

## MANAGING THE RISK OF NETWORKED APPLICATIONS WITH ITRINEGY AND NEOLOAD

Neotys and iTrinegy's integration partnership enhances the accuracy of testing by incorporating real-world network conditions into the load and performance test environment.

### WHY USE NETWORK PROFILING AND EMULATION TOOLS?

Applications must be developed and tested in the same "real-world" environments in which they will be deployed, which also means the same over-the-network experience the user is likely to encounter when using the application. Most networks, in particular, public ones, are challenging to applications as they create significant application performance issues that reflect on the end-user experience. Organizations that do not adequately test networked application performance before release risks loss of revenue, damaged reputation, or even loss of life in military or emergency services.

### WHY EMULATE NETWORKS WHILE LOAD TESTING?

While the mobile network operators continue to improve bandwidth and connection speeds (4G / LTE will potentially offer a speed of up to 300 Mbps - and even more than this when LTE Advanced comes out) the reality is that this greater capacity could quickly be used up by new services that come to the market (as well as contention between users in the "backhaul") - so any application you are developing or planning to deploy over mobile networks may still need to contend with limited bandwidth and slow download/upload rates.



For instance, your experience could be completely different depending on the location or carrier environment (e.g., a crowded train station or airport).

As an example, an iPhone displaying a 3G connection could be achieving anything from 384Kbps to 14.4Mbps depending on location, service provider and other network traffic. Other network characteristics such as latency and packet loss will also significantly influence the performance of applications accessed using a mobile device. That is why you have to consider these constraints a primary risk and measure their impact on your application under various network conditions. Developing and testing the application in a perfect 1 Gbps LAN is not representative of how the application will be used in the real world!

### WHY NEOLOAD?

The NeoLoad performance testing platform is designed to help today's performance engineers and developers save time. With advanced capabilities such as automatic script maintenance, Selenium conversion, and one-click dashboard accessibility (where shared metrics are displayed in Dynatrace), organizations are now able to fully automate, provide visibility, and easily share with key stakeholders across Dev, QA, and Ops.

### WHY ITRINEGY?

iTrinegy allows you to manage the risk of networked applications. With solutions giving peace of mind to all organizations deploying networked applications or migrating existing ones, iTrinegy is the perfect solution when it comes to:

- **Profiling:** iTrinegy helps you to understand the networks you use and how they affect application performance
- **Predicting:** With iTrinegy, you can mimic the worst possible network environments your application might encounter
- **Preparing:** Adjust your application design strategy or migration accordingly. Tweak testing parameters and repeat.

## HOW ITRINEGY AND NEOTYS WORK TOGETHER

The direct connection between Neotys NeoLoad and iTrinegy's Network Emulation software allows companies to mimic any network topology and scenario (good, bad or intermittent) -in a controlled and repeatable manner - from Development through Quality Assurance to Deployment.

- Real-world network conditions integrated with Neoload performance testing
- Customers can understand application performance across mobile, WiFi, WAN, LAN, satellite, DSL, cloud and other types of networks
- Configure normal and extreme network conditions to understand the impact on user experience
- Repeat tests in a controllable and repeatable network environment which is better than testing in the real network

## EXAMPLE USE CASES

**IOT Performance Testing** - In today's app-driven and IoT world (there could be between 20 billion and 100 billion connected devices), meeting the customer's expectations is what separates good IoT solutions from great ones. And the only way to know your solution will perform in real-world use cases and conditions is through performance testing. NeoLoad delivers the capabilities teams need to create realistic IoT load and performance testing scenarios. You can quickly and efficiently create tests and monitoring profiles that accurately represent your real users regarding network conditions and geographic locations. iTrinegy's INE Enterprise and INE Ultra network emulators, with their unique Port Virtualization capability, can easily recreate realistic Virtual Test Networks in which potentially hundreds of devices can be connected using just a limited number of physical ports.

**Mobile Application Performance Testing** - While the mobile network operators continue to improve bandwidth and connection speeds (4G / LTE will potentially offer a speed of 300 Mbps—and even more than this when LTE Advanced comes out) the reality is that this greater capacity could quickly be used up by new services that come to the market (as well as contention between users in the “backhaul”). Any application you are developing or planning to deploy over mobile networks may still need to contend with limited bandwidth and slow download/upload rates. This joint solution will allow you to test the performances of your applications on mobile devices as they can realistically replicate the network conditions encountered in mobile network environments

**Application Performance Testing** - An essential part of application performance testing is to conduct such tests in conditions that realistically reflect the environment in which the application is ultimately expected to operate. Testing onboard applications in those conditions is required in order to understand the consequences of a congested network. With Neotys & iTrinegy solutions, you can conduct a test that behaves like a real network environment by virtualizing a wide variety of different network conditions (bandwidth restrictions, latency & jitter, packet re-ordering, packet errors and packet loss etc.) and networks (WANs, Wireless, GPRS, Cloud, Satellite, MPLS, routed through connections available in the public transport, etc.)

## ABOUT ITRINEGY

iTrinegy is a world leader in Networked Application Risk Management and trusted by governments, military organizations, and enterprises across the globe. iTrinegy's unrivaled pedigree in safeguarding networked application performance delivers business-critical services over all types of networks. Through iTrinegy's suite of virtual test network and profiling products, developers, Q&A and deployment teams can replicate real-world networks in both physical and virtual test environments. This unique capability allows them to mimic any network topology and scenario (good, bad or intermittent) - in a controlled and repeatable manner during development through Quality Assurance to deployment. iTrinegy has the expertise and technical solutions to mitigate all networked application deployment risks. Contact iTrinegy - US : Tel +1 888-448-4366 | Email : [info@itrinegy.com](mailto:info@itrinegy.com) ; EMEA : Tel +44 1799 252 200 | Learn more : [www.itrinegy.com](http://www.itrinegy.com)

## ABOUT NEOTYS

Neotys is a leading innovator in load testing & performance testing for Web and Mobile applications. It has 12 years of development investment into NeoLoad – the performance testing platform designed to accelerate Agile and DevOps processes. Built by engineers who recognized that to achieve their Agile adoption objective, they needed to create a product that could facilitate superior load and performance testing continuously. The result – up to 10x faster test creation and maintenance with NeoLoad.

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