

INE for Windows (1-Port & 2-Port Versions) For Desktop or Laptop Installation

Creating the right networks conditions at the desktop

With more and more applications being expected to work over Wide Area Networks (WANs), Wireless LANs, GPRS/3G and Satellite networks it makes sense to include application function and performance testing in these environments as part of your application development and testing process.

How can INE for Windows help me?

iTrinegy Network Emulator for Windows (**INE for Windows**) is aimed at the Professional Developer, Tester or IT Specialist looking for a cost effective, simple to use Network Emulator for testing how their applications perform between individual workstations and servers.

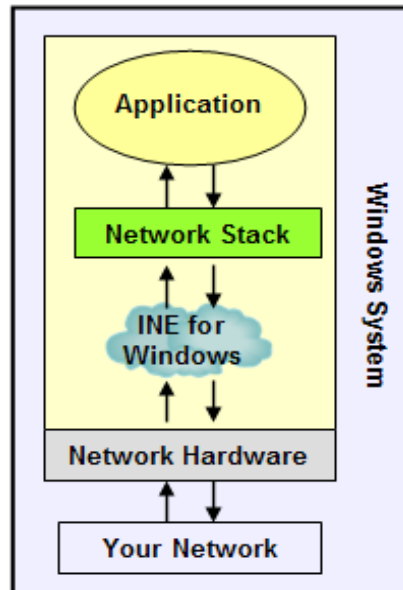
INE for Windows is network emulation software designed to install onto a Windows XP/Vista or Windows Server system and allow some or all of the applications running on that Windows system to “experience” realistic network conditions when accessing the network, rather than the near perfect LAN they’re connected to.

Using INE for Windows may be the first step, before a full multi-user test for which the **INE Enterprise** version is recommended.

How Does Each Version Work?

INE for Windows 1-Port runs on your desktop, and when activated, intercepts network communications between the application on your system and the network.

This allows your LAN network, which might be 100 Mbit/s with less than 1ms



INE for Windows 1-Port intercepting network communications on a single desktop or laptop

Delay (Latency) and almost 0% Loss, to behave like a WAN (Wireless, Satellite, or other non-LAN network) with very different parameters. So now when you run your application it’s just like running it in that network.

INE for Windows 2-Port software can be installed on a suitably configured dedicated Windows PC, laptop, workstation or server (i.e. with a 2nd network card) in order to convert it into simple-to-use 2 Port inline network emulator.

What Network Characteristics can be controlled?

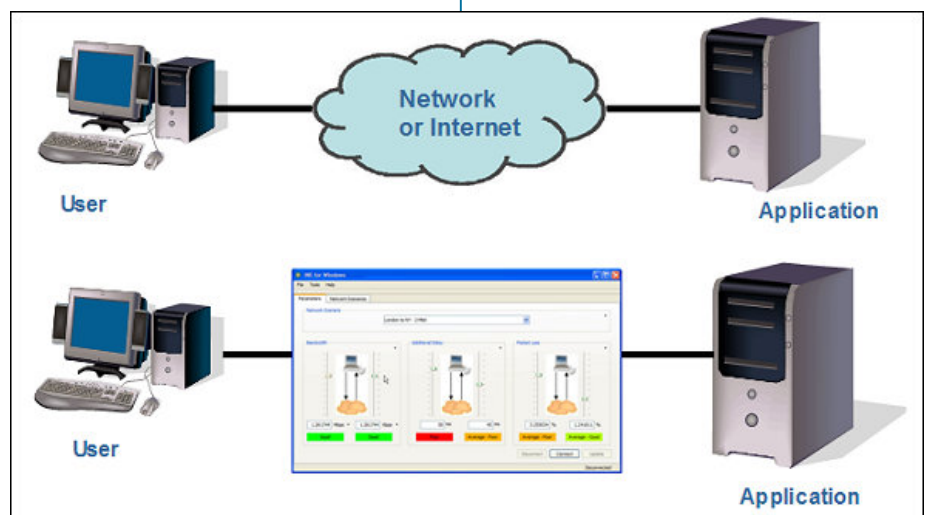
INE for Windows allows you to control all the major network parameters that affect application behaviour in networks:

Link Speed: e.g. T1, E1, Modem, (A)DSL, GPRS, 3G, Satellite etc.

Available Bandwidth: How much of the link the application can use.

Delay (Latency): How long the network packets take to reach their destination e.g. inter city, nationally, internationally or over wireless networks like GPRS, 3G or WiMAX.

Jitter: How much variation there is in the delay, which can have a profound effect



INE for Windows-2-Port converts your laptop or desktop PC into an inline network emulator

INE for Windows - WAN Simulation At The Desktop

on applications like VoIP, and live Video over IP etc.

Loss: How much data is lost by the network, for example in wireless networks and some types of WAN data, losses may be as high as 10% or even more.

Symmetry & Asymmetry

All of the above parameters are controllable asymmetrically as well as symmetrically i.e. you can have separate values for data leaving the Windows system compared to data arriving at the Windows system.

How Easy is INE for Windows to Use?

INE for Windows has been designed with speed and ease of use in mind.

From the main control interface it is a simple process to make changes to Bandwidth, Delay (Latency) and Packet Loss. Simply set the appropriate slider to the required setting, click update and you are ready to see how your application will perform in the new network environment.

Can I Save My Network Settings?

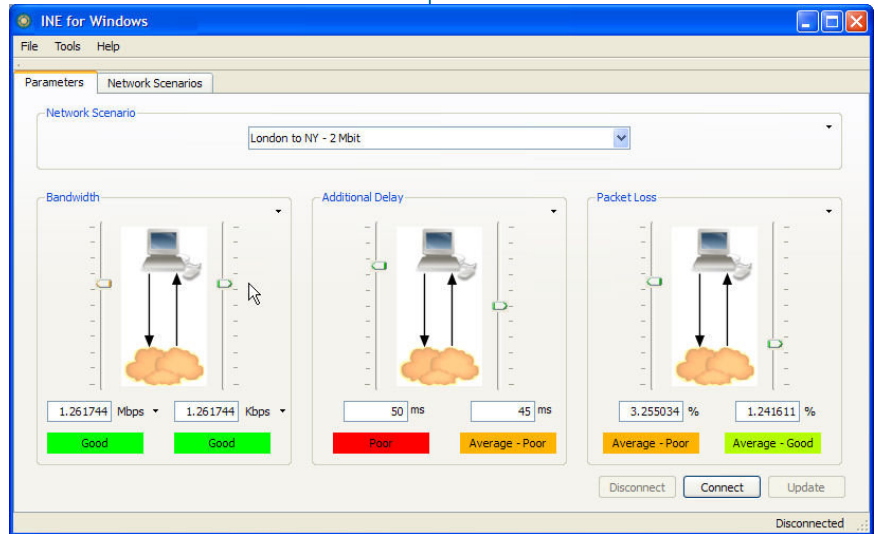
Yes, INE for Windows can store your current settings as a Network Scenario File for subsequent reuse.

But what if I don't know which settings to use in the first place?

If you are not sure which network settings to apply you can download predefined network scenarios from the iTrinegy networks scenario repository.

Alternatively, a network specialist within your organisation could create and save suitable scenarios as Network Scenario files

Another option is to use a product like the INE Companion which can record (and replay) traffic going across your network and then create a network scenario based on this data.



The INE for Windows Control Interface is easy to use

Will INE for Windows affect all network communication to and from my desktop?

No, you can specify which IP Address Ranges, Ports and IP Protocols will be subject to being controlled by INE for Windows. This is very important when wishing to avoid, for example, impeding traffic to your MS Exchange e-mail server as this would harm your normal work but would have no relevance to the application being developed or tested.

Is INE for Windows a single-user only network emulator?

No, INE for Windows can be deployed in single user or multi-user situations:

Single User: When installed on a client system, INE for Windows can be thought of as a **Personal Network Emulator** controlling the network traffic between your system and other systems (servers) in the network.

Multiple User: INE for Windows can be installed onto multiple Windows systems within an organisation, allowing multiple developers and testers to use the product **simultaneously and independently** of each other while sharing predefined network scenarios from the **INE Network Scenario Server**.

This also allows simultaneous tests of an application from multiple locations, by utilising separate Windows Client machines with different network control parameters set for each one e.g. one

setup for London to Washington and another for San Francisco to Washington. INE for Windows can also be installed onto a server, allowing a shared network experience.

The INE for Windows Product Range

- **INE Express** - A "Lite" workstation version
- **INE Professional** - Additionally offers the ability to download & store predefined network scenarios and can be remote controlled.
- **INE Server** - Designed to run on a server so that multiple users can simultaneously share the same network conditions.



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