

USING .NET MATRIX LIBRARY WITH A DEVELOPER'S LICENSE

INTRODUCTION

A Developer License of .NET Matrix Library (**NML™**) is not locked to a specific machine and grants you a royalty-free license to redistribute the **NML™** as part of your application. In order to enable your application to use the **NML™** you need to copy the license file (**YourCompanyName-BNML32.LIC** or **YourCompanyName-BNML64.LIC** depending on platform version) into the same directory as your executable file. You can redistribute this license file together with your executables along with the assembly named **Bluebit.MatrixLibrary.dll** which contains all **NML's** functionality.

A Developer's License is locked to a specific **public key token** of a signing key and restricts the use of **NML™** to your assemblies only.

After you have purchased a Developer's License, the followings steps need to be completed:

- 1) You generate a signing key, extract the public key token and email it to support@bluebit.gr.
- 2) We generate a license file and email it back to you.
- 3) You sign your assembly with the signing key and place the license file in same folder as your executable.

HOW TO GENERATE A SIGNING KEY AND EXTRACT THE PUBLIC KEY TOKEN

If you already have a signing key which you use to sign your assemblies, then you may skip this step. Otherwise you will find more info about "**Creating and Using Strong-Named Assemblies**" in this link [http://msdn.microsoft.com/en-us/library/xwb8f617\(VS.80\).aspx](http://msdn.microsoft.com/en-us/library/xwb8f617(VS.80).aspx) . Normally you will use the [Strong Name tool \(sn.exe\)](#) utility. The sn.exe can be found in [Visual Studio Folder]\SDK\[Version]\Bin folder .

To generate the signing key, at the command prompt type the following command:

```
sn -k keypair.snk
```

Now the file **keypair.snk** contains a globally unique private-public key pair. Next, extract the public key from the key pair and copy it to a separate file:

```
sn -p keypair.snk public.snk
```

The file **public.snk** contains just the public part of the of the private-public key pair. In order to extract and display the public key token use the following command (**Important: -t** has to be in lower case):

```
sn -t public.snk
```

The public key token of your key pair will be displayed. It will be a string of characters and it will look like this: b77a5c561934e089. Copy the public key token from the console window and paste it into a message to support@bluebit.gr .

HOW TO SIGN YOUR ASSEMBLY WITH YOUR SIGNING KEY

If you use Visual Studio 2005/2008 you may preferably use the project properties in order to sign your assembly. In **Solution Explorer** right click on your project's name and select **Properties**. In the **Singing** section check the "**Sign the assembly**" check box and browse to your signing key file e.g. keypair.snk.

Another way to sign your assembly is by using attributes. Put the key file in the appropriate project directory, open the AssemblyInfo file and set the key file attribute as follows¹:

```
[Visual Basic]
<Assembly: AssemblyKeyFileAttribute("keypair.snk")>
[C#]
[assembly: AssemblyKeyFileAttribute(@"..\..\keypair.snk")]
```

DISTRIBUTING NML™ WITH YOUR APPLICATION

After receiving the license file from Bluebit Software (usually named **YourCompanyName-BNML32.LIC** or **YourCompanyName-BNML64.LIC** depending on platform) place it in the same folder as your executable (in the /bin folder under your project's folder).

When deploying your application please make sure that you distribute the following files in addition to your executable:

- | | |
|------------------------------|--|
| 1) Bluebit.MatrixLibrary.dll | Assembly containing all functionality of NML |
| 2) YouCompanyName-BNMLxx.LIC | The license file of your Developer's License |

Also make sure that the runtime components of Visual C++ Libraries are installed on the target machine. If not, you may use the Visual C++ Redistributable Packages (VCRedist_x86.exe or VCRedist_x64.exe) to install them. These packages are installed by Visual Studio into %PROGDIR%\Microsoft Visual Studio 8\SDK\v2.0\Bootstrapper\Packages\ folder and they can also be downloaded from the Microsoft's download site.

If you use a setup project for deploying your application, then all the above dependencies will be included automatically and you will only need to add your license file in the install location.

Important!

Distribute only the license file with your application. **Do not** redistribute your **signing key**!

First because you don't need to, second because you will make your own assembly vulnerable to hacking and tampering, third because you will allow other developers to use **NML™** for free and this is a violation of our license agreement.

Please contact support@bluebit.gr if you need any further assistance.

¹ Visual Basic .NET looks for the key file in the directory containing the Visual Studio Solution, whereas the C# compiler looks for the key file in the directory containing the binary