



# High-Rely BARE METAL CHRONICLES

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ADVENTURES IN THE CHALLENGES OF OBTAINING PEACE OF MIND WHILE COMPUTING

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## High-Rely does Bare Metal Restore on Windows Vista

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*Summary: Microsoft provides a native means for doing a bare metal restore under the new VISTA operating system that works with High-Rely drives.*

Being a NEWBIE to MS Vista, I set out to prove that our High-Rely tapeless backup systems were functional under MS Vista. I also heard that Vista provided it's own complete PC backup and restoration system which I also wanted to try. The following is my account of the whole Vista installation process and the Back up and Bare Metal restore process. A few unnecessary comments made it into this account as a vent for some of the frustrations.

I have a 2.2GHz Intel Core 2 duo on an MSI 975X Platinum motherboard (Intel 975 chipset) with 1 GB of RAM and an ATI RADEON CATALYST with 512MB of RAM pumping an 80GB Seagate Hard Drive. Starting with a freshly installed copy of Windows XP Pro SP2.

I don't know all the venues for getting Vista, besides buying it from various outlets, I understand it can be downloaded from MS but it's about 2.X GB. I got mine from our company MSDN disks because we are in the MS Partner Program.

Initially I wanted to install from CD's rather than a DVD. I had to make 4 CDs from the DVD .ISO images on the MSDN supplied disk. To give you an idea of how much larger Vista is, it will use all four of those disks for the install compared to one of a

Windows XP!

Disk 1 of Vista does not boot. To install this way, Vista must be installed on top of XP or possibly some other previous Windows OS so you have to boot XP first then install disk 1. It will pop up and ask you if you want to check compatibility (on-line) or install. I chose Install now.

Vista pretty much assumes you're connected to the internet. The next option is "Go on line to get the latest updates for installation" or "Do not get the latest updates." It says below that "Without the latest updates installation might fail. That's a bit humorous considering this is the newest release.

The next screen asks for the product key. At least Vista won't lead you on half way through an installation before you discover your whether product key is bad or not for the version you're trying to install. There's Vista Business, Vista Home Basic, Vista Home Premium and Vista Ultimate. I chose Vista Business.

Next, you must accept the license. It's long. Very long. It might have even been the inspiration for the term "Long Horn".

The next screen gives you the option of upgrading (keeping your existing files and settings and programs) or installing clean and with custom choices. I chose Custom.

Windows then wants to know where you want it to install too. It will also install a driver at this point if you want it on a device not supported by the default drivers available to the installation.

Once you select a partition, rather than just blindly erasing everything, windows will save everything in a folder called Windows.Old. It will not function but you will be able to access it.

Windows then begins to copy it's files. At 19%, it asks for disk 2. At 45% it asked for disk 3. At 72% it asked for disk 4. Except for the fact that you do not have a bootable install for Vista this way, MS deserves some credit for uncomplicating its installation.

I must retract that last statement because my next prompt was to install disk 5! After fumbling through the MSDN Partner Program box of disks looking for something with another ISO on it, we simply installed the Vista DVD.

After rebooting the Vista DVD, I selected Install Now (again) and made the same selections as before then waited for windows to copy everything again.

Although aggravating, the process of starting over was pretty simple. After copying the files, it "Expands" them. At 27% it then reboots and continues expanding. This is disturbing because this looks like my machine may have shut down abruptly for some reason in the middle of this operation. But, if you experience the same thing then you'll know you're not alone.

It then reboots again. Screen goes black for an eternity and then a please wait message appears. Finally the screen returns with "Installing updates" and then "Completing installation". If you've been waiting to see the "Stunning" user interface. Everything this far is disappointing. The screen goes black again for an eternity then the machine reboots again.

Next I'm asked for the region, language and keyboard layout. I leave the defaults selected. Then I'm asked for a user name - I enter user and leave the password blank. Then I'm asked for a computer

name - again I leave the default.

I'm then asked to select User recommended settings (default), Install important updates only or ask me later. I chose the default of recommended settings.

Next, time zone. A nice analog face clock is shown. You'd think for the price of vista they would have copied a Rolex-like everyone else does.

Next it wants the computer's current location (home, work or public) I chose work. Thank you with a start button appears.

Then, please wait while windows checks your computers performance. MS self promotions slides fade in and out. This "performance checking" takes quite a bit of time (about 3 minutes). And... It's alive!

The GUI is pretty, but I guess I'm not "stunned" as others have been. On my screen is the nice looking analog clock, with a welcome window. At this point I have to leave so I click the windows logo in the familiar location of the old "start" button and find a cryptic arrow icon which has the option of shutting the machine down. I select that and then am notified that updates are being download and installed and then it shuts down.

Back again in the morning, the boot time appears equal to that of Windows XP. This is a hard thing to gage because my XP is dated and has many services loading.

After booting and unless disabled, an "in your face" explorer page showing system stats, Getting started and "Offers from Microsoft" - imagine you paid for a \$400 movie and still had to watch commercials.

In the top of the explorer window where the address or file path line would normally lie is a Control panel, System Maintenance and Welcome center menu. The first thing in order is to register - we don't want that beastly popping up when we start doing something

important. Off the explorer window I select Register Windows on-line. Hmm, they want to know how many employees. Now my email address. Now my business address, and phone number. Microsoft may wish to contact me... I clicked no. Do I run a home business? What best describes your industry? How many locations do you have? How many employees do you have? What is the total number of personal computers within your organization? Does your company currently utilize a network? Does your company utilize a server? How is information technology managed at your company? What type of connection does your small business use to access the internet? What percentage of ownership do you have in the company? Which of the following best describes your area of responsibility within your small business? Please indicate the Microsoft applications you use most often: (a list ensues). Continue - oops - make sure you answer each of the above questions and don't forget to check Windows OS on the last question of what Microsoft applications you're using! Finish.

I've been congratulated on registering my copy! WOW! Now I can visit Microsoft small Business + now to "get more out of your relationship with Microsoft". I just want an OS, not a relationship.

At this point I've noticed that Microsoft has ripped almost every last bit of navigational text off the GUI leaving you with iconic abstract icons to try to navigate with. This applies to Explorer as well. You can still hover and get a description but that's not "navigation at a glance".

Since I am specifically interested in backup, I select the Windows Button (replaces start button) and then select All Programs. Under maintenance I select Backup and restore center.

I can, Create backup copies of files and folders, Create a Windows Complete PC backup, Restore image of my entire computer or Restore files. I

chose Backup Computer.... BUT! Windows needs my permission to continue. I select continue.

I can store the backup on a hard disk or one or more DVDs. I chose hard drive (my high-rely external USB 250GB volume). Windows wants me to confirm again and says it will require 11GB of space! Granted, part of that is the Windows.Old (Windows XP). I guess the backup is not compressed unless... nope it's not compressed. I chose to start the backup. A nuclear green gas gauge starts running.

My high-rely volume is an empty 250GB drive connected via USB 2.0. **3 minutes and 50 seconds** later a discrete message appears "Your backup has successfully completed" - I chose close.

I explore my High-Rely volume and discover a single folder entitled "WindowsImageBackup". When I try to explore the folder I get a message that I don't have permission to access this folder." But, I have a button with the option of "continue" I choose Continue. I get another message saying that Windows needs my permission to continue hmmm if it were human I would think that it didn't hear me. It continues "if you started this action, continue. But below that statement is "Edit Security" and below that is "Microsoft Windows". Confusing but at least tempting me to do so as I then discover that EVERY folder on down requires that answer these two dialogs.

So, at this point it is clear that in order to restore a complete system, you must first build one because this file is clearly not bootable. Secondly, the backup and restore program has an option to "Restore Files" and "Restore Computer". This is almost gross considering that before you restore you must first install XP, then install Vista before you Restore your system.

Well, that would be an easy conclusion to jump to if

you purchased the Vista Upgrade as the .ISO of disk 1 was not bootable. However, the DVD from MSDN simply labeled "Windows Vista" does boot (FROM A DVD DRIVE). Upon booting you may Install Now, Get information or Repair your computer. I chose Repair.

It should be noted that at this point I had removed my original drive C and replaced it with a blank drive. However, my USB High-Rely with the WndowsImage file was still connected. The next screen that appeared asked that I select an operating system to repair. Of course there were none so I simply clicked Next. Then I was given a screen to "Chose a recovery tool" Startup Repair, System Restore, Windows Complete PC Restore, Windows Memory Diagnostic Tool or COMMAND PROMPT.

Not to digress too much, but MS insisted from the release of Windows 95 that the Command Prompt was doomed. I've always maintained that it's too simple and too powerful to be doomed. I just had to test drive the command prompt quickly. Edit was gone but notepad could still be launched from the command line. Type worked, Xcopy worked, format worked but fdisk was not present. Well enough of that for now – I type Exit - that still worked too.

Back to choosing a recovery tool - I chose Windows Complete Restore. It then Scanned for Backups. It found the backup on the USB connected High-Rely. I chose Next. It asked again where to restore from along with where to restore too. But the from was populated with the earlier selection and the to was defaulted to C:. I checked the box "Format and repartition disks" then clicked finish. I got "WARNING! Windows Complete PC restore will format the disks you chose to restore which will erase all existing data..". yaya. I confirmed that I wanted to format and hit OK.

**The restoration took 3 minutes and 15 seconds,**

then windows restarted. I removed the Vista DVD and... viola! Vista was back on my screen from a different hard drive. However, it re-detected some hardware and had to reinstall drivers again. It handled this automatically but still needed to reboot again. Reboot and all is good.

My impression of the whole process was that it was pretty darn easy. I was never asked for drivers, Vista knew my whole machine. I was never asked for domains, IPs or other fairly technical stuff. I give Vista an A for simplicity in that regard. However it must be considered that I have an MSDN copy of Vista to install from and my hardware is only about 4 months old and is rather well endowed. The only section I found uncomfortable was Microsoft's sudden interest in all the details of our business. Possibly this is a side effect of using a Business Version CD Key. My purpose was to prove the functionality of the High-Rely USB with Windows Vista which I did without incident. The other information is for entertainment value.