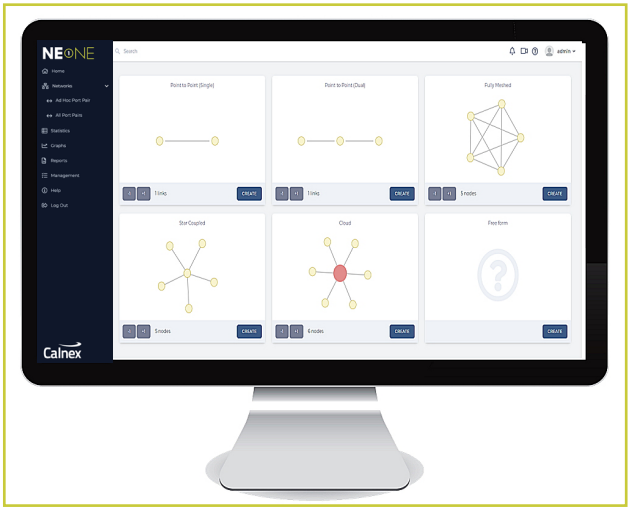
NE-ONE FAMILY
PRODUCT BROCHURE

NE ONE By Calnex

KNOWING YOU'RE NETWORK READY

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 work from any location, at any time of day and to run on any device. Modern applications must not only work effectively across a corporate LAN but across the WAN too which may include public networks, such as the Internet, Cloud, Mobile or WiFi.

Additionally, shifts in application development and the adoption of Agile and DevOps mean the pressure to release application updates quickly and deliver the highest level of reliability and performance, while also managing the budget, in a complex and evolving hybrid network has never been so high.



With these shifts, an application's ability to handle degraded networks is extremely important to ensure a positive customer experience. A crucial testing challenge is how to mimic the complex real-world networks so that application and device behavior can be validated under a wide range of network conditions in an accurate, controlled and repeatable environment.

We recognized that organizations needed a solution that lets them create a working facsimile of operational networks, however complex, so that every possible real-world network scenario can be played out. To address this, the NE-ONE family of Network Emulators was developed.

The design philosophy is simple: 'Anyone', from the network novice to the network expert, should be able to easily create Software Defined Test Networks in which to verify that applications are Network Ready.

FAST, FLEXIBLE AND EASY DEPLOYMENT

The NE-ONE family includes flexible deployment capabilities enabling you to seamlessly integrate the Software Defined Test Network into your test lab or production IT infrastructure.

In the Lab

From a simple inline bridge setup to multi-port or router-on-a-stick, the NE-ONE family has the most flexible and advanced deployment choices available making it easy to connect into your test lab.

You can also recreate the home or branch office firewall and router setup using built-in Network Address Translation (NAT) to mimic how networks are configured and behave in the real-world.

Continuous Test Network

As it's not always possible for your users to be physically in the lab the NE-ONE can be deployed on the edge of the production network so that they can test application performance from their usual location.

Enterprise-Wide Management

Reduce your operational overheads by including the NE-ONE into standard security and monitoring enterprise-wide management systems, making it an intergral part of your environment.

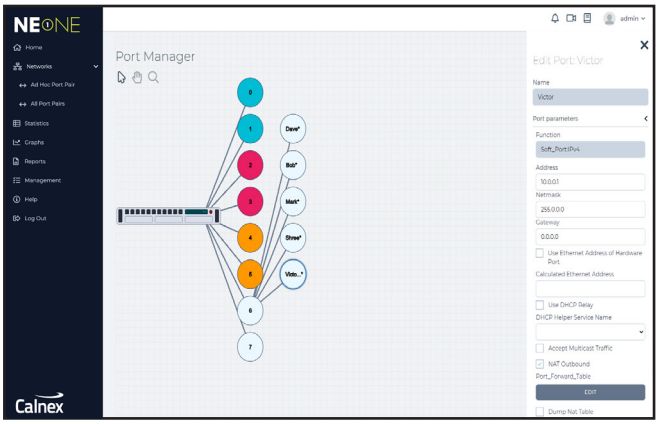
Deploy Anywhere

The NE-ONE family has a range of hardware models to suit your needs. Choose from a small portable desktop unit, half or full rack options that specifically meet enterprise-class performance requirements. Virtual editions of NE-ONE products offer the same breadth of features available in hardware solutions but as Virtual Appliances for VMware's ESXi and Openstack environments.

Operational Scaling

Whether you require testing to be conducted by just one person or multiple teams around the world, the NE-ONE family can scale up to meet your evolving needs.

Through features such as the intuitive web-based GUI, scenario sharing capabilities and Soft Ports, the NE-ONE range protects your investment and enables you to scale-out to support multiple teams and scale-up the number of concurrent tests, thereby lowering the total cost of ownership, environmental footprint and system management overhead, while conducting more complete tests or more tests in parallel.



Security

Remove the need for users to remember another username and password by using existing authentication processes in order to align its use with your corporate Single Sign On policy.

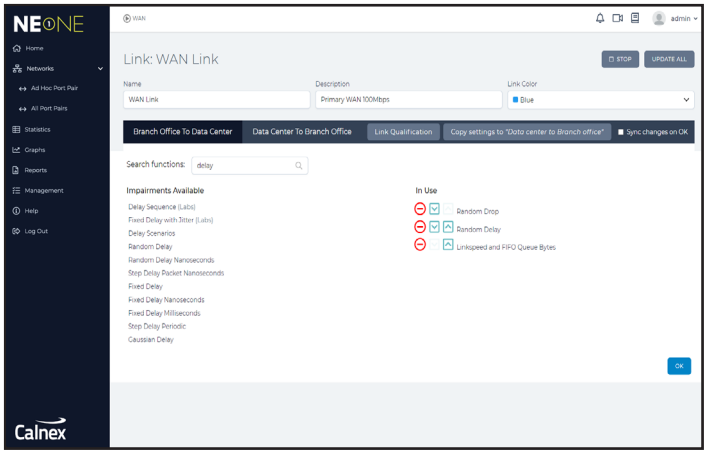
This also simplifies management of the NE-ONE, saving IT administrators' time and allowing them to focus on higher priority activities and tasks.

EASE-OF-USE

Designed to be used by 'anyone', the intuitive web interface enhances productivity through rapid installation and setup along with ready-made test networks and examples.

Out-of-the-Box Test Networks

The NE-ONE family comes pre-installed with a wide range of different network types and example profiles for LAN, WAN, Cloud, Satellite, Mobile, DSL and WiFi saving you time having to create them from scratch. Simply select your required environment and run your test.



Easily Deploy with Superior Realism

Choose from one of the templates or create your own test network using the built-in web based Network Designer tool incorporating NE-ONE's Virtual Routers and Links. Apply realistic impairments from a selection of over 100 parameters including bandwidth restrictions, latency, jitter, loss, errors and more, to accurately mimic what happens in real world networks.

Scenario Builder

Scenarios are an essential element of testing and help you to prepare your applications for what they'll actually encounter in the real-world. Use the Scenario Builder to set up a chronological and fully automated test network to help you identify weaknesses in your applications. From a train journey to the coffee shop, a walk around a city to a sports event, it provides almost unlimited possibilities for networked application testing.

Network Topology Wizard

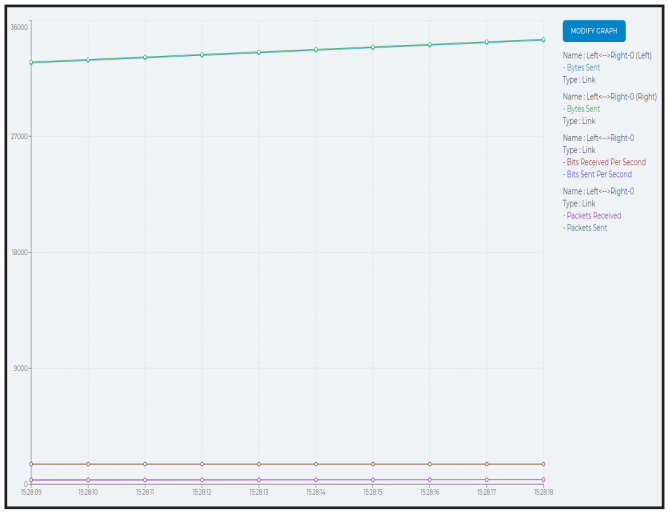
Creating sophisticated multi-point test networks, regardless of your level of network expertise, is incredibly quick and easy with the Network Topology Wizard. There is no need to manually draw and configure the number of links or nodes required to create the correct network environment. Instead, simply select from a choice of ready-made network templates including Point-to-Point, Multi-Point, Hub & Spoke, and Cloud. But if you prefer, you can still create your own unique network environments using the Free-Form Designer.

RAPID ANALYSIS AND OPTIMIZATION

Knowing what's happening on the test network is key for today's digital test teams so that they can quickly identify issues early and cut the time needed to find out what the problem is. NE-ONE puts a wealth of information at your fingertips ranging from real-time metrics and graphs to detailed and summary reports.

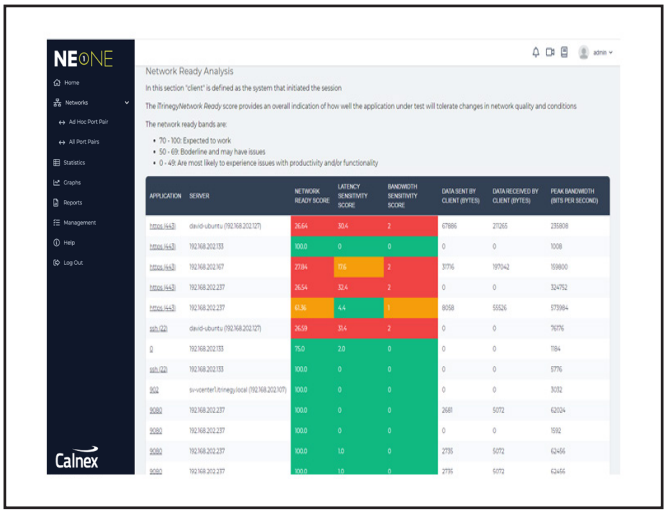
Graphs and Metrics

Analyze and measure in real-time application performance across the test network to identify issues and know what corrective actions are needed.



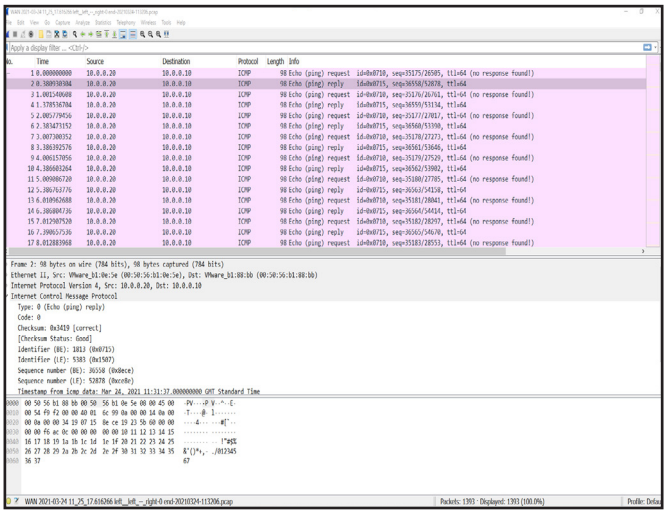
Reports

Figure out application behavior in detail enabling rapid discovery of its dependencies and network requirements.



Record the Network

Capture packets at any point in the test network to record network traffic for after-the-fact investigative capability. Provides pervasive application visibility, analysis and troubleshooting for use with other tools, including Wireshark®, enabling rapid debug of application performance issues.



Statistics

NAME	TYPE	STATUS	NETWORK NAME	DESCRIPTION	REPORTING CAPTURE	PACKET CAPTURE
0	HW Port	UP	System	00:50:56:b1:69:76		
1	HW Port	UP	System	00:50:56:b1:84:ad		

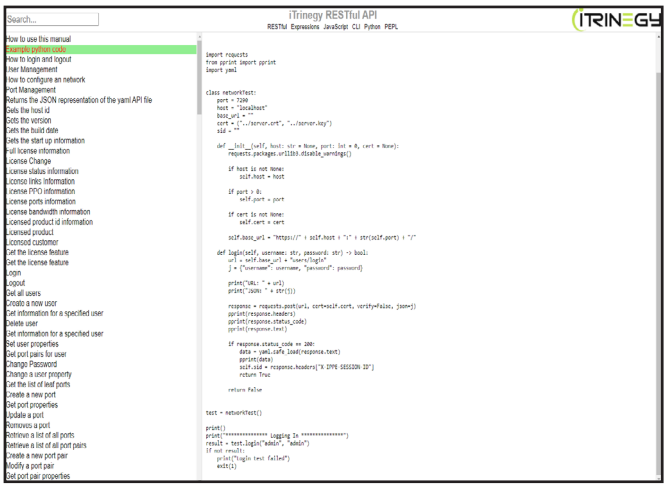
INTEGRATION AT YOUR FINGERTIPS

The NE-ONE family facilitates the evolution to a more efficient, modernized Software Defined Test Network through advanced automation, integration services and programmable architecture

Built For Power Users

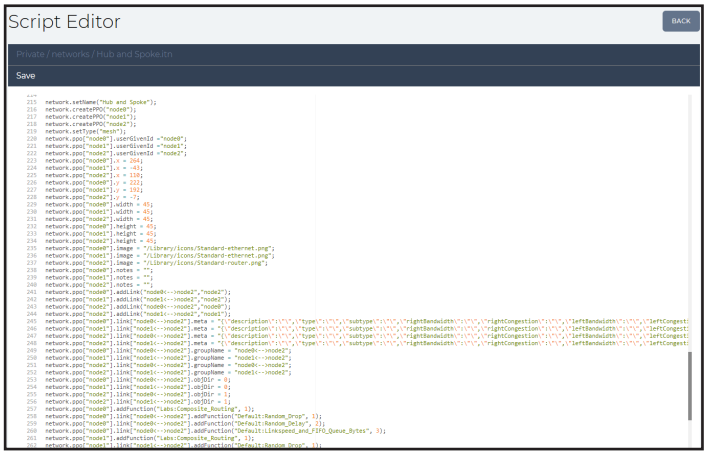
From the outset NE-ONE was built to accommodate the needs of power users, giving them complete control to create test networks on demand and change the structure on the fly. This includes the ability to:

- Optimize testing processes by automating repetitive tasks in the test network to save time and speed up testing.
- Connect external tools to developer-accessible features to create new software defined test network services or applications.
- Choose from the simple-to-use CLI or the RESTful API that allows complete, dynamic and programmatic control for easy integration and high level programmability.



A Programmable Architecture

The rich multi-layered programmable architecture, allows a fully customizable test network environment by using software-defined programmability that enables greater flexibility and product sophistication.

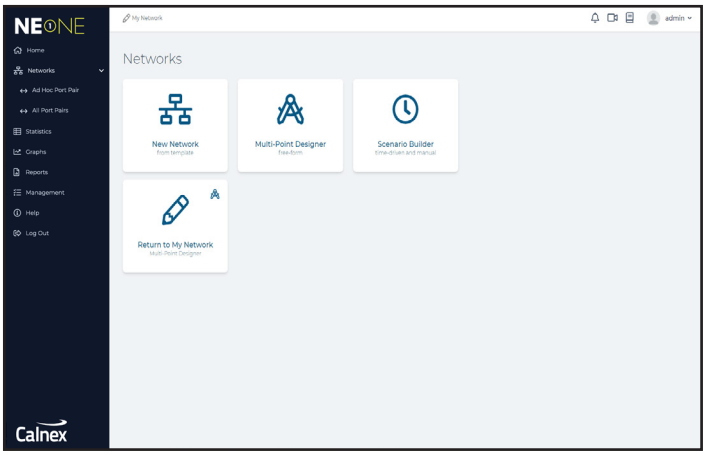


- Use the embedded Javascript engine to build powerful models and simulations of real-world active networks.
- From within the inside, control and synchronize changes concurrently across the test network to create high-fidelity models of real-world situations.
- Dynamically and rapidly change the state in one or many parts of the Software Defined Test

LOWERING THE TOTAL COST OF OWNERSHIP

It's a fundamental fact of life that if you want a quality product that you expect to pay a little more. But in the long term you actually save thanks to NE-ONE's centralized administration and do once, use multiple times style which increases the quality of testing while lowering the Total Cost of Ownership (TCO).

- Save & Share configurations with other users allowing them to reuse previously defined scenarios.
- Manage users centrally allowing you to easily control access to resources.
- Install software, operating system and security updates using built-in single-click functions.
- Investigate and debug problems fast by viewing simple to understand messages in the intuitive GUI.



FUTURE PROOF YOUR INVESTMENT

We recognize that in many cases, the initial need could be on a modest scale but as circumstances change you may wish to benefit from the capabilities of our higher spec models. With this in mind the NE-ONE family has been purposely designed to not only support today's requirements but also provide a cost-effective upgrade path to accommodate the inevitable future growth. This is easy to achieve in both the Professional and Enterprise editions by an easy upgrade path ensuring your initial investment is protected.

CONTINUOUS DEVELOPEMENT

The speed at which technology changes is almost impossible to predict but you can be assured that your investment is protected by our continuous development program which includes the release of significant product upgrades each year.

PASSIONATE ABOUT SUPPORT

Our Customer Support Team is in the business of partnering with customers to ensure they feel valued and receive total customer satisfaction. As a customer you gain access to a highly responsive and experienced technical team with years of practical hands on experience in helping customers.

A COMMITMENT TO QUALITY

Quality is key to the NE-ONE and all our products and our quality management system covering sales, development, support, finance, hardware assembly, and test departments is certified in accordance with the ISO 9001 standard. Our commitment to quality and client satisfaction ensures that quality is consistent throughout the NE-ONE family.

WHICH EDITION IS RIGHT FOR YOU?

Whether you're a network novice or expert there is a model in the NE-ONE family to suit your needs. Choose from the following editions, as well as several models for the solution that meets your needs.

The right edition will usually depend on your bandwidth requirements, number of physical ports and the type and number of test networks that you need to create.

	NE-ONE PROFESSIONAL	NE-ONE ENTERPRISE
Features	Intelligent Web User Interface Impairment Library Scenario Builder Graphs, Logging & Packet Capture Simple CLI/API Up to 20 Concurrent Network Links	Intelligent Web User Interface Impairment Library Scenario Builder Graphs, Logging & Packet Capture Advanced CLI/API Highly Scalable Architecture Multi-user / Team Sharing Soft Ports Reports RESTful API / JavaScript Engine Enterprise Management
Network Topologies	Point-to-Point Point-to-Point Dual Hop	Point-to-Point Point-to-Point Dual Hop Hub and Spoke Fully Meshed Cloud Any combination of the above
Ports	2 to 4	2 to 8
Bandwidth	100 Mbps to 10 Gbps	1 Gbps to 40 Gbps
Platforms	Virtual Appliance Half-Rack Desktop (Portable)	Virtual Appliance 1U Rack In-Cloud Custom

LEARN MORE

The NE-ONE family of Hardware and Virtual Appliances continues to lead the market with accurate, high performance, scalable Network Emulation that brings the behavior of private and public networks into controlled and repeatable Software Defined Test Networks.

Deployed by over 850 enterprises, governments and military organizations around the world NE-ONE is allowing businesses to effectively manage their digital products and brand, minimizing costs and risk while improving quality for projects such as:

- Application Performance Testing
- Data Center and Server Relocation
- Games Performance Testing
- Internet of Things Systems Testing
- Mobile Application Performance Testing
- Moving to the Cloud
- Radio over IP Testing
- Remote Worker Infrastructure Testing
- Satellite Network/Constellation Testing
- SD-WAN Proof of Concepts
- WAN & Network Simulation
- plus many more...

across industry sectors including:

- Aerospace & Defense
- Broadcasting
- Chemical & Oil
- Communications
- Education
- Finance
- Gaming
- Government
- Healthcare
- Logistics
- Manufacturing
- Professional Services
- Retail
- Technology
- Utilities

This brochure showcases some of the highlights across the NE-ONE Network Emulator family. Please note that not all of the features described are available on every model. You can click through to the NE-ONE Professional and NE-ONE Enterprise specification sheets for all the latest details.

NEXT STEPS

Contact us today to learn more about the NE-ONE Network Emulator family or to arrange an online demonstration:

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