

THE COMPUTER CORNER

## No. 146. MICROSOFT .NET FRAMEWORK

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At the Ozaukee Radio Club breakfast on 12Jul, Tom Oehler (W9LNL) came up with another good question. "What the heck is .NET Framework?" he said, and "Why do I need it?" Well, the simple answer to the latter question is that he does need it, and so do you. I routinely install .NET Framework on every computer I rebuild for ARES/RACES throughout the state (over 40 so far this year). And Jim Darrow (KB9MMC), ARES Assistant Section Emergency Coordinator for Digital Communications, queries me periodically to make sure I am still doing that. It is important not only for us hams as general computer users, but also especially as emergency communicators whenever we use digital modes.

So what is .NET Framework? Well, it is software (that should have been included in your Windows installation) that allows Unix or Linux or Macintosh or Windows computers to run programs. Thus, it is said that it is a cross-platform environment, because it is operating system independent (it works with all of them). That is rather important. The ham with the Mac who runs a program that calculates the distance from his station to a station in Anchorage, Alaska gets the correct answer. So does the ham using Windows, or the ham using Linux. Moreover, .NET allows software writers to more easily write programs, by including some commonly used programming subroutines from over 20 different programming languages. It also manages memory, periodically releasing memory back to your machine that is no longer being used for a specific process. It does this by a process known as "garbage collection", marking any items no longer attached to a specific programming step into a virtual garbage can and freeing up the memory those items were holding on to for other uses. You know, this description sounds a lot like the "memory managers" we used back in the 1980s and 90s, which were part of the operating systems we used back then. That is why the .NET Framework has been called by some an operating system in and of itself. It is used by software writers most new application programs created for the Windows platform, so you may well run into a "Requires .NET Framework Version X" message when you try to run a new program on a machine without the framework installed. As I alluded to above, it should really have been included with recent Windows versions, but until Vista, it was not. However, end-users can download and install it at no charge. I'll tell you how later. First, here is a bit of history.

Microsoft started development on the .NET Framework in the late 1990s, calling it then the Next Generation of Windows Services. The first trial (beta) versions of .NET were released in 2000, and Version 1 came out in early 2002, for download, installation and use with Win98, NT 4.0, 2000 and XP. A major upgrade, .NET Framework 1.1, came out in 2003, and was also bundled with Windows Server 2003. Version 2 was released in 2005, and is the last version supporting Win98, 2000 and Me. Version 3 came out after that, and is bundled with Vista and Windows Server 2008. There is even a .NET 3.5, released at the end of 2007, with a compact version available for Windows CE and Windows Mobile operating systems. Newer versions are in the works that will be tailored to multi-core computers, so that parallel computing can be fully utilized. So the .NET Framework has a pretty long history, and it continues to be developed. But except for servers, Vista is the first version of Windows that has had this key software bundled within the operating system. Shame on you, Microsoft!

In a nutshell, the major benefit of .NET for those of us who are end users is that all the programs we want to run will work, and with fewer crashes and other undesired effects, and our web experiences will be enhanced no matter what platform we are using. For developers and software writers the major advantage is that programs will be a bit easier to write, and they will work more often for customers because routines that in the past had to be hand written are already included in .NET development packages.

So, .NET Framework is a necessary part of whatever version of Windows you use. But if you are using anything prior to Vista, it was left out of your operating system and getting it is up to you. Furthermore, you need both Version 1 (actually, 1.1 after updates are installed), and Version 2.

How do you get it and install it? First, I recommend you get and install both .NET Framework versions 1.1 and 2.

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For 1.1, using Windows 2000, XP or XP Professional X64, Vista Enterprise/Home Basic/Premium/Starter/Ultimate, go to this site (or just search for NET FRAMEWORK 1):

<http://www.microsoft.com/downloads/details.aspx?familyId=262D25E3-F589-4842-8157-034D1E7CF3A3&displaylang=en>

Follow the instructions for downloading (23.1 Mb), which will create an installation program (be sure to note where that installation program is saved on your machine. You really should have all downloads go to your desktop. Close all your other programs before you install it by clicking the filename.

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For version 2, if you are using Windows 98 or 98se, ME, Windows 2000 with at least Service Pack 3, or XP with at least Service Pack 2, go to this site (or just Search for NET FRAMEWORK):

<http://www.microsoft.com/downloads/details.aspx?familyId=0856eacb-4362-4b0d-8edd-aab15c5e04f5&displaylang=en>

Do the same as noted above to download it (22.4 Mb) and install it.

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If your installation of one or both was successful, you are not quite done! Go to the Windows Update page (click START, Windows Update) have the site scan your computer for needed updates. It may well find some for .NET Framework. Let the site download and install any updates that are available (this is a safe, well-designed site; congrats are due Microsoft for doing it correctly). If you have never visited this site before, it may well find other updates you need – let it install all of them. It is prudent to do this twice because there may be updates to the updates (!). Do it twice – that is what I do.

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Here is an out if you GET INTO TROUBLE and want to uninstall either version. Go to this site:

[http://astebner.sts.winisp.net/Tools/dotnetfx\\_cleanup\\_tool.zip](http://astebner.sts.winisp.net/Tools/dotnetfx_cleanup_tool.zip)

Download the file, unzip it and run it. This will remove any version of .NET on your machine, including any updates, better than trying to uninstall from the Control Panel. Perhaps you now wish to try the installation again. Happy Computing!