



## What you need to know about Java and JetTrac Licensing

This document is designed to get you up to speed on the multi-platform nature of the JetTrac Products, and the licensing system that protects them from software piracy. The JetTrac Products are written in the Java language, which lets them be able to run on any platform that supports Java, and almost all platforms now do, at least almost all platforms that Central runs on.

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## 1. Introduction to Java

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By virtue of being written and run in Java, all JetTrac Products are automatically cross-platform. This allows users of JetTrac products to have maximum flexibility to use JetTrac products to solve their Central challenges. In order to run a Java program on your machine, you must first have either the Java Development Kit, (**JDK**), or at least the Java Runtime Environment, (**JRE**), installed. You can verify your installation by bringing up a command prompt and typing **java -version** at the prompt. If you have Java installed, you should get a message telling you the version number and possibly the usage options:

```
C:\WINDOWS>java -version
java version "1.3.0"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.3.0-C)
Java HotSpot(TM) Client VM (build 1.3.0-C, mixed mode)
```

If you see something like this, you are ready to run JetTrac Java products.

If you have an earlier version of Java, you might need to type **jre -version** at the command line to verify installation. Version **1.2 or later** of Java will be easier to work with, and if possible, you should check into upgrading your Java installation, but if your environment requires an earlier version, JetTrac Products can work with that as well. Contact Pro Technology for more information.

### **Installation on Windows**

On Windows, Java is often used for web pages. However, even if you have Java installed for web browsing, chances are you will not have the JRE installed. If you type **java -version** on the command prompt and don't get a Java message like the one specified above, you should download and install Java. You can download Java version 1.3.0 from these addresses:

<http://java.sun.com/j2se/1.3/jre/download-windows.html>  
<http://www.protechinc.com/software/java13win32.exe>  
<http://www2.protechinc.com/software/java13win32.exe>

Run the installer with the defaults. Everything should be fine and you will be ready to go with Java.

### **Installation on Unix or AS/400**

Your system administrator will have to be involved and (s)he will know how to install an application or update your Java installation. The Java Runtime Environment for most platforms can be found here

Sun OS/Solaris	<a href="http://java.sun.com/">http://java.sun.com/</a>
HPUX	<a href="http://www.hp.com/">http://www.hp.com/</a>
AIX	<a href="http://www.ibm.com/">http://www.ibm.com/</a>

Others can be found on their respective manufacturers' web sites.

## 2. JetTrac Java Command Line Execution

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Because these Java programs can only be run inside of the Java subsystem, all command lines start with **java**. If you need to run an older version of Java, your command lines will probably start with **jre**. Adjust your command lines accordingly. However, if your system does not have the **default path to Java** set up, you will have to include the path to Java as well. This may be especially important in UNIX, because the Central Server may not know the path to Java, even though it is found in the default path in the user's setup. Alternatively, you can add the path to Java to the script that launches the Central Server.

### Class Files

The JetTrac Site Code Manager and a few other JetTrac Products are packaged as Java class files. They are executed off of the command line by first calling Java, then referring to the class file name, **without specifying .class** on the end (even though the actual file name has .class on the end). The class file cannot be renamed and must be specified with the exact case (even on Windows). Here's an example:

```
java JetTracSiteCode
sometimes
java -cp . JetTracSiteCode
```

### Jar Files

Most JetTrac products are encoded into specific Java executables called **jar** files. They are executed off of the command line by first calling Java, then using the switch **-jar**, then referring to the jar file name, **including the .jar**. They are launched like this:

```
java -jar c:\jettrac\JTRoute\JTRoute.jar
```

Refer to <http://java.sun.com/docs/books/tutorial/jar/basics/run.html> for more information about running jar-packaged software and for help on running jar files in pre-1.2 Java.

### Executing Jar Files in Central

In order for a JetTrac Product to run inside of Central, it must be set up as a task in the JMD. Be careful to make the **Program Name** be simply Java, and put all of the options, including the **-jar** and the jar file name into the **Program Options**, followed by the other items that appear on the command line. Refer to each JetTrac product's User Guide for specific command line instructions.

### 3. JetTrac License Manager

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All JetTrac Java products are protected from software piracy by the JetTrac License Manager system. JTLM locks a product to the individual machine that it was licensed for. This means that a JetTrac product licensed for one machine in your organization will not run on another machine unless you have obtained a new license file for that particular machine from Pro Technology Automation. There are two steps to this process:

#### Step 1 - Your Private Site Code

In order to enable a JetTrac product to run on your specific computer system, specific information about that system needs to be gathered so that Pro Technology can generate a key specific to that system. Several system tokens are gathered in order to ensure the uniqueness of each computer system. The JetTrac License Manager system includes a program called **JetTrac Site Code Generator**, which you run on the system that the JetTrac product(s) will run on. The Site Code Generator gathers the system tokens, encodes them into a number, and writes it to a file called **SiteCode.txt**.

If you have purchased/will be running more than one JetTrac product for a computer system, you **DO NOT** need to generate more than one site code for that system. However, if you will be running a JetTrac product on more than one computer system in your company, you will need to run the Site Code Generator on each system in the company.

#### Generating your Site Code

The Site Code Generator file is called JetTracSiteCode.class, which is a Java executable file. You can also run it from the command line by typing **java JetTracSiteCode** assuming that the JetTracSiteCode.class file is in the current directory. It will create a SiteCode.txt file, which you will then send to us (preferably through E-mail), or use to generate your temporary code off of the web.

You can download the Site Code Generator from:

<http://www.protechinc.com/software/JetTracSiteCode.class>

or

<http://www2.protechinc.com/software/JetTracSiteCode.class>

On Windows platforms, Pro Technology has provided a **self-running Site Code Generator**, as an .exe file. Simply point your browser to one of the links below and click “Open” when asked how to handle the file. Your site code should pop up in a notetab window.

You can download the Windows .exe Site Code Generator from:

<http://www.protechinc.com/software/JetTracSiteCode.exe>

or

<http://www2.protechinc.com/software/JetTracSiteCode.exe>

## Step 2 - Your Private Product Key

You send your SiteCode.txt file to Pro Technology. Pro Technology will use your SiteCode.txt file to generate a license key file that will enable a specific JetTrac product to run on your system. Or JetTrac partners can obtain an evaluation license key from the Pro Technology web site, <http://www.protechinc.com>, by following the directions in section 4 of this document. It will be in the format of **PRODUCTCODE.lic**. You can place it anywhere in your system, but the recommend path is c:\jettrac\license. You will then refer to it in your command line, as specified in the next section.

It is possible to combine license files by copying the information from multiple license files into one file. In this case, each license needs to be on its own line.

### Specifying the license key file on the command line

License files are specified by adding a parameter in front of the -jar switch. The parameter is **-DJETTRACLF=** and then the name of the license key file. Here's an example:

```
java -jar -DJETTRACLF=c:\jettrac\license\route.lic JTRoute.jar
```

Be careful on UNIX platforms to specify the exact case of your license file names exactly, or it won't be found.

## 4. The JetTrac License Manager Web Interface for Partners

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JetTrac Partners have access to make their own 30-day product keys without needing to contact Pro Technology. This allows the partner to be on-site with their client and be able to make temporary codes immediately, and allow them to get a JetTrac Product up and running without delay, even if the partner can't contact anyone at Pro Technology. This is especially useful for when a partner is on-site with a client.

In order for a partner to make their own temporary code, they must be able to access the Internet, and go to the Pro Technology website, [www.protechinc.com](http://www.protechinc.com) and click on the **Partners** link. Before you can use this page, you must contact Pro Technology to obtain a **partner ID code** that you will be asked for. You can do this on any computer, but it is especially helpful to do so on the computer/server on which the JetTrac product will run. That way, you can generate a site code and immediately paste it into the web page. Here are the quick directions as it appears on the web page:

## JetTrac Products License Key File Generator

*Note: before you can download an evaluation license file you must obtain a partner ID from Pro Technology. Please call us at 805-527-1248 to request a Partner ID.*

1. Make sure that the **Java Runtime Environment** is installed on the server where your Central is running. If you do not already have Java installed, download and **install Java** for Windows by clicking [here](#) or [here](#). **Note:** If you have VTE installed on the machine, then Java is already installed. If you need Java for other platforms, go to [java.sun.com](http://java.sun.com) or call Pro Technology for instructions.
2. To generate a site code for a Windows platform, download and run the [JetTrac Site Code Generator by clicking on this link](#). Your site code should pop up on the screen in Notepad or another text editor.

For those on another platform, download the Java class file directly and execute it on the command line to obtain your sitecode.txt file. (The command line is usually something like

```
java -cp . JetTracSiteCode
```

or something like that, assuming you are executing it from the directory where it resides. Contact us for assistance.)

3. When you are ready, click below to go to the **JetTrac Product Demo Key Generator page** and fill out the form. You will need to fill in the **Site Code** box:
  - a) Change back to the Notepad or text editor window you left open and highlight all of the text from the Site Code file.
  - b) Copy it by pressing CTRL-C or picking Copy from the Edit menu.
  - c) Go back to the request form web page and paste this (CTRL-V) into the Site Code field.
  - d) If everything was validated, you will see a screen with the message: **Successful**. Follow the directions on the screen to download it.
4. When you have all of the info, Click [here](#) to go to the [JetTrac Product Demo Key Generator page](#) now to generate your key.

Note: You can request ONLY one evaluation license per product for each Site Code.

## 5. Running JetTrac Products on your laptop

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### IP Addresses

One of the system tokens used by the JetTrac License Manager system is the system IP address. If your IP address changes between when you made your site code and when you are running a JetTrac Product, you will have an invalid license, and your JetTrac Product won't run.

For this reason, it is very important that JetTrac Products be run on a system that uses a **static IP address**. DHCP or WINS-obtained addresses will not provide dependable and reliable results and will most often result in your system not working when you need it.

It is important to remember that it isn't so much the IP address of the system that matters, but the IP address of the system *that is reported to the Java Subsystem* that matters. License Manager needs the IP address reported to it to remain stable.

## Windows 95, 98, ME, and NT Issues

These operating systems bundle the networking components deep in the kernel, thus to change the IP address of the system, the computer must be rebooted. This is good for JetTrac License Manager, because it means that the IP address tends to be more stable.

However, starting a Dial-up Networking, (DUN), connection in these operating systems will change the IP address of the system. Plus, most users **get a different IP address every time** they connect. This is a problem, especially if you want to run a product like JetTrac E-mail, which requires an Internet connection to run. You will need to use the **JetTrac Web License Manager** to generate a new license key for each and every time you connect to the Internet.

## Windows 2000 and XP Issues

In Windows 2000, and inherited by XP, a dynamic networking system is used. You can change your IP address on the fly, without rebooting. However, this is bad for JetTrac License Manager, because dynamic networking systems tend to change the IP address more often.

In Windows 2000/XP, a static IP address is only static as long as Ethernet remains connected. Once you unplug your Ethernet connection, Windows reverts your IP address to the default system loopback address, **127.0.0.1**. This will result in all of your JetTrac products not running. Pro Technology will not generate permanent license codes for systems that use this IP address. This is often the case if you are testing a JetTrac product on your laptop when you are away from your office.

The solution for dynamic networking problems is to use a **loopback/crossover plug**. This is a plug that will fool your Ethernet interface and Windows into thinking that you are still connected to Ethernet, even though you are not. This will allow you to test and run your JetTrac products on your laptop from anywhere, because Windows will continue reporting the same IP address to Java. You can obtain a free plug or specs to make one by contacting Pro Technology.

Dial-up Networking is not a problem with Windows 2000/XP as long as you maintain an Ethernet connection. If Ethernet is alive, either by connection to a hub, or by means of the loopback/crossover plug, Windows will **continue to report the IP address of the Ethernet connection to Java**, even though the system is using the IP address obtained by Dial-up Networking.