

## No. 276: Reducing the Pain of an OS Upgrade

(Stan Kaplan, WB9RQR, 715 N. Dries Street, Saukville, WI 53080-1664  
(262) 268-1949 [wb9rqr@att.net](mailto:wb9rqr@att.net))

*This article was written by Mark Siegesmund, President of West Mountain Radio, and it appeared in their **The Beacon** newsletter, 2020 Quarter 4 issue. Reprinted with permission. It turns out that Mark worked for me when I was running the Department of Anatomy and Cellular Biology at The Medical College of Wisconsin. I hired Mark as a programmer back when he was still in high school. He successfully wrote software and the operating system (similar to CP/M but different from it) that allowed us to put a dumb terminal in every faculty member's office or lab so they could write scientific papers and have their writings saved by a single CPU on a floppy in the departmental office. The secretary could then format an article properly, correct the English and otherwise fix it up and print it. When the faculty member approved it and added the needed illustrations, it would be sent off to the scientific journal for peer review and publishing. My department was the first in the nation that had this kind of facility, back in the era of 8-inch floppy drives and total system memory described in a few kilobytes, not mega or gigabytes!*

A lot of our customers are upgrading their operating systems frequently due to hardware failures. Others are holding on to a OS they know, out of fear of the unknown. This article covers some of the basic concepts of upgrading. Hints and links to utilities are provided to help make the new operating system effective.

A quick history lesson showing the most important releases:

1985	Windows 1	No one really noticed, everyone is using MS-DOS.
1992	Windows 3.1	The first release of Windows that caught on.
1995	Windows 95	Big clean up of 3.1, now 32 bit, more consumer friendly.
1996	Windows NT 4.0	A lot of hype. New kernel. High security. Big flop.
1998	Windows 98 and ME	Windows 95 with out of the box networking and better graphics.
2000	Windows 2000	A cleaned up version of NT marketed to corporations.
2001	Windows XP	Modernized version of 98. Well received. Also a 64-bit version.
2007	Windows Vista	Took NT/2000 and put in the popular XP features. A flop.
2009	Windows 7	Vista, minus what people didn't like most.
2012	Windows 8 and 8.1	Windows 7 plus a smart-phone-like human interface. A flop.
2015	Windows 10	Took 8 and made the user experience more like XP.
***	***	Microsoft says there will be no more names. They have had several major versions since the initial release, all called Windows 10. Each release seems to be more internet/cloud dependent.

### Compatibility

The primary concern for application programs is if they are 16, 32 or 64 bit programs. Windows only allows running one step down. A 64 bit Windows 10 will not run old 16 bit programs. It can, however, run a 32 bit Windows 10 on a 64 bit machine. A 32 bit OS can only access 4 gig of memory, so be aware. Sometimes the programs themselves will check the OS version and they will not run if it is higher than what they are designed for. Windows has a way around this where users can set it up to lie to the application about what the version is.

Drivers are much harder to use between versions of Windows. Check to see if the drivers needed, like for a printer or other connected device, are available for the new OS version. Using the older drivers on a newer version of Windows frequently will not work.

When upgrading from Win7 or Win8 to Win10, Win10 will keep the programs installed. To upgrade from older systems, upgrader programs like Laplink can help. Either way, Windows keeps a copy of all old documents in a file called c:\windows.old. After installing, the first step is to rename that file. Windows will delete it when it thinks it is unneeded.

## **Virtual Machines**

Virtual machine software allows users to customize an environment that can emulate a specific hardware platform. This allows loading another operating system running under the primary operating system. For example, on a new Windows 10 system, virtual machine software can be installed and then load a full XP operating system on the same machine. In the case of Windows, a license key is still required to install it. When discarding an old XP or other machine, keep the key so it can be used for a virtual machine. Older programs and drivers should be able to run under the virtual machine. XP runs extremely fast on a modern PC. A virtual machine is also a great way to start playing with Linux. Most Linux operating systems are free. 16 bit programs from the Win98 days can still be used on a virtual machine. See the references at the end of this article for help getting started.

## **About Windows 10**

Out of the box, Windows 10 is strongly tied to the Internet. Some users will appreciate the convenience of keeping things up to date behind the scenes and giving hints based on Internet queries. Other would prefer their OS would only access the Internet when specifically requested. When first installing Win10, disconnect from the Internet to bypass creating a Microsoft cloud/email account. After installing, there is a utility that can be used to control privacy settings. See the references for a link. For total control, use an outgoing firewall. This can be used to block any program not specifically authorized from accessing the internet. There is a bit of a learning curve to set this up properly, but it can be very effective. It may bother people that the XBOX software they never use or installed is doing who knows what on the Internet, then this will help. XBOX seems to be one of the software programs Microsoft installs and does not let users uninstall.

## **Win7 to Win10**

It may still be possible to upgrade from Win7 to Win10 for free. You can try using your Win7 license key to activate Win10. There is more information on a link in the references. Win10 can be downloaded from Microsoft, then burn it to a flash drive using Rufus and use the existing key to get a fresh install of Win 10.

## **Hard Drives**

Windows 10 can only be installed on a disk with the newest file system type (NTFS). There will be no problem starting with a clean drive. Otherwise, the older FAT32 file system needs to be converted to NTFS before installing Win10. Note that there are two popular disk formats, MBR and the newer GPT. Windows 10 will work on both but if starting clean it would be best to format the drive for GPT and a NTFS file system. The last time I tried to install Win10 on a FAT32 partition, I got a cryptic error with a giant number. The error messages may have improved since then.

## **Removing Extras**

There is another utility that can be used to uninstall programs users do not plan to use. This is an easy way to get rid of a lot at one time. Be aware there are two type of programs under Windows 10. The traditional type of programs run when double clicked, or they can be set up to run on startup. The newer style programs are called apps and those are usually running in the background. Menu squares (also known as live tiles) on the Win10 start can be seen with programs showing the current weather and news when users click on start. These are the mobile phone style apps that are running.

## **Start Menu**

Many find the new style of start menu hard to use, especially for traditional programs. I have a recommendation for yet another utility that will restore the start menu to something more traditional (and usable). This is the first thing I install on Windows 10 systems. [The original of this article showed here a snapshot containing a new Win8/10 style start menu next to a more traditional start menu. Majorgeeks has a number of programs that will allow a more traditional style start menu under Windows 10. Stan]

## **Web Browser**

Microsoft Edge is the newest web browser. Microsoft works very hard to get people to make that the users default browser. Even if users resist and install another browser like Firefox, Edge keeps coming back. Edge runs as an app and some apps like that do not run when users operate as an administrator, so I never gave it much of a chance. I never was a fan of the Microsoft browser, since the older IE seemed to be a virus magnet and tended to corrupt downloads. The newest version of Edge has a Chrome engine behind it so it works very similar to Chrome. I do not have an opinion as to how good it is. I have not had trouble with Firefox so that is what I use. Many others seem to prefer Chrome.

## **File Security**

File security will take some getting used to if users are coming from XP. There is a way to turn off all file security, but Windows will punish users if they do it. Security is set up as if a lot of people were using the same PC and want to keep some data private from other users. The problem is that the vast majority of people have one user per PC and file security just gets in the way. It is further complicated by special rules and exceptions to try to keep popular older programs running. For example, in the XP days, a lot of programs kept user settings in the program files directory. Windows 10 does not allow writing to that directory, so when a program attempts to do that, it goes somewhere else instead. When a program tries to read the data from program files it goes to the secret directory to get the file. This works until a user tries to delete files or

move data on their own. My recommendation to reduce grief is to just put all the files created somewhere under the documents folder. By default Windows makes those files broadly accessible. If users have programs written before 2006, they probably want to install the programs directly under Documents instead of under program files or directly under the root directory (c:\).

### **Administrators**

If there is only one user, then they are probably set up as the PC administrator. In Windows 10, that does not mean what it used to. For programs that require administrator privileges, users will be prompted to confirm they want to run it. For programs that need administrator privileges, but do not know it, or if the programs were written before Windows 7, they need to right click on the icon and select RUN AS ADMINISTRATOR. There are some exceptions to make things less objectionable. For example, if they run a program with setup in the name it will run as an administrator. There is also a hidden administrator account that will give users more privileges if they log into it. Google "hidden administrator" for more details. Some buttons in Windows will have a shield on them, meaning if users click on it, it will do what they want in administrator mode. This replaces the nag that would pop up in older versions.

### **Updates**

Unlike previous versions, Windows 10 makes it very hard to prevent automatic updates. We bring a bunch of laptops to shows to use in demos and we frequently have a laptop or two down for a couple of hours doing an update. Newer versions of Windows allow users to defer updates for some (small) number of days. Frequently the updates begin when users first power on the PC and I have not found a way to stop it. PCs could be in transit for more than a week before being powered up so the deferral feature is less useful. If users get internet over WiFi they can mark the WiFi connection as being metered and then tell the update utility not to update over metered connections. This is the easiest way to stop updates. A reference is provided for more advanced situations. Be aware when it is updated, these tricks likely will change.

### **Searching**

Starting with Win7, searching became a bit difficult in Windows. They now have a search box in the upper right of the file explorer window for searching. When they start typing in there, other search options appear at the top of the window. This only searches the computer drives for the files users are looking for. I frequently have trouble getting this to find all the files and I have not figured out why. It may only look for certain types of files. I use a command line version of grep for local searches but would prefer a good GUI version. In Win10 users can also press the Windows key and S to bring up a search window. That version of search sometimes also looks on the internet. The search Microsoft is pushing in Win10 is called Cortana. It will transfer audio from the Mic or typed in questions to Bing for answers. The easy way to just turn it off is to right click on the taskbar and select SEARCH > HIDDEN. See the references to prevent the audio from being sent to Microsoft.

### **Backup**

We all know backing up is important, or at least we do when a drive crashes. To avoid crashes, users may want to just replace their hard drive after 30,000 hours of use. The cost is low compared to dealing with a crash. The most annoying thing I have found in backup utilities is many companies stop supporting their own backup formats in newer versions of the software. For example, I cannot read my Win98 backups under Win10. For people that do not have a lot of data, just copying everything to a DVD periodically is one solution. I found the Win7 backup program works well. By installing a second backup drive users can set it up to automatically keep an archive of their data on the second drive. Win10 includes the Win7 utility, but it needs to be turned on. I am currently using the EaseUS backup utility and have found it effective, but it does have a learning curve. The Win10 out of the box backup might work for some people, but it does seem to think it is smarter than the user and it does some scary stuff. One more hint, make a copy of the C:\boot directory if a full backup is not done. I have had that directory get corrupted twice during a power failure. When corrupted, the PC will not boot.

### **Conclusion**

It takes some effort to configure Windows 10 to be most effective for users, however, it is quite usable. As for bugs, it is probably about the same as XP. The difference is we have had time to get used to the XP issues. Windows 10 blue-screens maybe once a month, about the same as XP and much better than 98. More and more software is only available for Windows 10 and many companies will not provide support for older OS hosts. It can be valuable to upgrade during free time.

**References:** This list has URL links and a search term to use if the link does not work.

#### Better Start Menu

**Search:** open shell download

[https://github.com/Open-Shell/Open-Shell-Menu/releases/download/v4.4.152/OpenShellSetup\\_4\\_4\\_152.exe](https://github.com/Open-Shell/Open-Shell-Menu/releases/download/v4.4.152/OpenShellSetup_4_4_152.exe)

#### Privacy Settings Utility

**Search:** OOSU10

<https://www.oo-software.com/en/shutup10>

#### Fast Uninstaller Tool

**Search:** Bulk Crap Uninstaller

<https://www.bcupinstaller.com/>

#### Virtual Machine

**Search:** VirtualBox

<https://www.virtualbox.org/wiki/Downloads>

#### Free Linux

**Search:** Linux Lite or Ubuntu

<https://www.linuxliteos.com/download.php>

#### Maybe get a free upgrade from 7 to 10

<https://www.cnet.com/how-to/how-to-download-windows-10-for-free-now-that-windows-7-is-dead/>

#### Convert drive to GPT or manage drive partitions

**Search:** Mini-Tool partition manager

<https://www.partitionwizard.com/free-partition-manager.html>

#### Stop auto update

**Search:** stopping windows 10 update

<https://www.windowcentral.com/how-stop-updates-installing-automatically-windows-10>

#### Really stop voice activated searching

**Search:** getting rid of cortana

<https://gadgets.ndtv.com/laptops/features/how-to-disable-cortana-on-windows-10-1683223>

#### Find out how many hours the hard drive has run

**Search:** crystal disk info

<https://crystalmark.info/en/software/crystaldiskinfo/>

#### Outgoing Firewall:

**Search:** WFC firewall

<https://www.binisoft.org/wfc.php>

#### The older style calculator

**Search:** Microsoft Calculator Plus

[http://download.cnet.com/Microsoft-Calculator-Plus/3000-2053\\_4-10628441.html](http://download.cnet.com/Microsoft-Calculator-Plus/3000-2053_4-10628441.html)