When comms must work 100%

SCALABLE’s industry-leading communications simulation technology delivers an integrated workflow solution for network planning, analysis, testing, evaluation, and operation that outperforms other tools in speed, performance, and cost savings.

Background

Communications systems for critical environments such as large-scale public safety, online financial transactions, utility services or military missions must be architected to deliver as close to 100 percent availability as possible since any disruption in the real-time flow of information has costs measured in lives and livelihood.

SCALABLE Network Technologies (SCALABLE) develops high-fidelity communications simulation software that enables network planners and IT specialists to accurately model their environments, and efficiently run through a wide range of very realistic potential operating scenarios, including cyber attacks, to ensure communications will perform as required.

With SCALABLE, you can answer one of the most important questions from management or command staff: “Will the comms work 100 percent?”

Product Line

The QualNet® simulation platform can explore and analyze early-stage alternative device designs, network geometries and application code in pure synthetic networks at faster-than-real-time speeds, at a scale of up to thousands of network nodes.

The EXata® platform leverages the SCALABLE simulation engine to create “software virtual networks” (SVNs) – exact digital replicas of physical networks in virtual space that are indistinguishable to applications, devices, or users. It integrates and interoperates in real-time with all types of live components from physical networks – devices, applications, users, and network management tools – routing real traffic over the emulated network.

The EXata/Cyber product bundles the power of the EXata platform with a unique library of simulated cyber attack models. It is designed specifically to support and accelerate development of cyber security capability for communication networks. EXata/Cyber provides a robust emulation platform that can expose vulnerabilities (friendly and opposing) that threaten communication networks, and enables the rapid development and testing of countermeasures.

This capability brings advantage in a number of crucial areas:

- revealing vulnerabilities in network configurations
- emulating mobile network performance where malicious attacks may be confused with environmental effects
- understanding effects of cascading node failures
- training deployed personnel to rapidly defend and restore networks and shut down intruders

The new Scenario Player is an add-on module for the simulation platforms that provides very high quality 3D visual animation of the elements and their interactions during a scenario. The display is suitable for presentation to senior managers who need to quickly understand whether the comms will work as expected.
All SCALABLE products are essentially “platforms” that can be configured into many different “solutions”. The core communications simulation technology that drives SCALABLE products started out at UCLA as an advanced research project that received funding from DARPA to accelerate. Over fourteen years in the commercial marketplace, it has been adapted and refined in many different ways for many different applications, and all of the components remain highly flexible. In some cases, the C++ source code is available for virtually infinite customization by engineers with appropriate technical skills.

SCALABLE solutions tend to fall into one or more of three basic categories:

**PLANNING:** research and design communications protocols, network architectures, and deployment models

**TESTING:** evaluate different designs and technologies across a range of potential operating scenarios; integrate & interoperate with live equipment to simulate behavior at scale

**TRAINING:** create a “hands on” environment where users can safely learn how applications and operations will function when they get to the live environment, and work through missions in the face of cyber attack

**Company**

Founded in 1999, SCALABLE is based in Los Angeles, CA and is represented internationally by distributors with expertise in modeling and simulation. The company technical staff has extensive experience in the advanced science of simulation and subtle details of communications protocol behavior.

**Customers**

With more than 1,000 license deployments worldwide, SCALABLE plays an integral part of the development, testing, training and operations of next-generation defense and commercial communications networks. Below are some SCALABLE customers.