **DNS Model:** Domain Name System adds support for Fully Qualified Domain Names (FQDNs). A hierarchical distributed database can now be configured which is used to store information for mapping Internet hostnames to IP addresses and vice-versa. Major features are:
  - Domain Name Space and Name Servers
  - DNS Name Resolver
  - Multiple DNS servers, i.e. primary DNS server and secondary DNS server
  - DNS Updates

- **Fully Qualified Domain Names (FQDNs) in Applications:** Several application models (CBR, FTP, FTP/Generic, HTTP, Super Application, TELNET, and Traffic Generator) have been enhanced so that the destination/server can be specified by its FQDN. These application models can be used if DNS is enabled. A new toolbar (called Dynamic Address Applications) has been added in Architect for these applications (except HTTP). For HTTP, FQDNs can now be used to specify servers along with node IDs and interface addresses.

- **IPv6 Autoconfiguration Model:** The IPv6 hosts using Stateless Address Autoconfiguration can configure the IPv6 (global) addresses automatically. The stateless autoconfiguration requires no special server and only minimal router configuration. Major features are:
  - Creation of link local addresses
  - Duplicate Address Detection
  - Address delegation
  - Creation of global address and site-local addresses
  - Address categorization into preferred and deprecated address
Channel Names: Wireless channels can be given unique names using the `PROPAGATION-CHANNEL-NAME` parameter. This allows for the listening and listenable to be specified by using channel names. (Channel frequencies can also be used to specify listening and listenable channels). Channel names can also be used to specify channels (in addition to channel indices) in LTE, UMTS, Satellite-RSV, Cellular Abstract, and GSM models.

Federate Extractor: Extractor is a GUI-based utility to extract scenario configuration from HLA/DIS federations.

HLA 1516: In addition to HLA1.3, HLA1516 protocol (SISO DLC) is now supported.

RPR FOM 2.0017: The HLA1.3 and HLA1516 interfaces also support RPR FOM 2.0017 (Draft 17) in addition to RPR 1.0.

Availability

Both the QualNet 7 and EXata 5 network simulation platforms are available now. They are supported on Microsoft Windows 7 and Windows 8, and CentOS 5.9, Red Hat Enterprise Linux 5.9 and Ubuntu 12.04 LTS. The upgrades are available free of charge to all customers covered under a current software maintenance agreement via their online download page.

For more information on SCALABLE solutions, contact the company at info@scalable-networks.com or call +1.424.603.6369.

About SCALABLE Network Technologies

Based in Culver City, California, SCALABLE develops simulation software to develop and test large, sophisticated enterprise and wireless networks and new communications equipment, and train personnel on cyber defense. SCALABLE solutions enable network planners to design better comms, IT specialists to better manage comms, and users to operate comms better.

SCALABLE also provides custom software solutions and engineering support services to major aerospace and defense contractors, the US Department of Defense, mobile network operators, research agencies and universities around the world.

More information on the company is available at scalable-networks.com.

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