

By Louis Nel

Applying a service pack after every reinstallation of Windows XP is a schlep and a waste of time, especially in a business environment. That's why it's a good idea to have a copy of XP with the latest service pack already integrated into it--a process known as slipstreaming.

But that's not nearly the end of the story. What about adding all the subsequent hotfixes/updates Microsoft has released since Service Pack 2 for Windows XP was released eons ago (August 2004, to be exact)? There have been more than 120 since then. Downloading and installing every one of them is no fun; doing it every time for every new Windows installation is plain crazy.

Even so, you can't really take a chance on ignoring the updates. Venturing onto the Internet without the protection of the latest updates and patches is downright dangerous. Tests have shown that Windows vulnerabilities can be exploited within minutes after exposing such a system on the Net.

So wouldn't it be great if you could integrate all (or at least most) of those Microsoft updates right into a copy of XP, together with the latest service pack? Well, you can--and it's a relatively simple process. And once you've done it the first time, subsequent procedures (to make new CDs with the latest updates) is a walk in the park.

To top it all, you can even add some useful utilities to your customized version of Windows and make the disk bootable.

I'm going to walk you through the whole process of first slipstreaming your copy of XP with SP2, integrating most of the updates/hotfixes since the release of SP2 into your new installation pack, and then burning the image to a bootable CD.

Slipstreaming with SP2

Let's first slipstream XP with SP2:

1. If you don't already have it, get the full ("network installation") version of the service pack. You can download it [here](#). For the purposes of this article, we'll save it to the folder XP_SP2 on the C: drive.
2. Copy the contents of your Windows XP CD to your hard drive. We'll name this folder (also on the C: drive) WinXP.
3. Open a command prompt and go to the folder containing SP2 (XP_SP2 in our example).
4. Type the command: `servicepackfilename /integrate:drive:\XPfolder`. In my example, the command is:
`WindowsXP-KB835935-SP2-ENU
/integrate:C:\WinXP`

Note

When you try slipstreaming using OEM disks from some big companies, you might run into the following error:

"This Service Pack cannot be integrated into a destination that also has integrated Software Updates."

Not to worry, there are ways and means. A program called [nLite](#) will do the trick (although it needs the .NET framework).

See Figure A and Figure B.

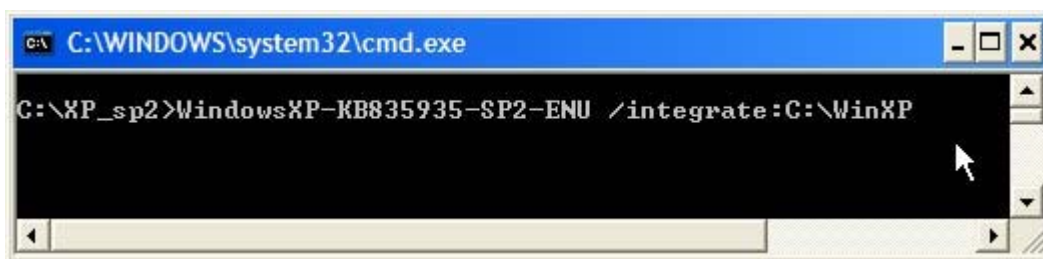


Figure A: The command to integrate the service pack

If the process has been successful, a message to this effect will be displayed (Figure C).

Integrating post-SP2 updates

Now we're ready to integrate most of the post-SP2 updates, thanks to a guy called Ryan VanderMeulen. As Ryan says on his Web site, his update pack and Integrator software are "designed to bring a Windows XP CD with SP2 integrated fully up to date with all of the latest hotfixes released by Microsoft since SP2's release. It accomplishes this task via direct integration, where files on the CD are directly overwritten by the updated files". He also says: "All necessary registry entries needed by Windows Update, QFECheck, and Microsoft Baseline Security Analyzer are imported during Windows setup, meaning that the integration is transparent to Windows. Security Catalogs necessary for Windows File Protection to recognize the updated files as digitally signed are installed, once again ensuring maximum transparency to Windows. Since the updated files are being directly overwritten on the CD, this pack has the minimum possible amount of overhead associated with integrating hotfixes in comparison to other methods--both in space used on the CD and in Windows installation time."

Sound good? It sure is!

A word of warning before you begin: Ryan strongly recommends that you start with a fresh XP installation source with no previous update packs integrated into it.

With that out of the way, let's get down to business:

1. Download the latest version of RVM Integrator and Update Pack (also the optional add-on packs if you want to--see note) here. On this page, you'll see the list of the included updates.
2. Start RVM Integrator. At the top of the screen you'll see the message Browse to the location which contains the i386 directory. In our example, that's C:\WinXP (Figure D). Note that this is the root folder that contains the i386 folder (do NOT select the i386 directory!).
3. The detected version of Windows will be displayed. You can also select a destination directory if you want to create the new installation source in a different folder. Otherwise, leave the field blank.
4. Select Choose An Update Pack CAB to browse to the location of the update pack. My update pack was called rvmupdatepack2.1.1.7z. In your case, the version might be different.

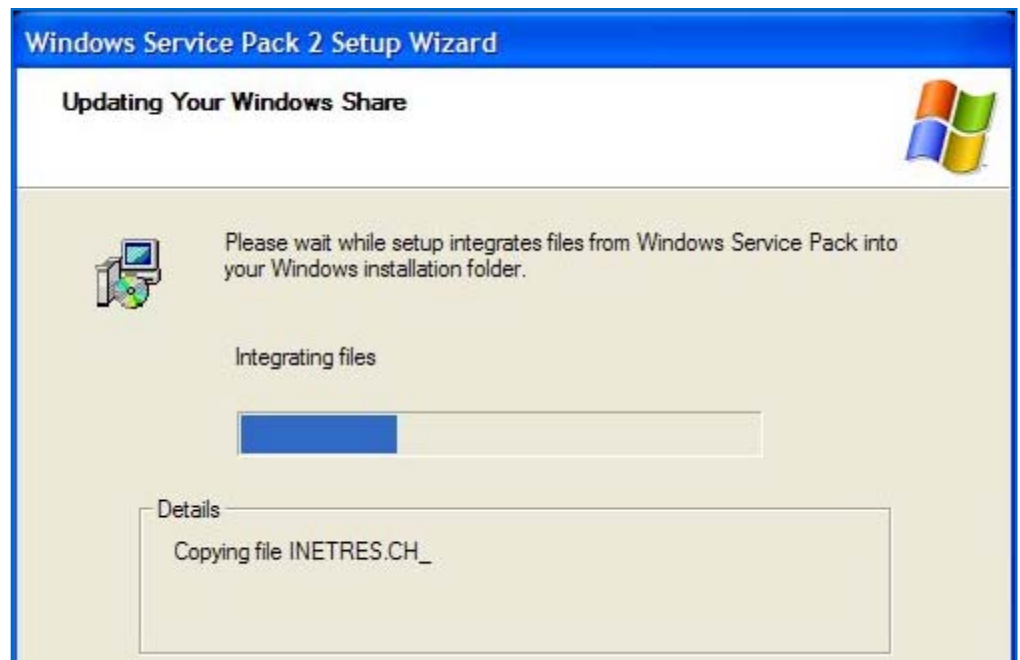


Figure B: The integration process

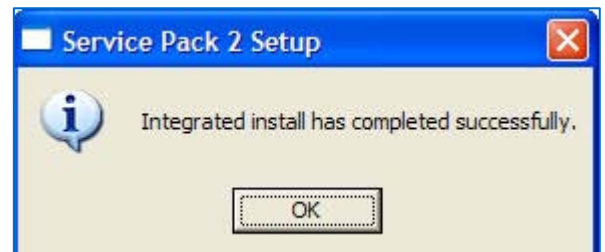


Figure C: Success!

Note

Ryan has several add-ons available. One includes some useful programs and utilities; another integrates Windows Genuine Advantage Validation (KB892130) into the XP install CD.

5. If you downloaded any add-on packs, add them next.
6. The final step is the integration. Click Integrate, and the process will start (Figure E). Go get yourself another cup of coffee.

Creating a bootable CD

To make our bootable CD, we'll use Bart's approach. Bart Lagerweij, as you probably know, is the doyen of boot disks. I'll provide an overview of the steps, but if you want to read Bart's full instructions on how to create a Bootable Windows XP CD, go [here](#).

Other methods are available. If you already have a preferred way, by all means go ahead and use that. You can, for example, use IsoBuster and Nero Burning ROM 6 (you'll need at least version 5.5.9.0) or you can use nLite (but you'll need .NET framework installed).

I prefer Bart's way. Apart for a couple of small extras you need to download the first time, you won't need things like the full version of Nero and .NET like other methods. Besides, I just love to watch Bart's command line magic.

Here are the essential steps:

1. Download [Bart's BCD software](#) (523 KB).
2. Unzip BCD to a folder. We'll unzip it to c:\bcd for this example.
3. Download the file wnaspi32.dll from [here](#) and copy it into BCD's \bin folder (in our example, to c:\bcd\bin).
4. Download this [Windows XP file](#) (5 KB). Unzip it into BCD's root folder (c:\bcd in our example). Make sure the subfolders are also unpacked.
5. Copy the i386 folder (in our example, from C:\WinXP) into one of the following folders, depending on whether it's Windows XP Home or Professional:

c:\bcd\cds\wxphome\files\
(Windows XP Home Edition)

c:\bcd\cds\wxppro\files\
(Windows XP Professional)

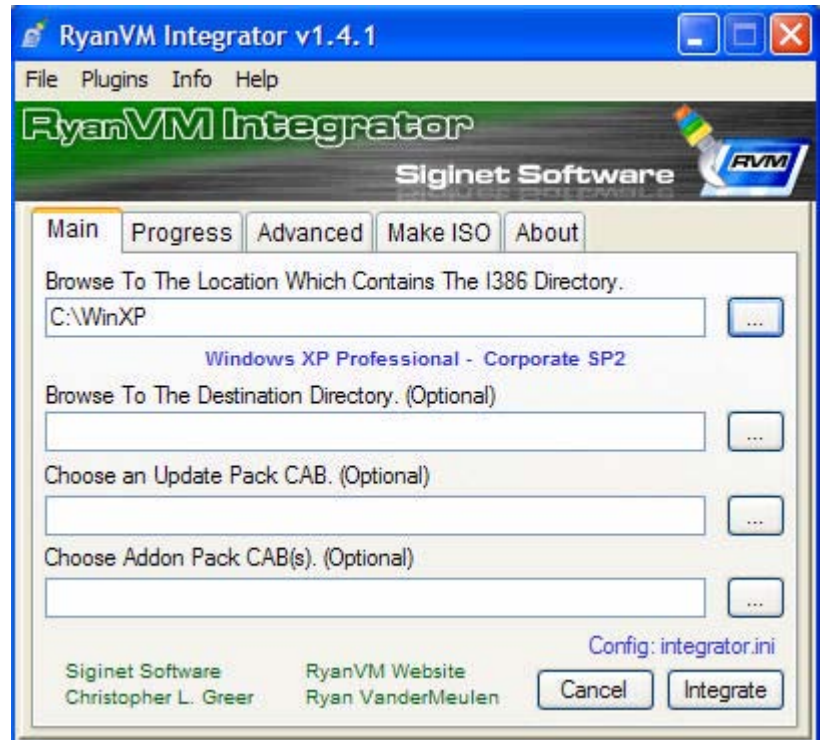


Figure D: Providing the path to the i386 folder in RVM Integrator

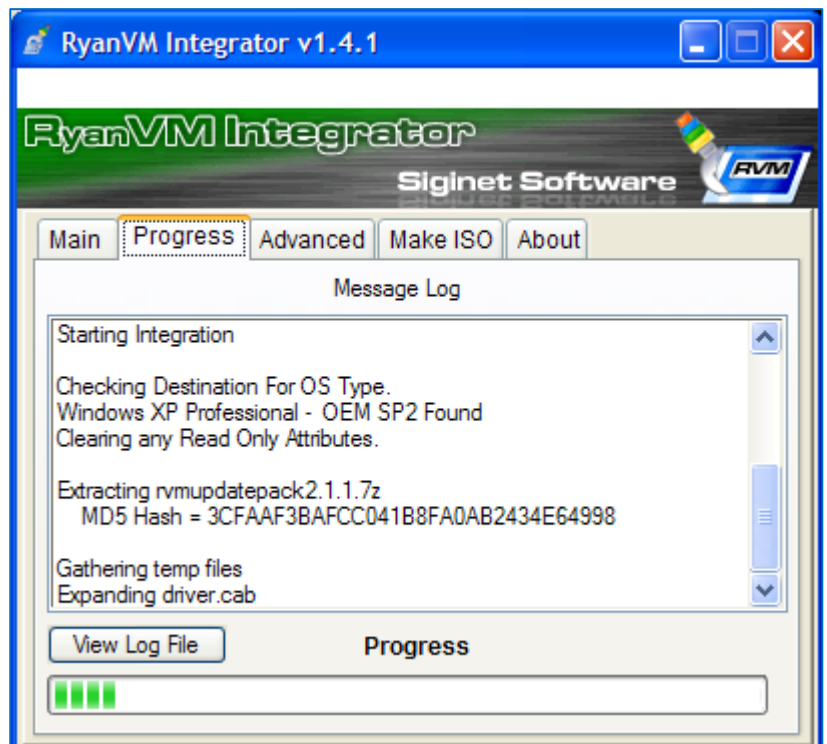
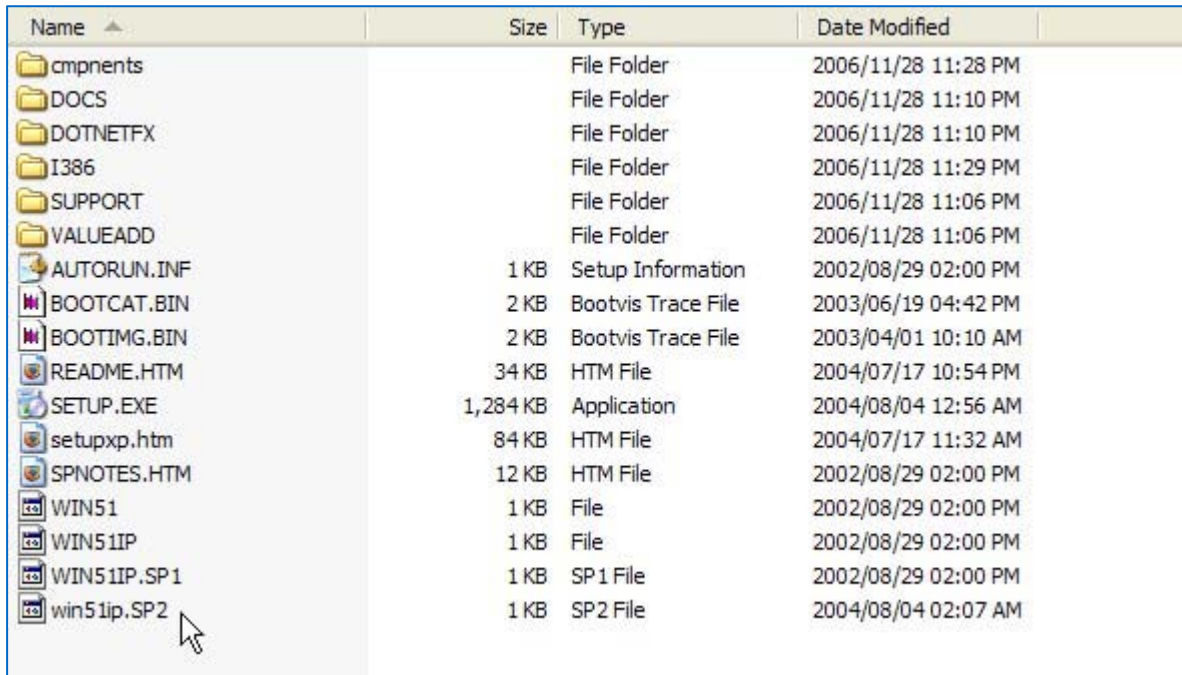


Figure E: RVM Integrator doing its job

Create a bootable WinXP CD slipstreamed with SP2 and hotfixes

Copy the win51ic.SPx or win51ip.SPx file here as well (See **Figure F**). Optionally, you can also copy the following files (not needed for bootable CD installation):

```
autorun.inf  
readme.htm  
setup.exe
```



Name	Size	Type	Date Modified
cmponents		File Folder	2006/11/28 11:28 PM
DOCS		File Folder	2006/11/28 11:10 PM
DOTNETFX		File Folder	2006/11/28 11:10 PM
I386		File Folder	2006/11/28 11:29 PM
SUPPORT		File Folder	2006/11/28 11:06 PM
VALUEADD		File Folder	2006/11/28 11:06 PM
AUTORUN.INF	1 KB	Setup Information	2002/08/29 02:00 PM
BOOTCAT.BIN	2 KB	Bootvis Trace File	2003/06/19 04:42 PM
BOOTIMG.BIN	2 KB	Bootvis Trace File	2003/04/01 10:10 AM
README.HTM	34 KB	HTM File	2004/07/17 10:54 PM
SETUP.EXE	1,284 KB	Application	2004/08/04 12:56 AM
setupxp.htm	84 KB	HTM File	2004/07/17 11:32 AM
SPNOTES.HTM	12 KB	HTM File	2002/08/29 02:00 PM
WIN51	1 KB	File	2002/08/29 02:00 PM
WIN51IP	1 KB	File	2002/08/29 02:00 PM
WIN51IP.SP1	1 KB	SP1 File	2002/08/29 02:00 PM
win51ip.SP2	1 KB	SP2 File	2004/08/04 02:07 AM

Figure F: Copy the files to the relevant locations in the bcd folder

Note

If you have a Windows XP CD from MSDN, edit the file i386\txtsetup.sif:

```
section [SetupData]
```

and change the setup source path to:

```
SetupSourcePath = "\"
```

Now you're ready to roll. Open a command prompt, go to the c:\bcd folder, and type in and run one of the following commands (depending on whether it's XP Home or XP Pro):

```
bcd wxphome (For Windows XP Home edition)
```

or:

```
bcd wxppro (For Windows XP Professional)
```

This will start creating the bootable ISO image and burn it to a CD for you. Armed with this CD, reinstalling XP or installing it on new machines will be a breeze.

Additional resources

- TechRepublic's [Downloads RSS Feed](#) **XML**
- Sign up for TechRepublic's [Downloads Weekly Update](#) newsletter
- Sign up for our Windows XP newsletter
- Check out all of TechRepublic's [free newsletters](#)
- ["10 handy Windows XP efficiency tricks"](#) (TechRepublic download)
- ["10 customization tricks to save you time in Windows XP"](#) (TechRepublic download)
- ["Tune Windows XP to speed up boot and shutdown times"](#) (TechRepublic download)

Version history

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