zti
Communications

LanTraffic V2
Enhanced

Version 2.8

Traffic Generator for IP Networks (IPv4 & IPv6)
FTTx, LAN, MAN, WAN, WLAN, WWAN, Mobile, Satellite, PLC, etc.

Designed for Windows x64 platforms and 10Gbps Ethernet

Product Overview

The **LanTraffic V2 Enhanced** software generates traffic for IP networks on 64-bit platforms by using the following protocols: TCP (Transmission Control Protocol), UDP (User Datagram Protocol), ICMP (Internet Control Message Protocol).

The add-on software called **Automation Tool for LanTraffic V2 Enhanced** allows automating operations with **LanTraffic V2 Enhanced**. For instance, you can run test campaigns automatically.

Various testing configurations can be implemented using more than two PCs. **LanTraffic V2 Enhanced** creates TCP or UDP connections between PCs through the IP network. **LanTraffic V2 Enhanced** creates also ICMP connections.
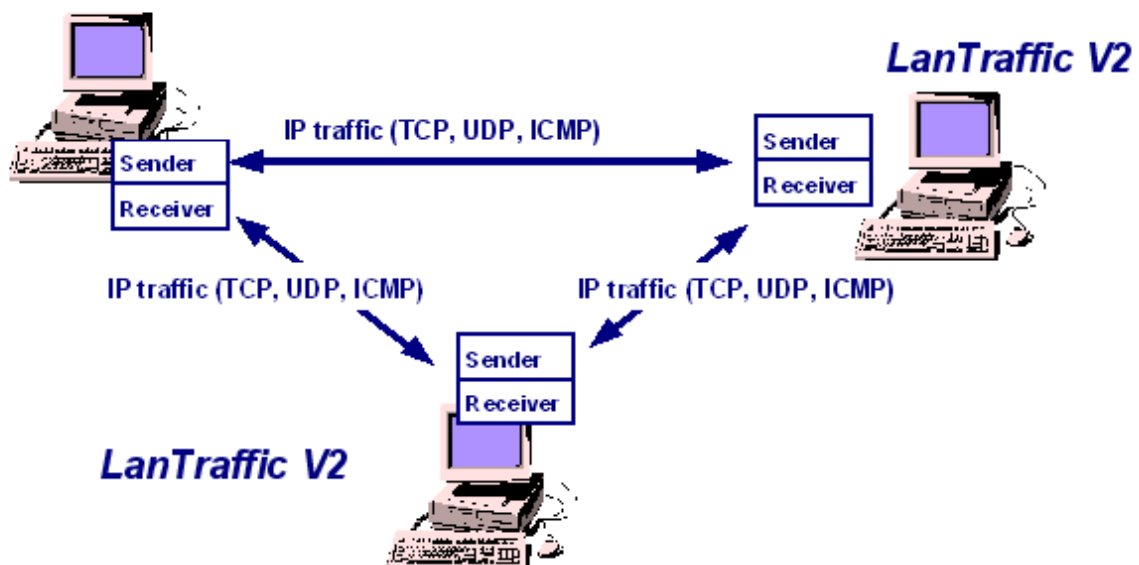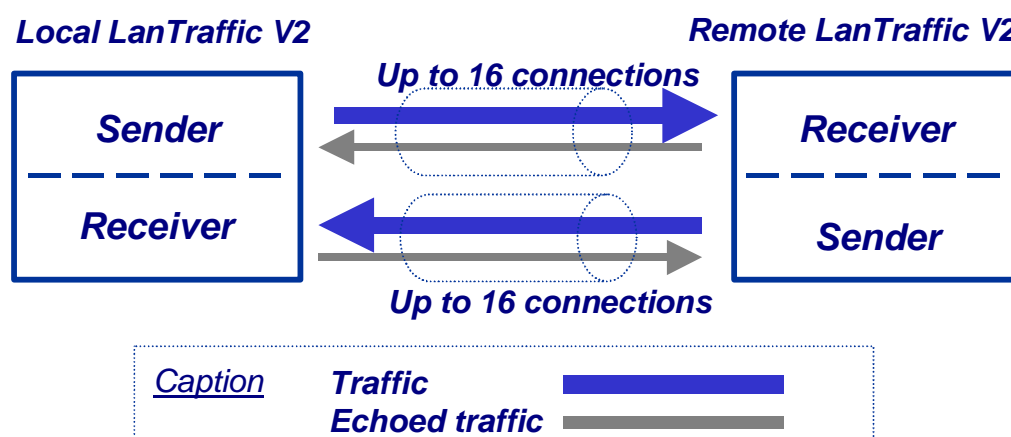
Product Requirements

- Pentium PC running Windows Vista, Seven, 8, Server 2003, Server 2008 or Server 2012 64-bit versions, and with at least 512 MB Ram.
- 20 MB free hard disk space.
- Acrobat Reader XI is needed to display the help.
- 1024 x 768 display and DPI setting = Normal size (96 DPI).
- One Network Interface Card (LAN, WLAN, etc.)

Products features

The **LanTraffic V2 Enhanced** testing tool is made of a **Sender** part and a **Receiver** part.

Local LanTraffic V2   **Remote LanTraffic V2**

Up to 16 connections

Sender   *Receiver*

Receiver   *Sender*

Up to 16 connections

Caption   **Traffic**
            Echoed traffic

- The **Sender** generates up to 16 simultaneous UDP (Unicast, Multicast or Broadcast) and/or TCP connections and/or ICMP connections. The connections can be established in two different testing modes:

    Unitary Mode: you can select the traffic generator data source and configure packets size and inter packet delay for each connection. With the ICMP protocol you can:

    ⇨ ICMP Echo request packet number and content: packet generator (fixed, randomized, alternated and increasing / decreasing).

    ⇨ ICMP Echo Request data size: fixed, randomized, alternated and increasing / decreasing.

    ⇨ ICMP Echo Reply receiving timeout: fixed, randomized, alternated, increasing / decreasing or use of a mathematical law.

    LanTraffic V2 Enhanced offers three different data sources:

    - Automatic data generator by using mathematical laws,

    - Packets generator: many parameters can be defined (number of packets to send, inter packet delay, packet contents, …)

    - File: selection of a file to send.

    ⇨ ***Automatic Mode***: select one mathematical law for connections generating (up to 16 connections) and starting time, and then select a second mathematical law for data volume to be sent. This mode is
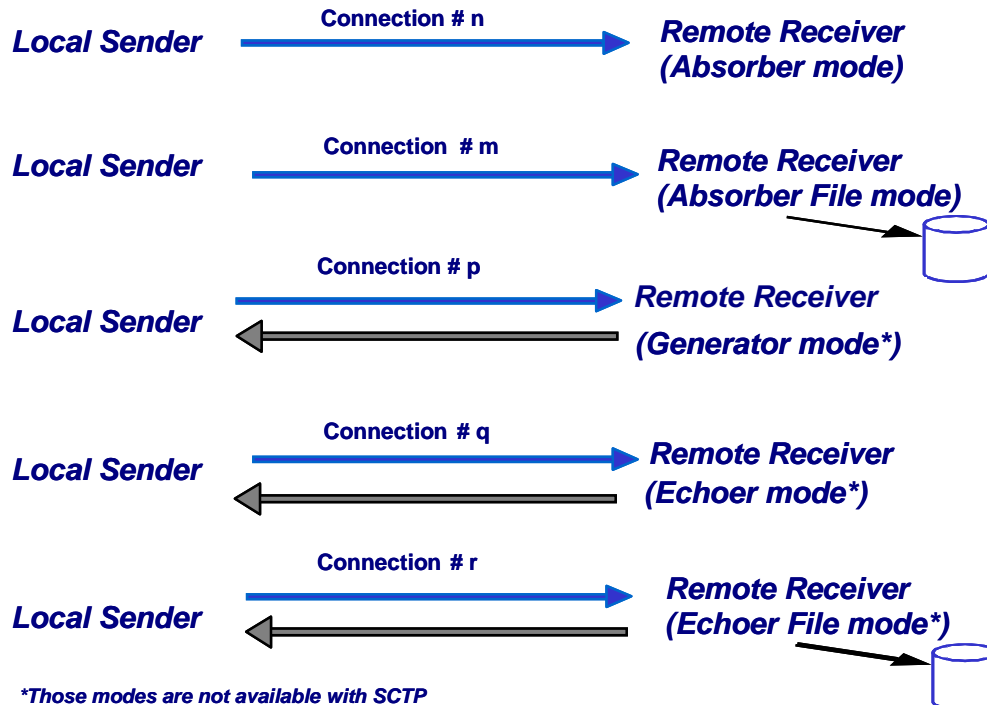
available with UDP and TCP only. With this mode, ICMP connections can not be started.

⇨ **Statistics**: for each connection the following statistics parameters are displayed by the **Sender** and can be saved in a file:

- Sent throughput[1]
- Received throughput[1]
- Sent packet throughput[1]
- Received packet throughput[1]
- Sent data volume[1]
- Received data volume (volume of data sent by the remote) [1]
- Sent packets
- Received packets (packets sent by the remote)
- Data volume to send[1]
- Remaining volume (of data to send) [1]
- Sequence numbering errors
- RTT Mean (Round Trip Time)
- Jitter [1]

[1] These statistics are not available with ICMP protocol.

❑ The **Receiver** receives traffic (up to 16 simultaneous connections) and operates five different working modes: Absorber, Absorber File, Generator, Echoer and Echoer File.

 ↳ Each Receiver connection can be set up according to one of the following five modes:

Local Sender ——— Connection # n ——→ *Remote Receiver (Absorber mode)*

Local Sender ——— Connection # m ——→ *Remote Receiver (Absorber File mode)*

Local Sender ——— Connection # p ——→ *Remote Receiver (Generator mode*)*

Local Sender ——— Connection # q ——→ *Remote Receiver (Echoer mode*)*

Local Sender ——— Connection # r ——→ *Remote Receiver (Echoer File mode*)*

*Those modes are not available with SCTP

 Note: We consider that the local machine is used for sending traffic and the remote one is used for receiving traffic.

⇨ **Statistics**: for each connection the following statistics parameters are displayed by the **Receiver** part and can be saved in a file:

- Sent throughput
- Received throughput
- Sent packet throughput
- Received packet throughput
- Sent data volume
- Received data volume (volume of data sent by the remote)
- Sent packets
- Received packets (packets sent by the remote)
- Data volume to send
- Remaining volume (of data to send)
- Sequence numbering errors
- Data not echoed
- Jitter

::: Unicast, Multicast and Broadcast feature

LanTraffic V2 Enhanced is able to generate and receive Unicast, Multicast (IPv4 and IPv6). and Broadcast (only with IPv4) IP traffic. The multicast and the broadcast features are available with the UDP protocol only.

::: IP version selection

LanTraffic V2 Enhanced supports IPv6 (available from Windows Vista and later versions and Windows Server 2003).

*LanTraffic V2 Enhanced supports the IPv6 numerical address format (128 bits long) as well as canonical addresses. The IPv6 multicast is available with **LanTraffic V2 Enhanced** in accordance to RFC 2373 where a multicast IPv6 address starts with FF.*
With IPv6 the maximum size of the TCP packet is **1440** bytes whereas it is **1460** bytes with IPv4.

::: Interface selection

The interface selection of a LAN card (NIC), a virtual NIC such as an IP tunneling protocol or a remote access is useful to control the data traffic hardware route. **LanTraffic V2 Enhanced** is able to generate and receive Unicast, Multicast and Broadcast IP traffic on a selected interface, giving the user a deeper control where data are exchanged and makes multiple routes definition easier. The interface selection is not available with SCTP.

::: Statistics values

Statistics values presented by **LanTraffic V2 Enhanced** are calculated at the Application level. They don't include the protocol header, the IP header nor data link header and/or trailer.

The Automation Tool for LanTraffic V2 Enhanced

The add-on software **Automation Tool for LanTraffic V2 Enhanced** allows you to edit scenarios, carry out scenarios, set the **LanTraffic V2 Enhanced** parameters and pilot **LanTraffic V2 Enhanced** automatically on the same PC.
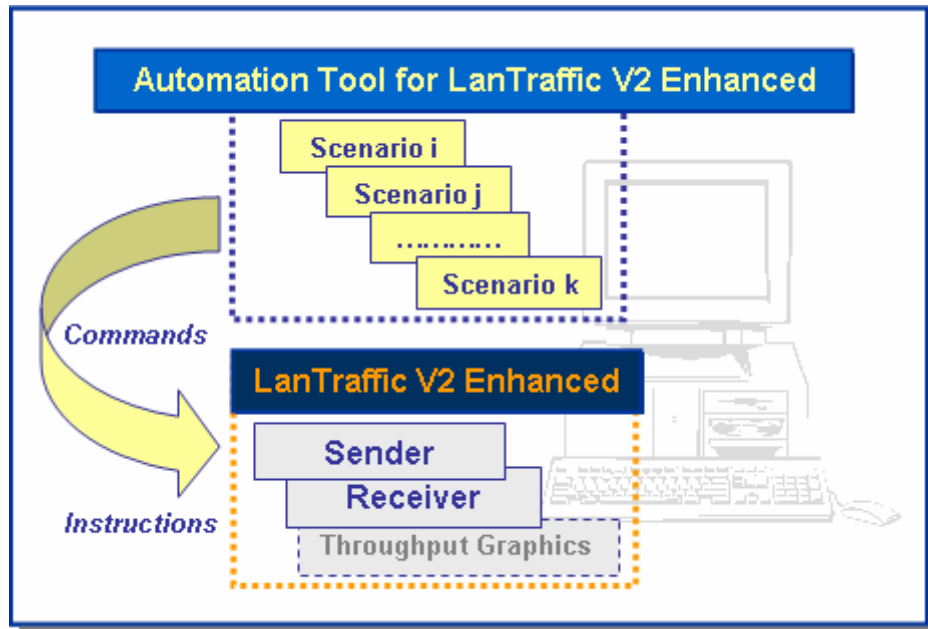
A scenario is a succession of commands and instructions.
A command is used to set parameters and/or activate a function of **LanTraffic V2 Enhanced**.
For example the *Set and Start connection(s)* command helps to set parameters for IP connections and to start the traffic on these connections. With such command you specify the IP address, port number, protocol, packet size, inter packet delay, duration, etc. and you start the traffic generation for these connections.

An instruction is used by the Automation Tool to create an internal process. For example, the *Wait Date/Time* instruction suspends the scenario execution up to the specified date and time before to continue.

By using the **Automation Tool for LanTraffic V2 Enhanced** you can:

- Set automatically the parameters of the **LanTraffic V2 Enhanced** software,

- Start and stop IP connections based on timers,

- Execute the scheduled operations in accordance with your own timing,

- Make repetitive tests operations automatically,

- Simplify the tests reproduction,

- And more…

Conditions of use

LanTraffic V2 Enhanced is licensed on a per workstation basis. You will need to purchase a separate license for each machine that you install it on.
Each licensed copy of the software installed on a workstation has:
- a unique Site Code that requires the corresponding unique Site Key to be entered before being operational.
- or a USB key that must be plugged before launching the software

Delivery

Includes CD with documentation, printed installation guide.

Additional technical support and software maintenance (including major and minor software upgrades) for a period of twelve months may be ordered separately.

To download an evaluation of **LanTraffic V2 Enhanced,** please visit us at:
http://www.zti-communications.com