



PRODUCT REVIEW

Exploring Linux—Part 21 *by Alan German*

Although I use Linux most of the time, when it comes to full-system backups, I have resorted to dual-booting into Windows and using the free edition of Macrium Reflect (<http://opcug.ca/public/Reviews/MacriumReflect-Free.htm>). Under Linux, I have so far restricted my backups to either file and folder synchronization using FreeFileSync (http://opcug.ca/public/Reviews/linux_part18.htm), or real-time backup of my data partition using inosync (http://opcug.ca/public/Reviews/linux_part16.htm). Now, it's time to move on and find a more comprehensive Linux solution for file, folder, and disk partition backups.

“There are two kinds of people.... those who have lost data due to a system crash, and those who will.”

*Mike Epstein
TwoKindsOfPeople*

One program that I have tried in the distant past is partimage (http://www.partimage.org/Main_Page). A brief return to this software reminded me that it sports a quasi-graphical interface (much like old

DOS programs), needs to be run as root, and requires partitions to be unmounted for processing. The simplest way around all of these issues is to run the program using a bash script file.

My solution was to incorporate commands to unmount my data partition (sudo umount /dev/sda2), run partimage, and then remount the data drive (sudo mount /media/DataDisk/) to make this once again available for use. The command to run partimage to make the backup on my external USB drive (/media/MYBOOK1) takes the form:

```
sudo partimage -z1 -o -d -b -B=alan
save /dev/sda2/media/MYBOOK1/
z_images/test0/datadisk_ddmmm12.gz
```

The switches used for partimage are mostly straightforward: -z1=use Gzip compression, -o=overwrite any existing image file, -d=no description, and -b=run in batch mode (GUI doesn't wait for input). The -B switch is a little strange. There has to be a -B=value, but partimage doesn't seem to care what “value” is used. I opted to use -B=alan which worked just fine.

The other potential problems with partimage are that it has no support for the ext4 file system and there is no 64-bit version of the software. A possible workaround for both these issues is a relatively new program named fsarchiver (<http://www.fsarchiver.org>) for file system archiver. However, a possible downside to fsarchiver is that, while it also supports NTFS, it has no support for FAT disk volumes.

This program is a bit similar to partimage (although it currently only sports a command line and no GUI) and at least one web posting suggests that the two pieces of software may come from the same programmer. Fsarchiver uses a slightly dif-

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April Raffle

Courtesy of the Pierre Roman, we have a copy of **Microsoft Office Home and Student**. This version of Office includes Word, Excel, PowerPoint and One Note. New Office Web Apps tools offer dynamic new ways to create access and share your files via computer, web browser or Windows Mobile based smart phone. Customizable templates, color schemes, dynamic text effects, photo and video editing capabilities allow for unprecedented creativity and put you in total control of your project. Office Home and Student 2010 is able to be installed on 3 PCs per household.

Microsoft Office Home and Student is valued at \$160.

Tickets are, as always, a good deal at \$1 for one, a great deal at \$2 for three or the unbelievable bargain of \$5 for ten!

March Prize Winners

Harold McClemens, John Archibald and Peter Hecht each won a door prize (a copy of the Kaspersky Security Suite) at our March general meeting.

The raffle prize of a copy of Window7 Ultimate went home with **Bob Walker**.

Coming Up... Wednesday, April 11th, 2012

Pierre Roman is a Senior Technical Account manager for the Federal sector of Microsoft Canada. As such he connects and engages with his customer to ensure they are operating in the most efficient, problem free manner. He will be giving us a peak at the upcoming Windows 8.

Windows 8 has been reimagined to focus on your life. The beautiful, fast, and fluid design is perfect for a range of hardware: from compact, touch-enabled tablets and lightweight laptops, to large, powerful all-in-ones with high-definition screens. It's smooth, intuitive, and gives you instant access to your people, apps, and stuff, so you spend less time searching and more time doing. In this session we will explore the following key Windows 8 points:

- How Windows 8 is Windows reimagined
- All the great apps you want
- How Windows 8 is cloud-connected
- Getting more from the Windows Store
- How we reimagined browsing with IE10
- How you can get things done at home and work
- And the choice to have a great experience across all hardware
- The Windows 8 solid foundation

2012 CALENDAR

Meetings	Date	Time and Venue
OPCUG General Meeting	Wednesday, April 11 th	7:30 p.m. Auditorium of the Canada Science and Technology Museum , 1867 St. Laurent Blvd. http://www.sciencetech.technomuses.ca/english/index.cfm
Beginners' SIG	Wednesday, April 11 th	Immediately following the OPCUG General Meeting.
Linux SIG	(suspended)	Immediately following the OPCUG General Meeting.
Beer BOF (Wing SIG East)	Wednesday, April 11 th	10:00 p.m. (after all other SIGs) at Liam Maguire's, St. Laurent Blvd. at Innes Rd.

Please note that unless otherwise noted, SIGs meet at 9:00 p.m. (immediately following the OPCUG General Meeting).

PRODUCT REVIEW

System Information for Windows

by Alan German

A number of club members have indicated that they have found programs listed in OPCUG's Free Software Guide (http://www.opcug.ca/public/LinuxSIG/freeware_guide.htm) to be very useful and several individuals have been good enough to contribute suggestions for the list. Brice Wightman further suggested that Gizmo's Freeware Reviews (<http://www.techsupportalert.com/>) would provide a valuable source of information on free software. So, when I needed to identify the Ethernet controller and wireless card inside my netbook computer, it was to Gizmo's that I turned for assistance.

The solution to my problem was quickly identified by navigating to Freeware Categories – System Info. – Best Free System Information Utility – Quick Selection Guide. The top listing in the category, with 9 out of 10 stars, and the recipient of Gizmo's Freeware award as the best product in its class, was SIW (System Information for Windows).

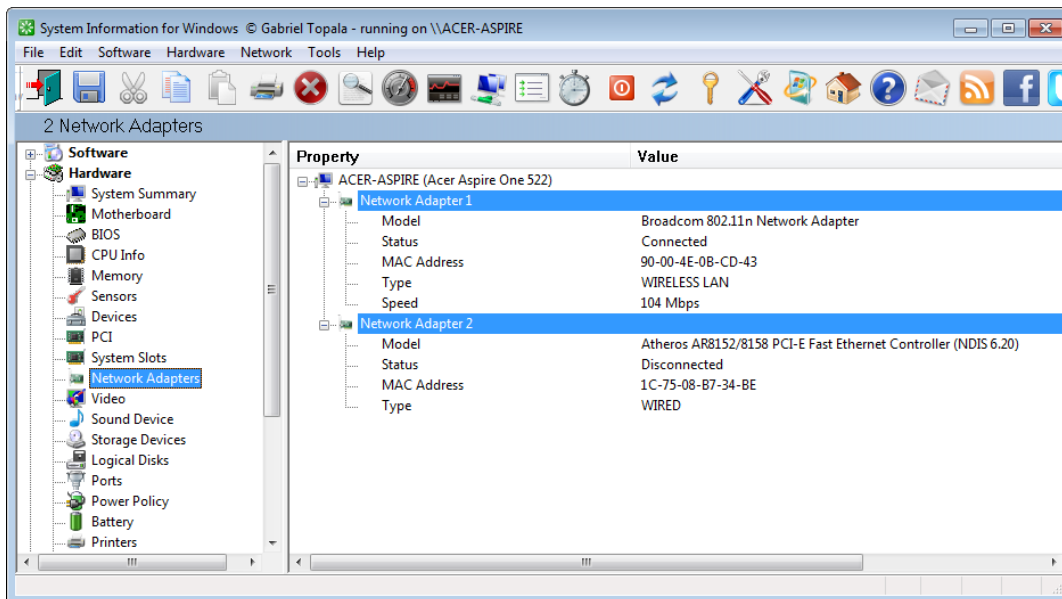
This program is a Canadian product, having been developed by Gabriel Topala of Vaughan, Ontario. The author says that: "SIW is an advanced System Information for Windows tool that analyzes your computer and gathers detailed information about system properties and settings and displays it in an extremely comprehensible manner." Furthermore, PC World says of this program: "It's probably the most comprehensive free system analyzer you'll find anywhere." So, this was good enough for me. Time to give the program a whirl.

The home edition of SIW is bundled with "InstallMonetizer" that produces an advertisement when the package is installed. While this, therefore, makes SIW a type of ad-supported software, it should be noted that Monetizer is a one-time-only feature, and no further advertisements are displayed when the program is in normal use.

Once installed, using the program couldn't be simpler. The utility produces a list of software, hardware, and network components, each broken out by category. In my case, I was interested in the Network Adapters' group in the Hardware section, and quickly determined that my computer was equipped with a Broadcom 802.11n Network Adapter (providing wireless access) and an Atheros AR8152/8158 PCI-E Fast Ethernet Controller (NDIS 6.20).

The system information can be viewed on screen, or a report can be produced in a variety of formats (e.g. HTML). In addition to the extensive range of system information that is automatically generated, the program provides a number of diagnostic and testing tools, including a broadband speed test, a real-time indication of CPU and memory usage, and a cookie monitor.

SIW does indeed provide a comprehensive list of system information. So, if you have a need-to-know, this free program will readily provide the information specific to your system.



Bottom Line

SIW 2011 - System Information for Windows (Freeware)

Gabriel Topala, Vaughan, Ontario

<http://www.gtopala.com/>

ARTICLE

Desirable specs for buying a new Windows PC

By Dick Maybach n2nd@charter.net

Sooner or later, you'll be looking for a replacement for your PC. What requirements must the hardware satisfy? This article will assume you will be using the Windows 7 operating system, although almost any PC that supports Win 7 will also support any Linux distribution.

If you purchase your PC from a well-established vendor, it will arrive with Windows already installed and well checked-out. However, most of us keep our PC's for several years, which means that their performance should exceed what is needed today.

Software vendors know that to sell new versions of their products, they must add new features, and these require more from the hardware. Moore's Law, which says that integrated circuit performance doubles every 18 months, has been true for 30 years and shows no signs of changing in the near future.

As a consequence, six years from now, PC's will be eight times as powerful as today's models, and software designers know and depend on this. Buying a barely adequate PC means that it may not adequately run any software on it that it wasn't delivered with.

Let's begin by looking at what hardware Microsoft recommends as a minimum for Win 7.

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit processor
- 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)
- 16 GB available hard disk space (32-bit) or 20 GB (64-bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver

We see that the first choice is between a 32-bit and a 64-bit processor. At present, most home applications are available only in 32-bit form, and while these will run in a 64-bit environment, doing so provides little advantage, except that 64-bit CPUs can handle more RAM. (See the RAM discussion below.) This will probably change, perhaps as early as the next release or so of Windows.

You might be tempted to go for a 64-bit processor, thinking that you will be able to upgrade to Win 8 or 9; however, don't forget Moore's law. When the time comes to upgrade, you will certainly find that your PC is hopelessly underpowered. A 32-bit processor is the correct choice, unless you have special requirements.

Processor clock speeds can now exceed 3 GHz, but processor architecture also greatly affects its computing rate, with the result that clock speed is not as good an indication of computing power as in the past. Indeed, AMD has stopped using clock speed to characterize its processors.

Manufacturers achieve higher performance by putting multiple processors (called cores) on a single chip. Get at least a 2-core processor and preferably a 4-core one. You may not see much advantage initially, but Windows slows down as the number of updates increases, and you probably will add new applications, which become more resource-hungry with each release.

Note the important difference between multi-core processors and multiple processors. The former are single packages with more than one computing component; the latter are multiple packages, each with its own stacks, cache memory, and input/output. Only the Professional, Enterprise, and Ultimate versions of WIN 7 can make use of more than one processor, although all 32-bit versions of WIN 7 can use up to 32 cores.

Finally, consider getting a CPU with an Intel-VT or AMD-V supported and enabled. Without this, you can't run Windows Virtual PC (<https://www.microsoft.com/windows/virtual-pc/default.aspx>.)

RAM is cheap, which means you should get as much as you can use. However, a 32-bit processor, can access a maximum 4 gigabytes of memory, and memory includes not only RAM, but also video RAM. If you have a high-end graphics controller with 1 GB of video RAM, your processor can use only up to 3

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Desirable specs...

(Continued from page 4)

GB or RAM. Remember, though, that many people use just a video controller on their motherboard, and such units use regular RAM for video storage.

Once your system fills RAM with data, it begins to use swap space on your disk, and this drastically slows performance. I recommend you install as much RAM as your processor can address, 4 GB if you use an integrated video controller, perhaps somewhat less if you have a separate one.

You can see a problem developing here; because the recommended RAM is at the limit of what the processor can see. To use more RAM, you have to use a 64-bit CPU and operating system, which is why I think that we will soon see a move to this configuration.

I recommend at least a 2000 GB (2 TB) hard disk. You do not want to run out of disk space and have to port all your software and data to a new one. Faced with this, most home PC users would decide to purchase a new PC. A competent PC shop can do this for you, and while the cost is reasonable, it will certainly exceed any savings you realized by skimping on the original disk size.

Most home PC users will find that the minimum video controller specified by Microsoft is adequate, but if you play action games or

have specialized needs, such as photo editing or computer-aided design (CAD) you probably need a separate high performance video card, perhaps one compatible with DirectX 10 or 11.

Graphics cards have faster processors than those mounted on motherboards and their video RAM is separate from that on the motherboard. You will have to do some research into the recommendations of your software vendors, not just for what you now use, but also for what you may soon install.

However, replacing your video controller is much easier than changing disks, so you can upgrade later if needed. Pay attention to the connector for the display; although VGA is still common, many high-performance controllers use Digital Visual Interface (DVI), High-Definition Multimedia Interface (HDMI), or Display Port.

Besides the basics above, you also need some peripherals, and the most important of these is the display. You will probably follow the recommendations of the PC vendor, but consider getting a larger one than standard. As we age, our vision dims and blurs, and more visual real-estate allows us to magnify images, which makes computer time more comfortable. Be a little careful here, and be sure the display interface is compatible with your video controller.

Of course, you need a read-write DVD drive, and you may want to get one that handles Blue-Ray. If you have a pile of diskettes, you may also want a floppy drive, but the need for these is fading fast. Get as many USB ports as you can (version 2.0 or later), and at least two should be on the front panel. If you run out of ports, you can add USB hubs, but the result is a tangle of cables, power cords, and power supplies. (This will happen anyway, but try to avoid making it worse.)

Keyboards and mice are cheap commodities and are easily upgraded. Current PCs use USB ports to communicate with keyboards and mice, so you may not be able to transfer these from your old system.



Naughty Video

by Chris Taylor

A clever little video on parental controls.

<http://www.worktobejudged.com/strippause/peca.html>

Whenever the video stops playing, click on the play button.

Don't worry, there is nothing offensive in the video.

Strip Tease



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Exploring Linux—Part 21 *(Continued from page 1)*

ferent command line format than partimage. It's still best to work with unmounted volumes, but I was easily able to get my bash script file to work by modifying the main command to:

```
sudo fsarchiver -o -v savefs /media/MYBOOK1/z_images/
test4/datadisk_ddmmyy.fsa /dev/sda2
```

The `-o` switch is to overwrite any existing backup file, while the `-v` switch provides verbose output and displays the progress for individual files while the backup process is running.

Fsarchiver provides support for multiple file system backups in a single file system archive (`.fsa`) file. While perhaps an interesting idea for some, for me this has the disadvantage that it is even more difficult to retrieve individual files or folders from the backup. So, onto yet another possible backup solution...

The current release of Ubuntu Linux (Oneiric Ocelot) has the Déjà Dup (<https://launchpad.net/deja-dup>) backup utility built into the distro. If you are a fan of minimal graphical user interfaces, then you have arrived at the right place! Launching Déjà Dup produces a small window with two large buttons – Backup and Restore – so, it's not too difficult to figure out how the program works.



Setting the program's preferences to indicate the backup location, and the files and folders to be included in the backup process, is a straightforward process. The dialogue box has a number of other options, such as the ability to add a list of exceptions for files or folders that are not to be included in the backup, file encryption, backup on a regular schedule (e.g. daily), and setting the time period for which backups should be retained (which includes “Forever”).

Déjà Dup is actually a graphical front end to a program named duplicity, and it's the latter utility that creates the backup, essentially as a series of Gzip files. Initially, duplicity makes a complete backup of the source files. Subsequent backups are made as a series of incremental backups such that only the changes in the source files are copied to the target directory.

The backup series is stored chronologically in a bewildering series of volumes, manifests, and signature files in the target directory. Fortunately, these are effectively transparent to the user. Pressing the Restore button returns a “Restore from When?” dialogue box, with the individual backups in the series being displayed in a simple list.

Running the program to create or restore an entire backup is as simple as pressing a button. The only real downside is that recovering a single file from the backup set is not a straightforward exercise. There is no option for this built into the program, and finding a given file among the many Gzip files is probably more trouble than it's worth.

Several backup packages available for Linux are based on the `rsync` file synchronization utility. This program creates backups by simply copying files, which makes restoring a single file or folder very easy. Some time ago, I played around with `rsync` (http://opcug.ca/public/Reviews/linux_part9.htm), but found the use of the command line tedious. While one can use a bash script file to make the backup process more efficient, it's even simpler to use a purpose-built backup program that essentially adds a graphical front end to the package. Next time, we will review some packages that use this technique.



OPCUG Free Software Guide – Part 30 Compiled by Alan German

This guide features an annotated list of free computer programs. The software mentioned has not been reviewed (except where noted) nor have any tests necessarily been conducted. Consequently, no guarantees are provided that the individual programs will perform as described. Rather the list of available software is provided for the information of our members who may find one or more of the programs useful.

PagePlus Starter Edition

This amazing – and free – desktop publishing software will give you total layout control when creating documents. It has powerful word processing features, sticky guides for exact alignment of objects, and support for common image file formats (e.g. JPG, PNG)

Web Site: <http://www.serif.com/desktop-publishing-software/>

CyberGhost VPN

Are you concerned about security when connecting to the Internet at a cyber café or other wireless hot-spot? CyberGhost creates a virtual private network (VPN) to make your web connection secure from hackers..

Web Site: <http://cyberghostvpn.com/>



Family Budget Planner

This worksheet for MS Excel, created by Dr. Jon Wittwer, will help you create a yearly budget by entering amounts based on the month in which expenses are incurred.

Current Release: Version 2.0

Web Site: <http://www.vertex42.com/ExcelTemplates/family-budget-planner.html>

CD Recovery Toolbox

This tool helps recover damaged files from optical disks (including CD's, DVD's and Blu-Ray). Restore information lost as a result of mechanical damage of the disk (e.g. scratches) or as a result of incorrect recording.

Web Site: <http://www.oemailrecovery.com/cdrecovery.html>

Notepad++

As the name suggests, this open-source replacement for Notepad in Windows offers much more than simple text editing. Features include multiple file tabs, program code

editing, and the ability to add plug-ins (e.g. for multi-language spell checking).

Current Release: Version 5.9.6.2

Previous Reviews: Two Pluses for a Notepad Alternative, <http://opcug.ca/public/Reviews/notepadplus.htm>, Another Plus for Notepad++, <http://opcug.ca/public/Reviews/NotepadUpdate.htm>

Web Site: <http://notepad-plus-plus.org/>



DiskExt

This Windows Sysinternals utility, from Mark Russinovich, displays information about all the disk drives, volumes, and partitions on your computer.

Current Release: Version 1.1

Web Site: <http://technet.microsoft.com/en-us/sysinternals/bb896648>

Ultimate Windows Tweaker

A freeware utility for tweaking and optimizing Windows 7 and Vista to make your system faster, more stable, and more secure, with just a few mouse clicks.

Current Release: Version 2.2

Web Site: <http://www.thewindowsclub.com/ultimate-windows-tweaker-v2-a-tweak-ui-for-windows-7-vista>



Rainmeter

Want to radically change the look of your Windows desktop? Rainmeter displays customizable skins, many of which are functional. They can record your notes, to-do lists, and launch your favourite applications. Rainmeter is open source software for Windows XP/Vista/7.

Current Release: Version 2.1

Web Site: <http://rainmeter.net/cms/>

OTTAWA PC NEWS

Ottawa PC News is the newsletter of the Ottawa PC Users' Group (OPCUG), and is published monthly except in July and August. The opinions expressed in this newsletter may not necessarily represent the views of the club or its members.

Member participation is encouraged. If you would like to contribute an article to Ottawa PC News, please submit it to the newsletter editor (contact info below). Deadline for submissions is three Sundays before the next General Meeting.

Group Meetings

OPCUG meets on the second Wednesday in the month, except July and August, at the Canada Science and Technology Museum, 1867 St. Laurent Blvd, Ottawa. Meetings are 7:30–9:00 p.m. and Special Interest Groups (SIGs) go until 10 p.m.

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