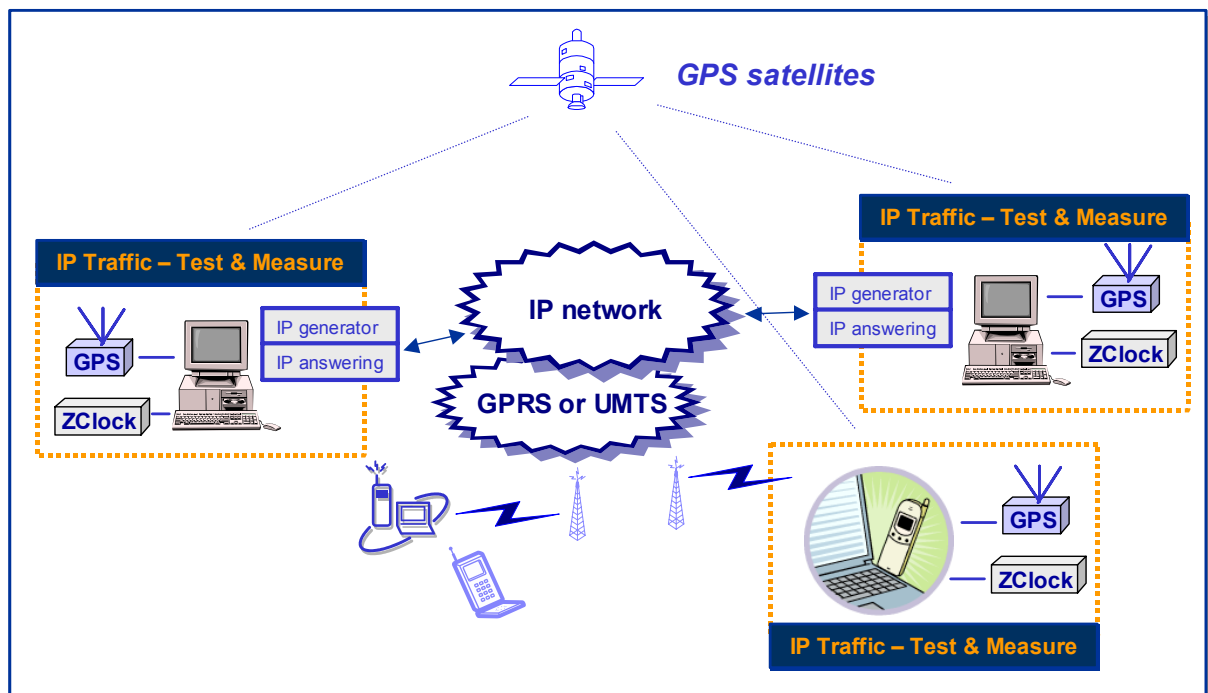




IP Traffic -Test & Measure

Version 2.3

**Traffic Generator and Measurement Tool for Wired,
Wireless, Satellite, PLC or Mobile IP Networks**



Read Me First

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Part 1 : Install and Uninstall “IP Traffic - Test & Measure”

To install this software testing tool, you need a PC with [at least a 1024 x 768 display screen resolution](#) and [Windows 98, 2000 or XP](#).

Note: the “IP Traffic – Test & Measure” software is also named “IP Traffic” in this document.



** To run "IP Traffic – Test & Measure" your computer's screen resolution must be configured on 1024 X 768 (at least). Please note that you should mask the task bar in a 1024x768 screen resolution, so you could have an optimal view of the software interface.*

** For Windows 2000 and XP you must be logged on with administrator privileges.*



It is advisable to first close anti-virus application before installing this software.

The “IP Traffic – Test & Measure” software is configured by default with a 15-days limited license. When the time limit expires, “IP Traffic - Test & Measure” will cease to run. See part 2 below for more information about the license program.

The installation procedure is a standard installation program for Windows 98, 2000 and XP.

1.1. Install “IP Traffic - Test & Measure” from a downloaded trial version



The installation procedure under Windows 2000 or XP requires to be logged on with administrator privileges.

The installation procedure is a standard installation program.

Please note that the install procedure of the "IP Traffic - Test & Measure" software will be different in the last part, depending on the target Operating System: Windows 98 or Windows 2000 / XP.

- If you have downloaded the “IP Traffic – Test & Measure” software trial version from our website, you have downloaded the file “Setup_IPTraffic.zip” that includes the documentation and the file “Setup_IPTraffic.exe”.
- Run “Setup_IPTraffic.exe” and follow the “IP Traffic - Test & Measure” setup instructions to proceed with the installation.

By default, the “IP Traffic - Test & Measure” software will be installed in the following directory (C: is used as example):

C:\Program Files\IP Traffic with the following subdirectories:

C:\Program Files\IP Traffic

C:\Program Files\IP Traffic\Samples

C:\Program Files\IP Traffic\Samples\DataFile (for the IP Generator)

C:\Program Files\IP Traffic\Samples\User_DLL (for the IP Generator)

- The following step of the installation procedure depends on the target Operating System (Windows 98 or Windows 2000/XP). Follow the instructions relating to your Operating System in the table below:

<i>Windows 98 install</i>	<i>Windows 2000/XP install</i>
<p>Just before the end of the installation, the WinPcap Setup Program is automatically launched in order to install the packet capture driver used by “IP Traffic - Test & Measure”.</p> <p>You will find below the different windows displayed by WinPcap 3.0 during the install procedure.</p> <p>Once the install procedure of WinPcap is finished, you can end the “IP Traffic - Test & Measure” installation procedure.</p> <p>You must then reboot your PC.</p>	<p>The installation procedure automatically installs the packet capture driver named ‘znpf.sys’ on your system in the ‘IP Traffic’ directory.</p> <p>When the installation is finished, you don't need to reboot your computer to consider changes.</p>

Start Menu shortcuts created:

Start > Programs > **IP Traffic**

⇒ **IP Traffic – User Guide**

⇒ **Automation Tool – User Guide**

⇒ **Read Me First**

⇒ **License help**

⇒ **Uninstall IP Traffic**

⇒ **IP Traffic – Test & Measure** (click to run the “IP Traffic” software)

⇒ **Automation Tool for ‘IP Traffic – Test & Measure’**

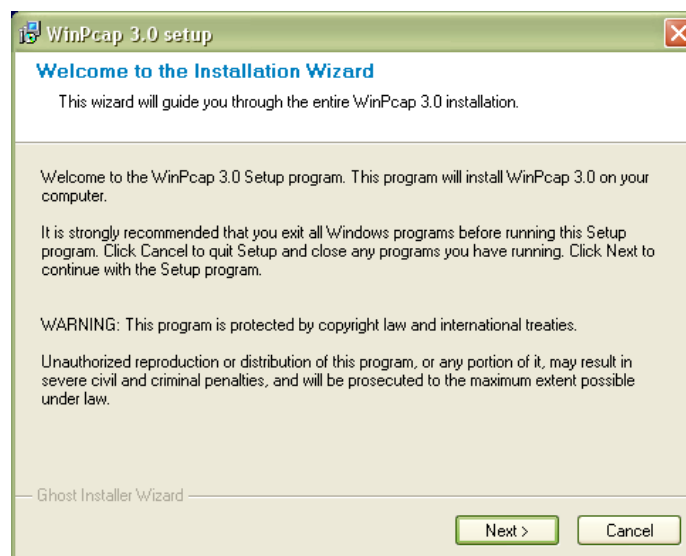
With the “IP Traffic - Test & Measure” trial version, when you launch “IP Traffic - Test & Measure” for the first time, a message is displayed showing remaining days of use (for example, 15 days left out of 15 in the following example):



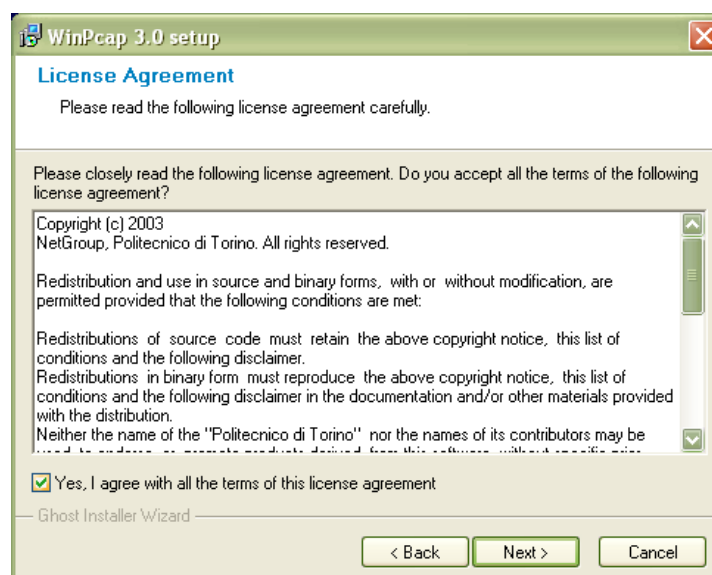
Please refer to the third paragraph to configure your license.

Automatic install of the packet capture driver by WinPcap for Windows 98

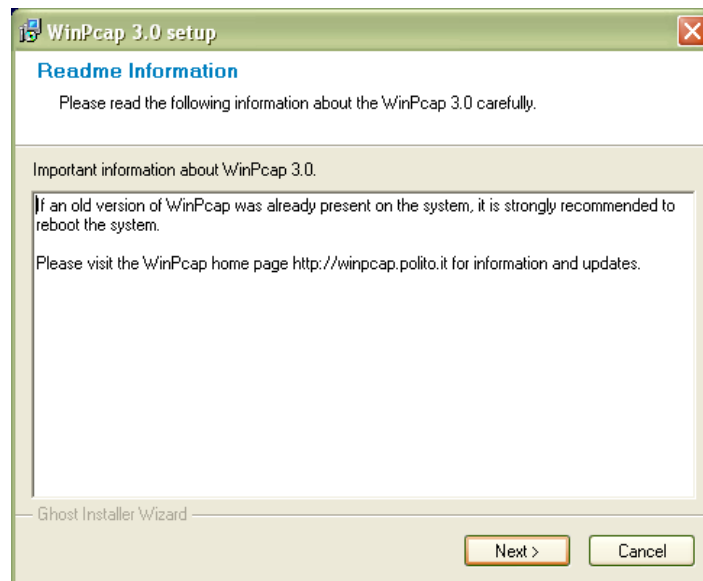
Note: The WinPcap program includes software developed by the Politecnico di Torino and its contributors.



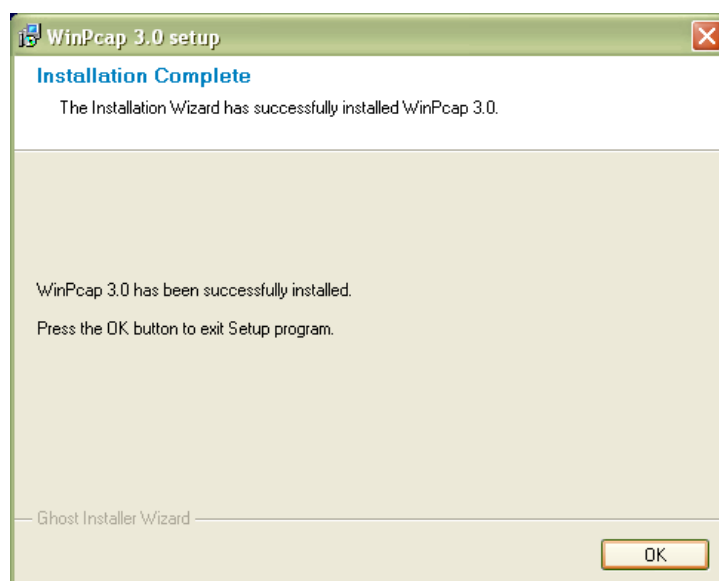
Then press Next to continue and display the License Agreement.



Once you have checked "Yes, I agree with all the terms of this license agreement", then press Next to continue.



Press Next to continue.



1.2. Install “IP Traffic - Test & Measure” from the CD-ROM



The installation procedure under Windows 2000 or XP requires to be logged on with administrator privileges.

The installation procedure is a standard installation program.

Please note that the install procedure of the "IP Traffic - Test & Measure" software will be different in the last part, depending on the target Operating System: Windows 98 or Windows 2000 / XP.

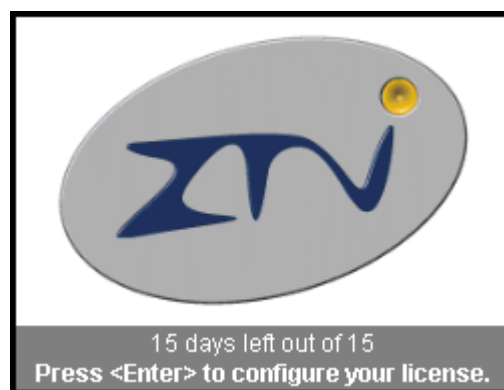
- First, insert the «IP Traffic - Test & Measure» CD-ROM on disk drive.
- Click on “Start”, “Execute” and type “CD-ROM unit>:\Setup_IPTraffic.exe”
Follow the “IP Traffic - Test & Measure” setup instructions to proceed with the installation.
By default, the “IP Traffic - Test & Measure” software will be installed in the following directory (C: is used as example):
C:\Program Files\IP Traffic with the following subdirectories:
 C:\Program Files\IP Traffic
 C:\Program Files\IP Traffic\Samples
 C:\Program Files\IP Traffic\Samples\DataFile (for the IP generator)
 C:\Program Files\IP Traffic\Samples\User_DLL (for the IP generator)
- The following step of the installation procedure depends on the target Operating System (Windows 98 or Windows 2000/XP). Follow the instructions relating to your Operating System in the table below:

<i>Windows 98 install</i>	<i>Windows 2000/XP install</i>
<p>Just before the end of the installation, the WinPcap Setup Program is automatically launched in order to install the packet capture driver used by “IP Traffic - Test & Measure”.</p> <p>You will find below the different windows displayed by WinPcap 3.0 during the install procedure.</p> <p>Once the install procedure of WinPcap is finished, you can end the “IP Traffic - Test & Measure” installation procedure.</p> <p>You must then reboot your PC.</p>	<p>The installation procedure automatically installs the packet capture driver named ‘znpf.sys’ on your system in the ‘IP Traffic’ directory.</p> <p>When the installation is finished, you don’t need to reboot your computer to consider changes.</p>

Start Menu shortcuts created:Start > Programs > **IP Traffic**

- ⇒ **IP Traffic – User Guide**
- ⇒ **Automation Tool – User Guide**
- ⇒ **Read Me First**
- ⇒ **License help**
- ⇒ **Uninstall IP Traffic**
- ⇒ **IP Traffic – Test & Measure** (click to run the “IP Traffic” software)
- ⇒ **Automation Tool for ‘IP Traffic – Test & Measure’**

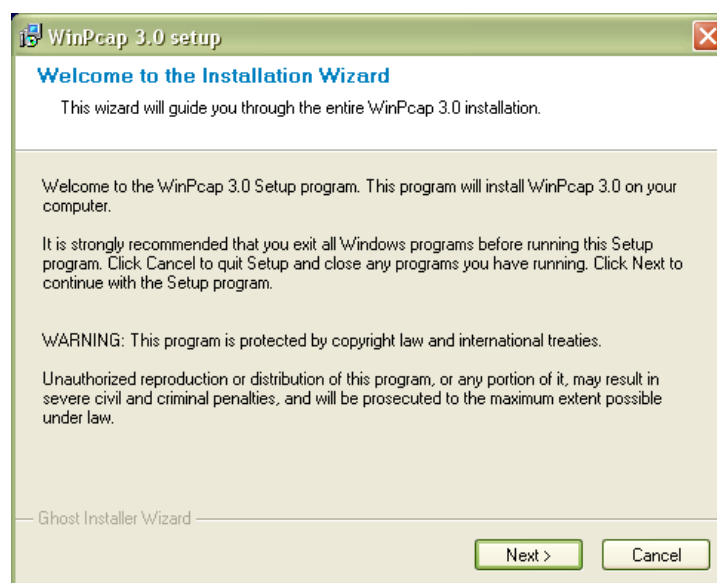
When you launch “IP Traffic - Test & Measure” for the first time, a message is displayed showing remaining days of use, even if you have bought an unlimited license (for example, 15 days left out of 15 in the following example):



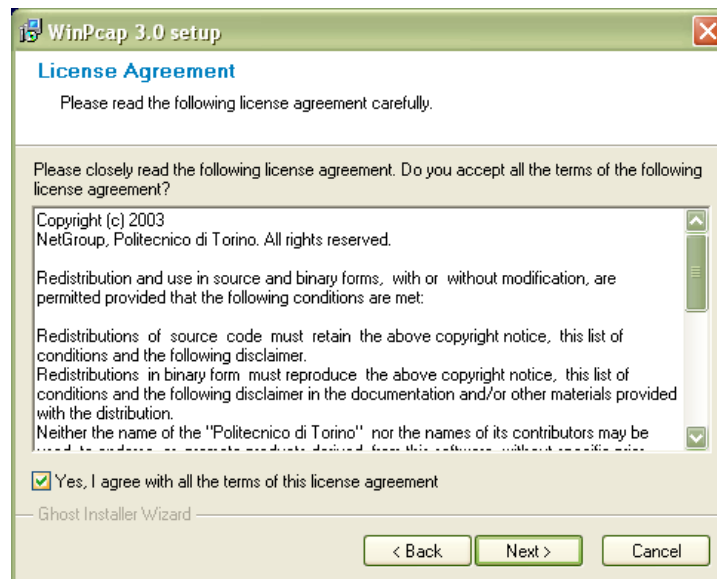
Please refer to the third paragraph to configure your unlimited license.

Automatic install of the packet capture driver by WinPcap for Windows 98

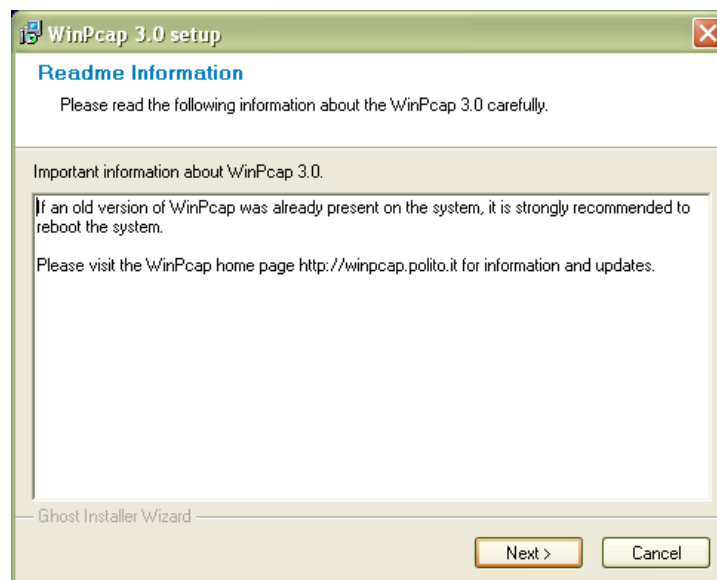
Note: The WinPcap program includes software developed by the Polytechnico di Torino and its contributors.



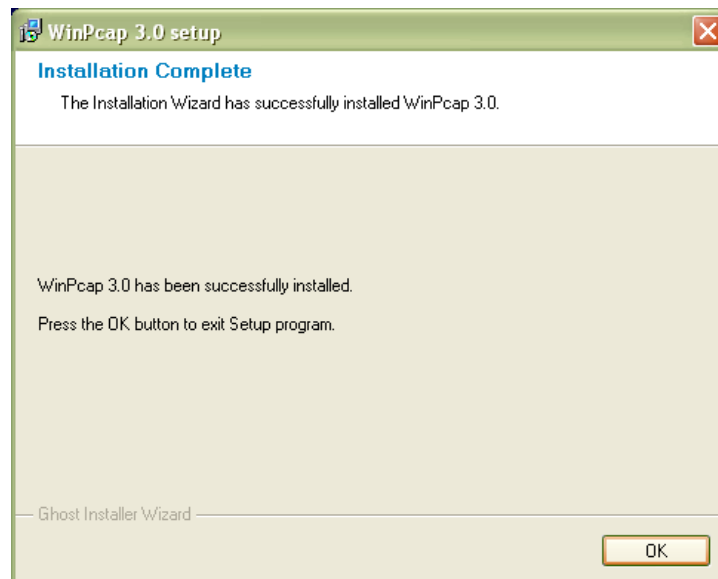
Then press Next to continue and display the License Agreement.



Once you have checked "Yes, I agree with all the terms of this license agreement", then press Next to continue.



Press Next to continue.



1.3. Uninstall “IP Traffic - Test & Measure”

The uninstall procedure is a standard uninstall program.
In the “Start > Programs > IP Traffic” Menu, select “Uninstall IP Traffic”.

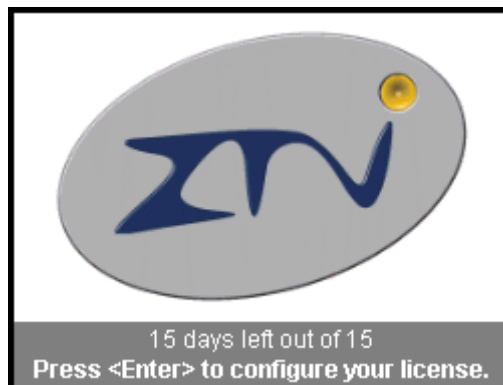
<i>Windows 98 uninstall</i>	<i>Windows 2000/XP uninstall</i>
<p>Then delete all remaining files in the directory "C:\Program Files\IP Traffic".</p> <p>To uninstall the packet capture driver installed by the WinPcap Setup program, select the 'Add/Remove programs' icon of the "Control Panel" and then uninstall the "WinPcap 3.0" program.</p> <p>Then reboot your PC.</p>	<p>Then delete all remaining files in the directory "C:\Program Files\IP Traffic".</p>

Part 2 : License Configuration and License Transfers

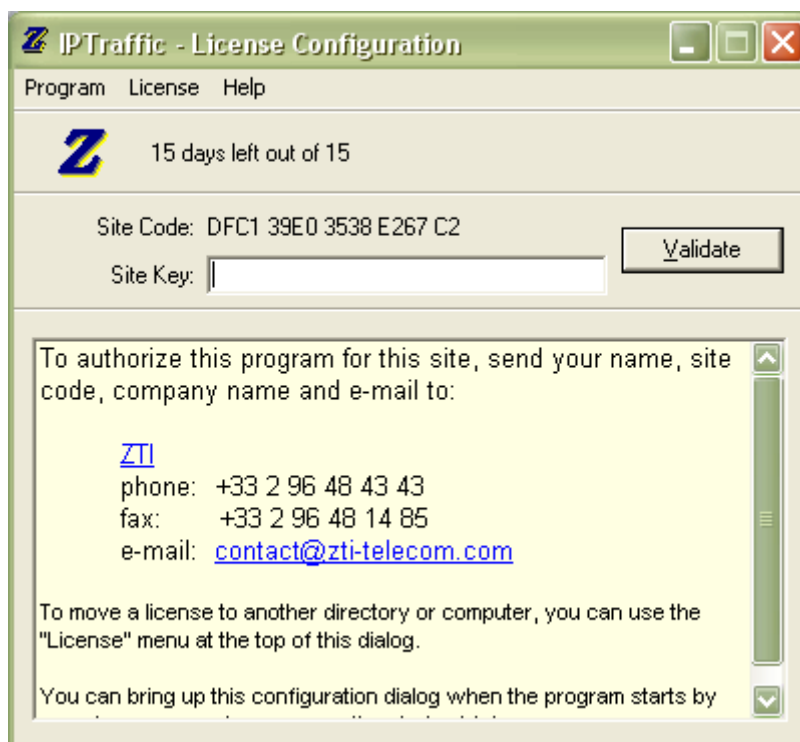
2.1. To configure a license

Note: This software is licensed on a per workstation basis. You will need to have a separate license for each machine that you install it on. Each licensed copy of the software installed on a system has a unique Site Code which requires the corresponding unique Site Key to be entered before the tool is operational (except for a trial version: a duration of 15 days is automatically enabled at the first installation of the software. If you try to install again the software, the license program disables the trial period).

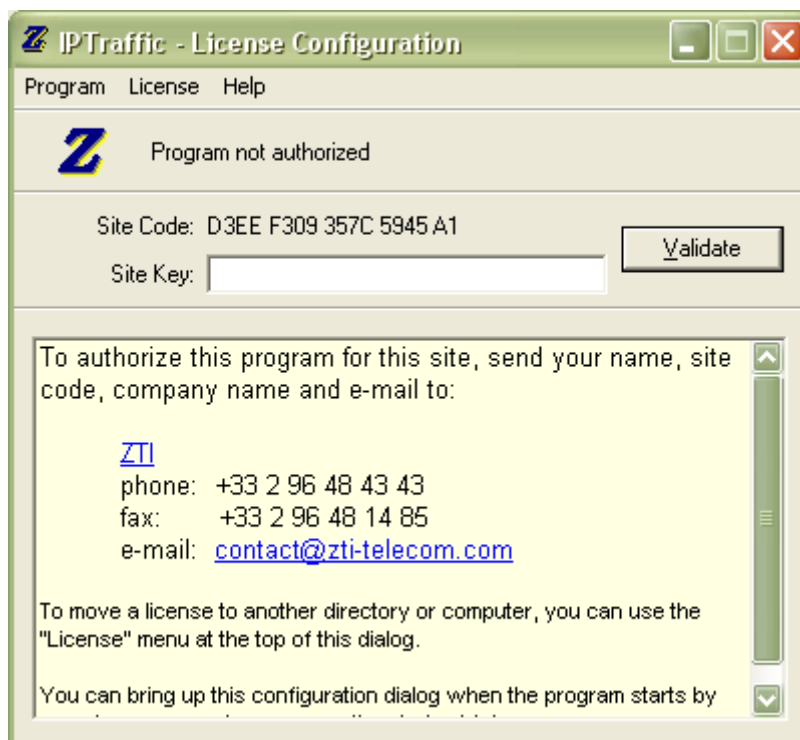
If you wish to configure your license before trial period end, please press **Enter** when the following message is displayed:



Therefore, you will obtain the license configuration dialog as follows:



At the end of the trial period when you launch "IP Traffic – Test & Measure", the same license configuration dialog appears, with a specific mention instead of the remaining days of use: "Program not authorized".

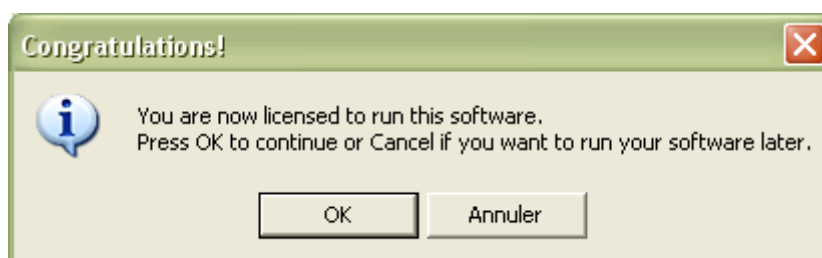


To get the 'Site Key' and obtain an unlimited version, please send your name, 'Site Code' (specific to your installation), company name, e-mail and preferred method of payment (if you haven't bought the "IP Traffic – Test & Measure" software yet) to: contact@zti-telecom.com or contact@zti.fr.

We will send you your 'Site Key' once we receive the payment.

If you have already bought the license, please email your Site Code and we will email you back the Site Key.

After you have entered your Site Key, you get the following message:



You will see the following dialog when you launch "IP Traffic – Test & Measure" if you have an unlimited license:

2.2. License Transfers

***A license transfer is not a duplication of any type.
Please contact ZTI or your authorized distributor for site license information
and for several licenses purchase.***

Licenses can be transferred using one of the following methods:

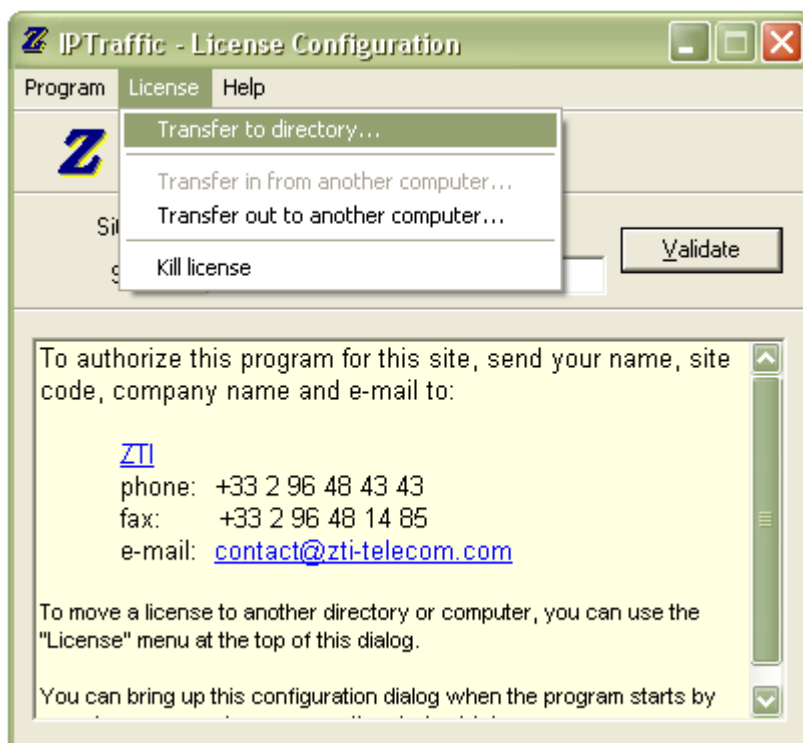
- ⇒ **Direct transfer:** move the license to another directory on the same PC or between two networked PCs.
- ⇒ **Transfer by media:** move the license from a source PC to a target PC by using a floppy disk or USB key.

Important note: Be careful when using USB keys in particular with a Windows 2000 system. When you unplug the USB key, you should use, before any removing of the USB key, the Unplug/Eject system by clicking on the Unplug/Eject icon present on the systray bar (placed on the bottom right corner of your screen). A "hot unplug" is unsafe and can damage all data contained on the USB key.

2.2.1 Direct Transfer: move the license from one local directory to another

This transfer mechanism must be used to move a license in two cases:


- from a source to a target directory of the same PC
 - from a source to a target directory of networked PCs
- First, copy the program (copy the folder “IP Traffic – Test & Measure”) to the target directory.
For example from “C:\Program Files\IP Traffic” to “C:\Temp\IP Traffic”
 - Then run the program in the original directory (from “C:\Program Files\IP Traffic”). When the license configuration window appears, press **Enter** and select in the menu “License > Transfer to directory ...”, as shown below:



- Provide the path name of the target program (for example C:\Program Files\IP Traffic\IPTraff.exe).
The program copy now has the license awarded the original.

2.2.2 Transfer by media (floppy disk or USB key) between 2 PCs

This mode is used to transfer the license from the source PC (PC #1) to the target PC (PC #2), proceed as described in the following points.

 A floppy disk or USB key is needed for this kind of transfer.

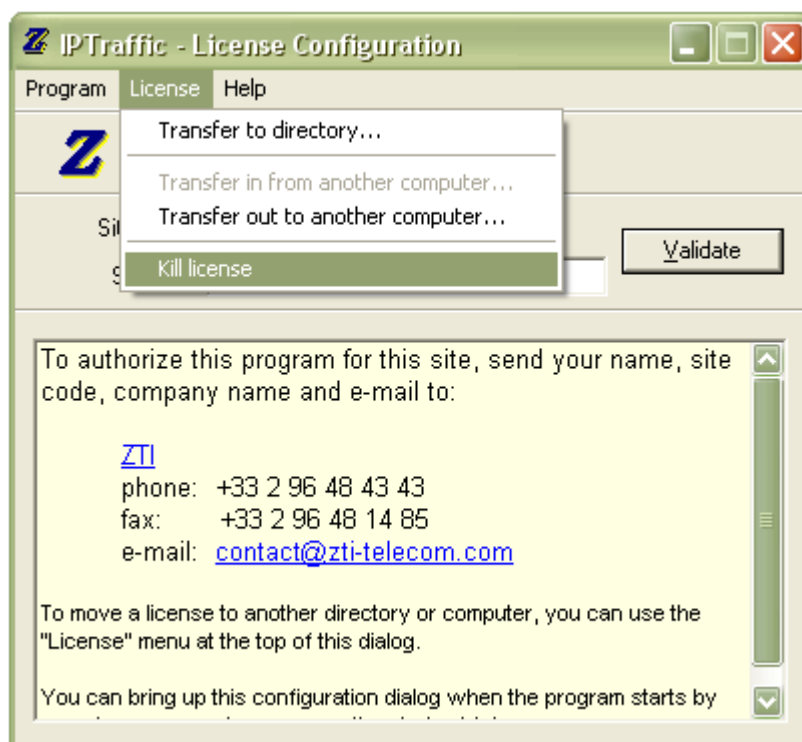
Point 1: First install the program on the target PC (PC # 2).

Point 2: Run the software on PC # 2 and kill the trial license in order to have an unauthorized license on this PC.

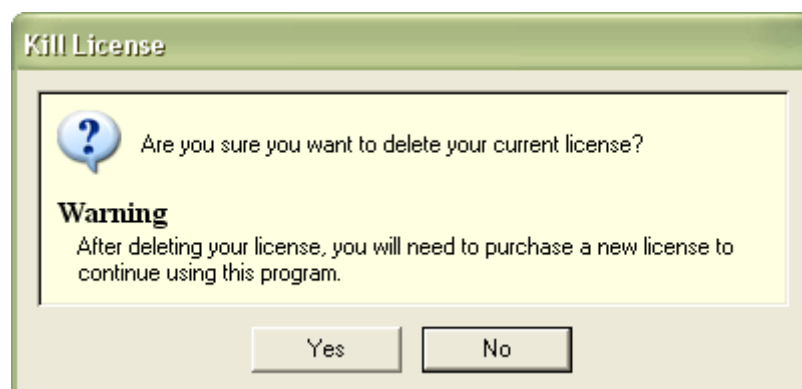
You need to kill the license if the "Transfer in from another computer ..." item of the license menu is disabled.

To kill the license, please proceed as follows.

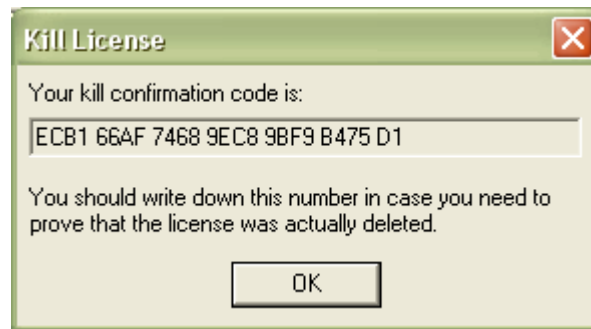
When the license configuration window appears, press **Enter** and select in the menu "License > Kill license".



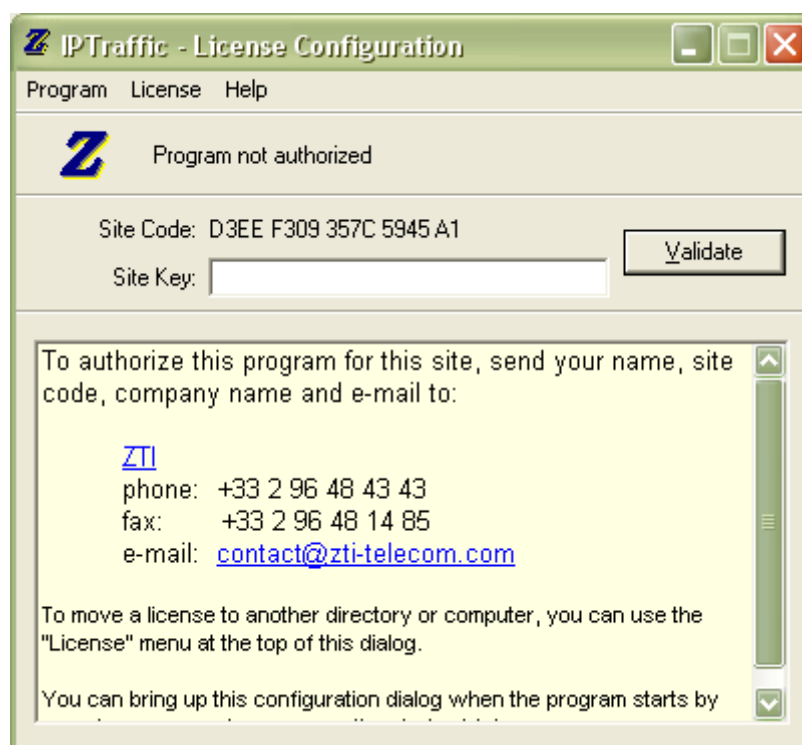
A message box appears, press 'Yes' to kill the license.



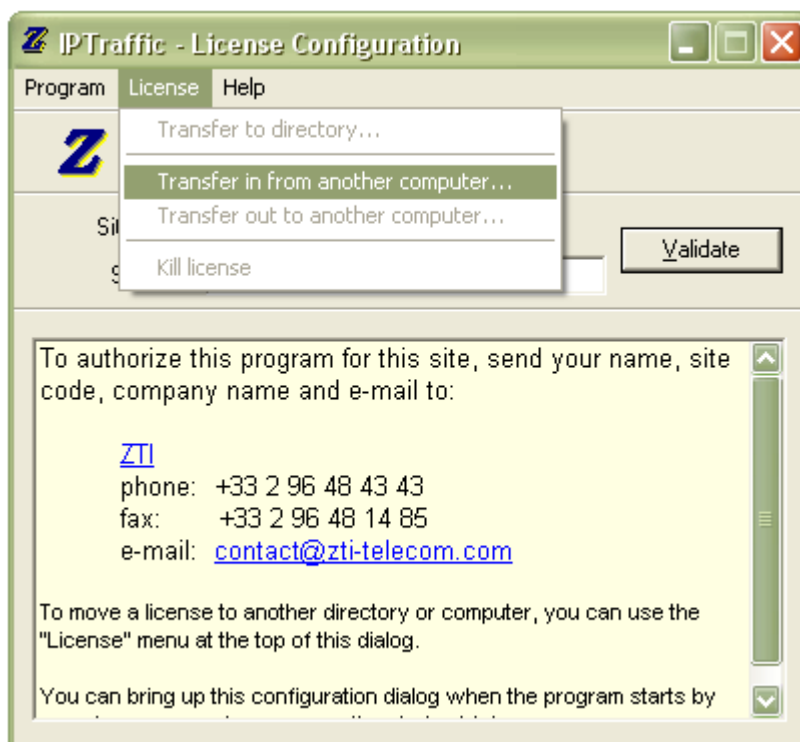
And a kill confirmation code is displayed.



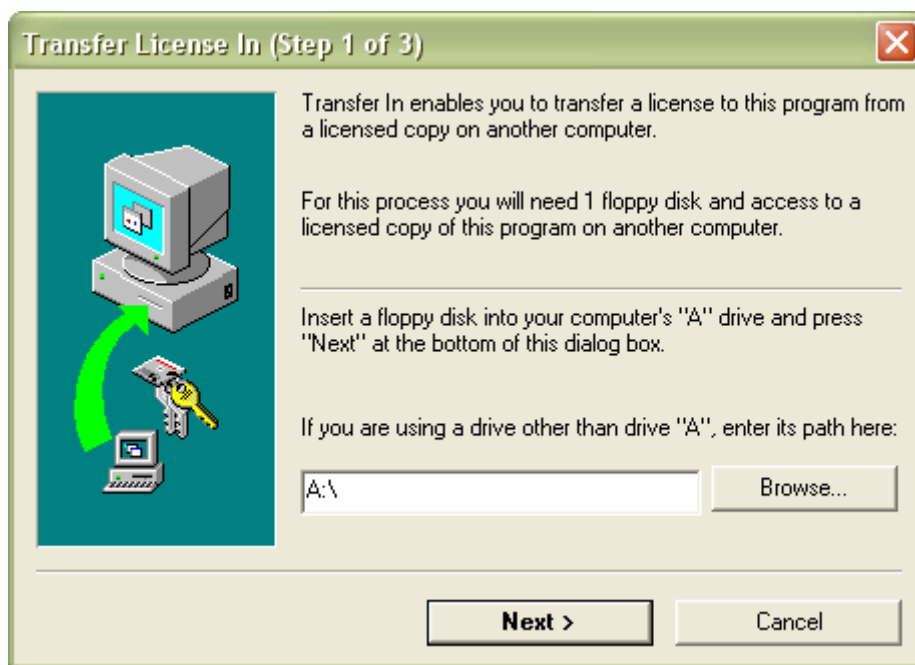
The license window displays now "Program not authorized" as following:



Point 3: select in the license menu, the item: "License > Transfer in from another computer ..."

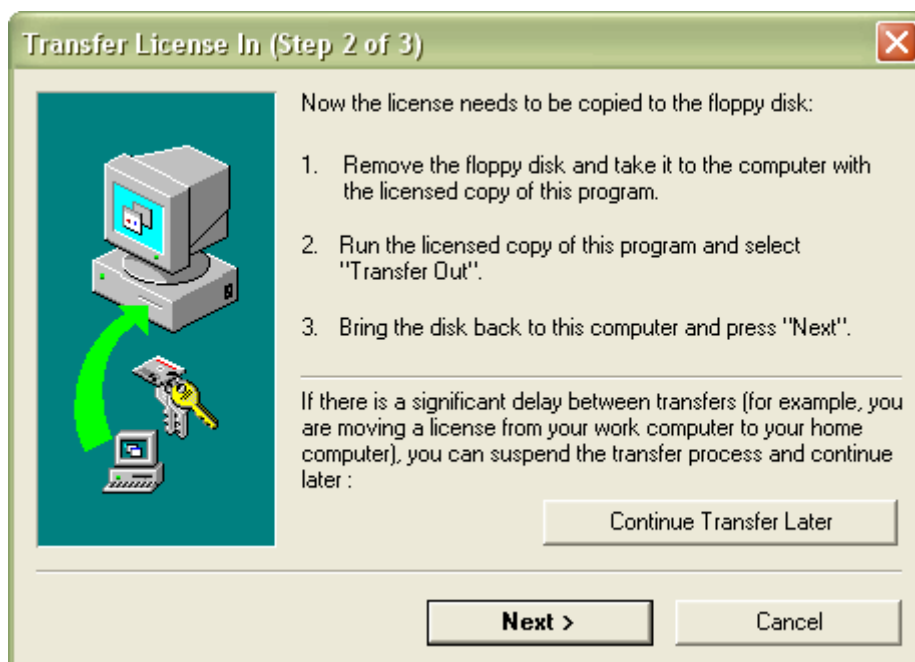


and the "Transfer License In (Step 1 of 3)" window is displayed:

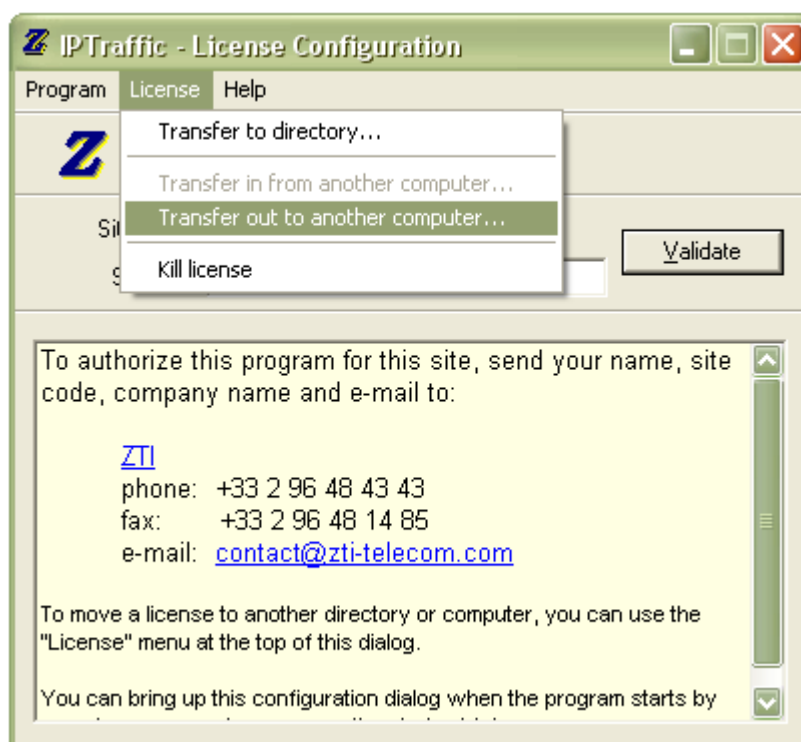


Point 4: Insert a floppy disk or use a USB key as requested in step 1 of 3 and specify the path.

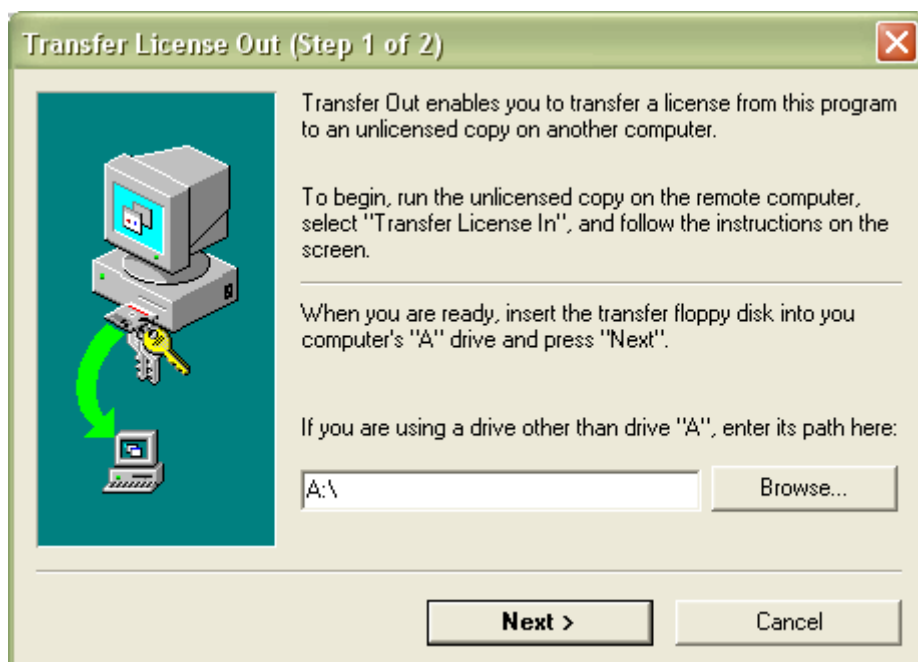
Then press “Next >” and the "Transfer License In (Step 2 of 3)" window is displayed:



Point 5: go to the source PC (PC #1) and insert the media (floppy disk or USB key). Then start the program on PC #1. When the license configuration window appears, press **Enter** and select in the menu “License > Transfer out to another computer ...” as shown below:

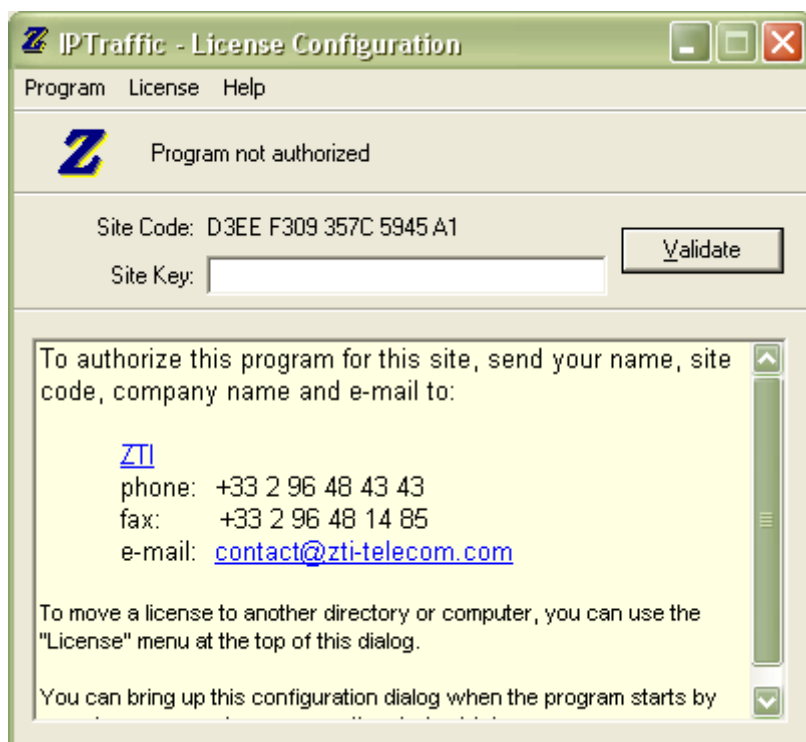


Then the following window is displayed:



Input the media path (floppy disk or USB key) and then press "Next >".

When the license is put on the media, you get the "Program not authorized" message:



You can check that the license is no more available on the source PC since the IP Traffic – Test & Measure software license is on a per workstation basis. Contact us to get information on site license (contact@zti.fr or contact@zti-telecom.com).

Point 6: Remove the media from PC #1 and return to PC #2.

Click the 'Next' button on the step 2 of 3 of the "Transfer license in" window (on PC #2) to complete the transfer.

The unlimited license key is now transferred from the source PC to the target PC, and you get the following message:



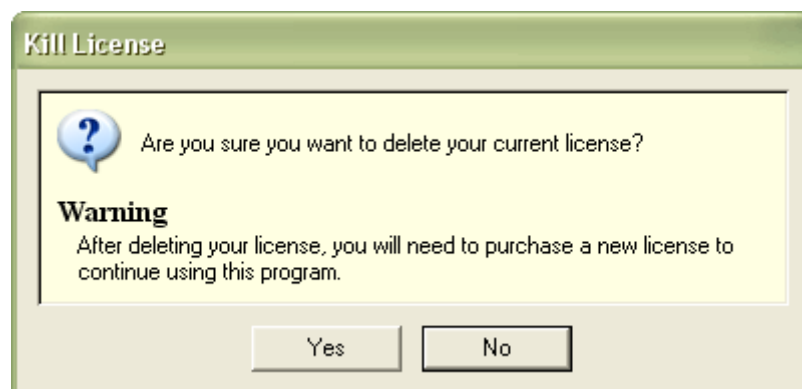
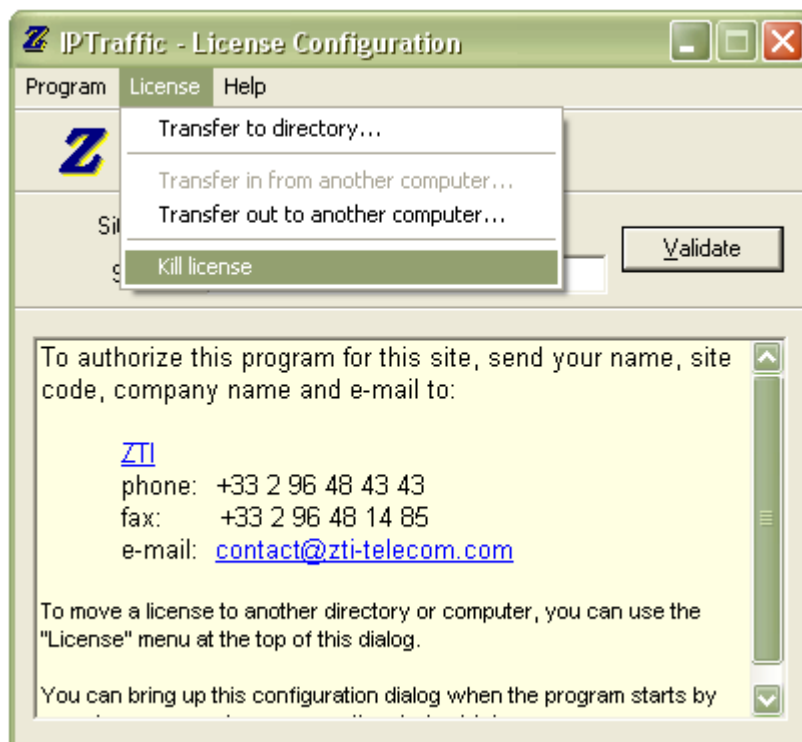
Click Finish to continue.

2.3. Kill a license

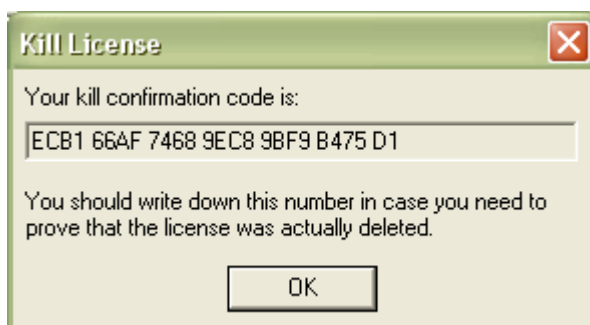
If you would like to transfer an unlimited license key onto a PC where a trial period is still active, you should first kill the active trial period. If you don't kill the active trial period, you will not be able to transfer an unlimited license.

To kill the trial license, you should proceed as follows:

- On the license configuration window, select in the menu "License > Kill License" as shown below. A message box appears, press OK.




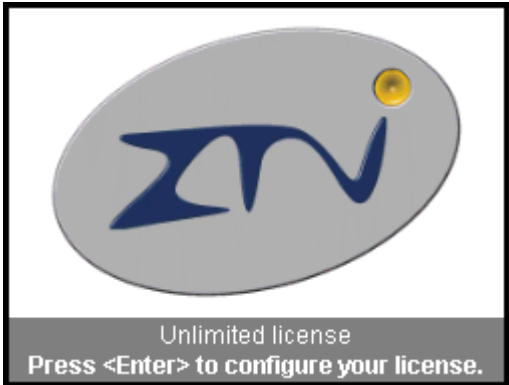
- Press 'Yes' and then your license is now killed. Please, write down the kill confirmation code. This code may be requested by ZTI.



Part 3 : Launch “IP Traffic – Test & Measure”

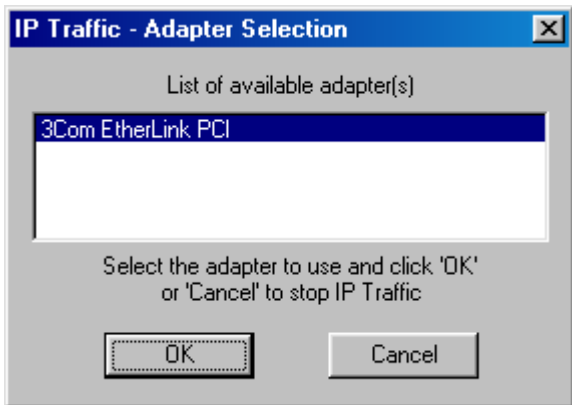
In the ‘Start > programs > IP Traffic’ Menu, select “IP Traffic” and click. The software is launched.

Step 1: depending of your license, you will get the following license window:

Time limited license	Unlimited license
	

Press **Enter** only if you need to configure your license, else do nothing.

Step 2: depending of the operating system, you will get the following window

Windows 98	Windows 2000/XP
<p>You must select the adapter needed to send and receive the IP traffic.</p>  <p>For example, select the 3Com Ethernet adapter in this laptop configuration and then press OK. After a while due to initialisations, the "IP Traffic - Test & Measure" main window is displayed.</p>	<p>After few seconds due to initialisations, the "IP Traffic - Test & Measure" main window is displayed.</p>

Part 4 : What's new in "IP Traffic – Test & Measure" version 2.3

This part is a general overview of new features, main corrections, provided with 'IP Traffic - Test & Measure' version 2.3 and important information to upgrade from previous versions.

Details regarding features and corrections included in versions of 'IP Traffic - Test & Measure' can be found in the file **version.txt**. This file has been copied in the installation directory (C:\Program Files\IP Traffic).

The upgrade process depends on the current version installed. Upgrading from version 2.0 and higher is nearly transparent to the user. The upgrade from earlier versions needs the current version to be uninstalled before upgrading. Tips are included in paragraphs 4.2, 4.3, 4.4 and 4.5 respectively.

4.1. Extensions and corrections included in the version 2.3

Main extensions and corrections are:

- Adding mean jitter statistic for the Off-line Analysis (for Connections synthesis)...
- Adding network interface selection (for the "IP Generator" and "IP Answering" parts) and local source port definition ("IP Generator" part).
- ICMP is now present for each "IP Generator" connection (for PING queries simulation).
- New statistics are now available (as packet throughput, jitter ...). Moreover, the user can select the statistics to display in the "IP Generator – Traffic + Statistics" tab or in the "IP Answering – Parameters + Statistics" tab.
- Adding new commands for the "Automation Tool for IP Traffic" (interface selection, statistic columns selection, ...)
- The TCP/IP stack parameters can be configuring using the IP Traffic Configuration windows (in order to activate SACKS option or to specify high TCP Window Size) to high-delay or low-bandwidth networks (for example a satellite link).
- Improvement in the Traffic Generator : Mean Packet Throughput (only for the UDP connection) and TTL option are now available
- The IP Traffic driver, used to sniff the traffic, is now able to capture traffic simultaneously on multiple network interfaces and to show the Traffic Observer statistics from any network interface (this feature is only available with Windows 2000/XP systems).
- "IP Traffic – Test & Measure" can be now working on multiprocessors systems and on enabled hyperthreading systems

- Adding a tool to convert the IP Traffic Sniffed Traffic files to Ethereal format files.
- Contexts created with versions 2.1 and higher are reused automatically. When saved, they get the new 2.3 context file format.

4.2. Upgrading from 'IP Traffic - Test & Measure' version 2.2

There is no need to uninstall 'IP Traffic - Test & Measure' version 2.2 before upgrading to version 2.3. The installation procedure checks if a previous version of 'IP Traffic - Test & Measure' was installed. When the version 2.2 is found, it updates automatically the 'IP Traffic - Test & Measure' components.

Installation of the 'IP Traffic - Test & Measure' version 2.3 over the 'IP Traffic - Test & Measure' version 2.2 replaces the IPTraff.exe application and the Itsnif.sys driver by the znpf.sys driver where they have been installed. The old help file named 'User Guide IP Traffic V2.2.pdf' is replaced by the 'User Guide IP Traffic V2.3.pdf' file. The registry content is extended with new parameters needed by the help mechanism and the "Automation Tool for IP Traffic". Finally, the DLL file "packet.dll" is replaced by a new version including ZTI extensions(only for Windows 2000/XP systems).

The license scheme is retained during the upgrade process. If an unlimited license was available, the 'IP Traffic - Test & Measure' version 2.3 is ready to be used unlimited. If the trial version was used, the number of remaining days isn't changed: it will continue to decrease up to the final date.

Acrobat Reader is needed with 'IP Traffic - Test & Measure' version 2.3: see 'paragraph [4.6 Acrobat Reader version compatibility](#)' for more details.

4.3. Upgrading from 'IP Traffic - Test & Measure' version 2.1

There is no need to uninstall 'IP Traffic - Test & Measure' version 2.1 before upgrading to version 2.3. The installation procedure checks if a previous version of 'IP Traffic - Test & Measure' was installed. When the version 2.1 is found, it updates automatically the 'IP Traffic - Test & Measure' components.

Installation of the 'IP Traffic - Test & Measure' version 2.3 over the 'IP Traffic - Test & Measure' version 2.1 replaces the IPTraff.exe application and the Itsnif.sys driver by the znpf.sys driver where they have been installed. The old help file named 'User Guide IP Traffic V2.1.pdf' is replaced by the 'User Guide IP Traffic V2.3.pdf' file. The registry content is extended with new parameters needed by the help mechanism and the "Automation Tool for IP Traffic". Finally, the DLL file "packet.dll" is replaced by a new version including ZTI extensions (only for Windows 2000/XP systems).

The license scheme is retained during the upgrade process. If an unlimited license was available, the 'IP Traffic - Test & Measure' version 2.3 is ready to be used unlimited. If the trial version was used, the number of remaining days isn't changed: it will continue to decrease up to the final date.

Acrobat Reader is needed with 'IP Traffic - Test & Measure' version 2.3: see 'paragraph [4.6 Acrobat Reader version compatibility](#)' for more details.

4.4. Upgrading from 'IP Traffic - Test & Measure' version 2.0

There is no need to uninstall 'IP Traffic - Test & Measure' version 2.0 before upgrading to version 2.3. The installation procedure checks if a previous version of 'IP Traffic - Test & Measure' was installed. When the version 2.0 is found, it updates automatically the 'IP Traffic - Test & Measure' components.

Installation of the 'IP Traffic - Test & Measure' version 2.3 over the 'IP Traffic - Test & Measure' version 2.0 replaces the IPTraffic.exe application and the Itsnif.sys driver by the znpf.sys driver where they have been installed. The old help file named IPTraffic.chm is replaced by the 'User Guide IP Traffic V2.3.pdf' file. The registry content is extended with new parameters needed by the help mechanism. Finally, the DLL file "packet.dll" is replaced by a new version including ZTI extensions (only for Windows 2000/XP systems).

The license scheme is retained during the upgrade process. If an unlimited license was available, the 'IP Traffic - Test & Measure' version 2.3 is ready to be used unlimited. If the trial version was used, the number of remaining days isn't changed: it will continue to decrease up to the final date.

Acrobat Reader is needed with 'IP Traffic - Test & Measure' version 2.3: see 'paragraph [4.6 Acrobat Reader version compatibility](#)' for more details.

4.5. Upgrading from versions 1 (including version 1.3)

An upgrade from 'IP Traffic - Test & Measure' versions earlier than version 2.0 needs to uninstall the current version before upgrading to 'IP Traffic - Test & Measure' version 2.3. Due to changes in the license scheme introduced with version 2.0, the reinstallation will not keep the unlimited license information. You should contact ZTI (contact@zti-telecom.com) to get back a new unlimited license number when upgrading to version 2.3 with the new site code. Finally, the DLL file "packet.dll" is replaced by a new version including ZTI extensions (only for Windows 2000/XP systems).

Context files from version 1.3 and earlier are not compatible with the version 2.3. There is no converter tool to translate versions 1's context files into version 2.3.

The 'IP Traffic - Test & Measure' version 2.3 in trial mode can still be used 15 days even if the trial version 1.3 was installed before.

Acrobat Reader is needed with 'IP Traffic - Test & Measure' version 2.3: see 'paragraph [4.6 Acrobat Reader version compatibility](#)' for more details.

4.6. Acrobat Reader version compatibility

To access 'IP Traffic – Test & Measure' version 2.3 help, the Acrobat Reader should be installed.

Acrobat Reader can be found on the CD-ROM of "IP Traffic - Test & Measure". If Acrobat Reader has been installed previously, it can be used by 'IP Traffic - Test & Measure'. Tests of English Acrobat Reader versions from version 4.01 to version 7.0 have been tested successfully.

If you have another version of Acrobat Reader already installed, you can check its compatibility with the file '**User Guide IP Traffic V2.3.pdf**' or **this current Read Me First file**. If this file can be displayed by the version of Acrobat Reader installed, the Acrobat Reader may be compatible with the 'IP Traffic - Test & Measure' help. If display fails, you should consider migrating to the version delivered with 'IP Traffic - Test & Measure' or to a version provided by adobe (www.adobe.com).