iTrinegy INE Series High Performance Network Emulators at a Glance

ITRINEGY NETWORK EMULATOR ULTRA   **ITRINEGY** NETWORK EMULATOR ENTERPRISE   NETWORKcomputing AWARDS 2015 ★ WINNER ★ PERFORMANCE TESTING PRODUCT OF THE YEAR

Overview

Networks have been rapidly evolving in recent years to address the changing needs of application workloads and user expectations. Corporate users and consumers expect applications to be available from any location, at any time of day and to work on any device. Modern applications must not only work effectively across a corporate private network but in public networks too, such as the Internet, Cloud, mobile or WiFi. Additionally, shifts in application development and the pressure to release application updates quickly has never been so high.

With these shifts, an application's ability to handle adverse network conditions is extremely important to ensure a good user experience. A crucial testing challenge is how to mimic the real-world environment so that an application's behavior can be validated under normal and abnormal conditions in a controlled and repeatable process.

iTrinegy recognized that the next generation of Network Emulator must provide organizations with a solution that enables them to create a blueprint of the operational network, however complex, so that every real-world perceivable network scenario can be played out. To meet the changing testing needs, iTrinegy developed the INE Enterprise and INE Ultra Network Emulators which are designed to integrate easily into the DevOps environment.

Benefits:

- **GUI -** Draw out your test network in a simple to use Visio®- like integrated GUI

- **Real-world Network Impairments -** In excess of 50 built-in impairments are available for mimicking real-world normal and abnormal network conditions for WAN, Cloud, Internet, Mobile, WiFi, IoT, Satellite, SD-WAN and other types of networks

- **Congestion:** Easily mimic and vary network congestion to make a link appear busy

- **Traffic Generation** - Generate both internal & external traffic to create congestion

- **Cisco QoS Class of Service Handling & Traffic Shaping -** Model Cisco's QoS class of service and traffic shaping algorithms to test an application's ability to work with Cisco QoS classes, with or without traffic shaping

- **Wireshark-Like Packet Classification, Filtering & Routing -** Classify, route, filter & selectively impair traffic by any packet field within any protocol layer (2-7) using a Wireshark-like syntax

- **User-Defined Protocol Definitions -** Deploy your own custom-built private, prototype or even secret protocols to run on the emulator

- **Sophisticated Routing -** Bridge and/or route traffic via the emulator enabling you to mimic the complexity of your real world network

- **Timed-scenarios -** Automatically change the network conditions in-line with the real world network or test requirements

- **Save and Share Network Scenarios -** Create a central scenario library allowing users to efficiently share scenarios

- **Multi-user -** Allows a single network emulator to be shared by many users as if each user has their own independent virtual test network

- **Virtual Ports**- Create new virtual ports as subdivisions of physical ports enabling the division of traffic by VLAN, IP Address, IP Port or packet data. Removes the need to purchase expensive multi-port appliances

- **CLI/API -** Orchestrate changes in the network conditions dynamically from external applications.

- **Security** - Centrally control access to the emulator's resources and ports.

- **Graphs -** Inspect what is happening to packet flows in the test network

- **Packet Capture** - Full packet capture provides pervasive application visibility, analysis and troubleshooting

- **Labs -** Get access to new ideas from our engineers before general release and build your own impairments using the INE's Packet Engine Programming Language (PEPL).

- **Flexible Deployment -** Available on hardware or as a software virtual appliance providing easy integration with your existing environment.

- **Administration** - Centralized web portal for fast setup, easy configuration and efficient maintenance

By using iTrinegy's new generation of network emulator organizations ensure their applications are Network-Ready and lower the risk of application failure. INE provides significantly greater scalability & flexibility and underpins operational acceptance testing, all at a lower cost than competing emulators.

INE ENTERPRISE & INE ULTRA KEY FEATURES

- A choice of 1Gbps or 10Gbps models
- A choice of 2,4,6, or 8 ports as standard (depending on model)
- Virtual ports enable multiple devices (200+) to share a single physical port
- Easy-to-Use Pictorial Network Drawing GUI
- Simultaneously run multiple tests or share a single test with multiple users
- Ideal for DevOps, IoT, Cloud and SD-WAN Projects

The following capabilities are among the main features in the new, third generation, iTrinegy INE Enterprise and Ultra range:

- **Easy To Use GUI:** Install the easy-to-use drag-and-drop INE Visio®-like GUI onto an unlimited number of Windows, Mac and Linux workstations enabling you to draw out your network.

- **Real-world Network Impairments:** Control network bandwidth, congestion, queuing and impair packets using over twenty built-in algorithms affecting network latency, loss, error, fragmentation, duplication or reordering for each network link, providing greater realism and enhanced confidence of tested applications.

- **Scale-up/Scale-out:** The INE range's multi-user, virtual ports and scenario sharing capabilities enable customers to future-proof their investment and increase usage when required. As testing requirements grow INE can be scaled out to support more users or teams and the number of concurrent tests scaled up with minimal impact on the test environment. Each user can run in isolation from each other as if they had their own personal network emulator and each test is controllable and repeatable thereby lowering the total cost of ownership, environmental footprint and system management overhead.

- **Automation:** Save time by integrating your network scenarios with functional and performance test tools and/or your own scripts instead of making manual changes.

- **Better Analytics and Capture:** Get easy and fast visibility into your application's performance using over twenty built-in graphs including export data feature for offline analysis in other tools. Packet capture at any point in the virtual test network enabling you to analyze and inspect application behavior in detail enabling rapid debug of application performance issues.

- **Flexible Integration:** INE easily integrates with the most complex network environments and can be used inline with your test equipment or configured to route and impair traffic in VLAN configurations such as router-on-a-stick. At the same time other traffic, not under test, can flow through the emulator unimpaired.

- **Optimized Price Point:** By using industry-standard hardware or a software virtual appliance and a Packet Engine Programming Language (PEPL) new features can be developed and added faster meaning lower price points for customers when compared with conventional proprietary appliances.

- **Keeping Pace:** The speed at which technology changes is almost impossible to predict but iTrinegy's customers can be assured that their investment is protected by the continuous development and the release of at least two major product upgrades each year.

Next Steps

To find out more about the latest iTrinegy INE series visit the iTrinegy website at http://www.itrinegy.com/index.php/products/network-emulators ,email us or call our offices or your iTrinegy stockist.