

The PCLinuxOS magazine

Volume 84

January, 2014



Happy New Year 2014!

KDenLive: Part 2

Say It Out Loud With googlesay

PCLinuxOS Forum

Family Members: smileeb

**A Wallpaper Slideshow
For ANY Desktop**

Bored? Twenty Ideas To Help

**Enhance Your Home Brews
With Brew-Target#**

PCLinuxOS Recipe Corner

**Game Zone: Assault Android
Cactus**

**Computer Hardware 101:
Power Supplies**

**Fail2ban:
Installation & Configuration**

**Inkscape Tutorial:
Make A Chalkboard**

And More Inside!

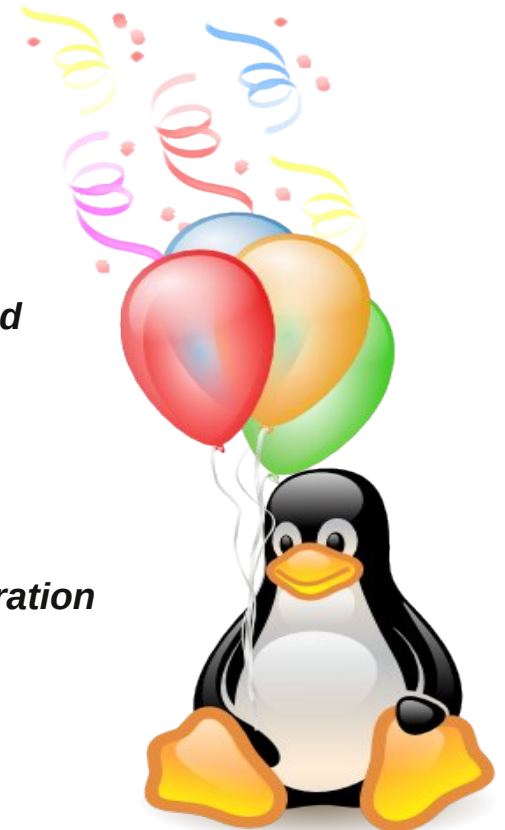


Table of Contents

3	<i>Editor's Welcome</i>
4	<i>Keep Tabs On Your HD's Health With GSmartControl</i>
7	<i>Screenshot Showcase</i>
8	<i>ms_meme's Nook: PCLOS Will Shine</i>
9	<i>Computer Hardware 101: Power Supplies</i>
17	<i>Screenshot Showcase</i>
18	<i>PCLinuxOS Recipe Corner</i>
20	<i>Say It Out Loud With googlesay</i>
21	<i>Screenshot Showcase</i>
22	<i>Inkscape Tutorial: Make A Chalkboard</i>
25	<i>Kdenlive, Part 2</i>
28	<i>Bored? Twenty Ideas To Help</i>
33	<i>PCLinuxOS Puzzled Partitions</i>
36	<i>Almost Ten Years Here, and Loving It</i>
37	<i>Screenshot Showcase</i>
38	<i>A Wallpaper Slideshow For Any Desktop</i>
41	<i>Game Zone: Assault Android Cactus</i>
43	<i>Fail2ban - Installation and Configuration</i>
44	<i>Screenshot Showcase</i>
45	<i>PCLinuxOS Family Member Spotlight: Smileeb</i>
46	<i>Screenshot Showcase</i>
47	<i>Enhance Your Home Brews With Brew-Target#</i>
50	<i>Screenshot Showcase</i>

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Welcome From The Chief Editor

It's hard to believe that another year has passed. Over the past year, we've witnessed many milestones. 2013 saw the release of an official Mate version of PCLinuxOS, while the KDE and LXDE versions saw continual updates. Community-member remasters of e17 and Xfce, by OnlyHuman and lka, respectively, delivered updated, albeit unofficial, new releases of those favorite desktops under a PCLinuxOS banner.

Earlier in the year, Neal had to take leave of his lead packager/developer position, due to some health

issues. Textstar stepped back in to resume his lead role, in Neal's absence. We all certainly hope that Neal heals well and returns to us in the new year. His absence is sorely noted, and he is missed.

More recently, PCLinuxOS took some undeserved heat in the press over an obviously fabricated charge. As the fervor mounted among PCLinuxOS users, and after their voice was heard loud and clear, the blog was removed. It remains to be seen what damage might have been done before the blog entry was removed.

On a brighter side, PCLinuxOS celebrated its 10th birthday this past year, while Linux celebrated its 22nd birthday as an operating system. Here at The PCLinuxOS Magazine, we completed a series of articles on migrating to PCLinuxOS from Windows – and then assembled them all into a special edition of the magazine, to better serve as a reference resource for those making the switch.

The disaster better known as Windows 8 has hit full force, and is causing more and more Windows users to search and seek out better alternatives, such as Linux. As such, 2013 saw the emergence of Linux as a premiere gaming platform. Valve has even launched their SteamOS gaming system, based on – you guessed it – Linux.

Let's all hope that 2014 sees the continuing growth of PCLinuxOS – and the Linux community as a whole. With Steam embracing Linux as a gaming platform, the entire Linux community stands to gain some “steam,” which may propel Linux into the mainstream.

Until next month, I bid each of you peace, prosperity, serenity and happiness.



The PCLinuxOS magazine

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Keep Tabs On Your HD's Health With GSmartControl

by loudog

Have you ever wondered about your hard drive's health? Is it getting along in years, or how many hiccups has it had during its life? Does it run hot? Or the most important question of all, is it ready to die? At one time or another we have all dealt with these nagging questions.

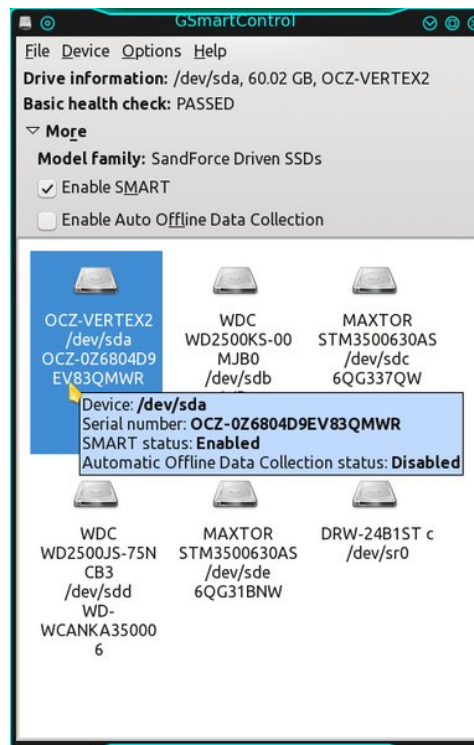
Some PCLinuxOS users are very adept with the OS, and with a few strokes of the keyboard, can launch a program from the CLI (command line interface), and satisfy any of these nagging questions fairly quickly. But what about those of us who are not quite comfortable in the console yet? What about those of us who are members of the "Point and click generation?" What program does PCLinuxOS have that would alleviate or aggravate our suspicions as to the hard drives recent erratic behavior and provide us with a simple but user friendly GUI?

Why, **Gsmartctl** of course! This little program is an excellent choice when you need to check on your HD's basic health status. Recently, while writing an article on KdenLive, I noticed one of my videos was corrupted from the 7 minute 9 second mark onward. This did not make me a happy camper, since the corrupted part of the file was the best part. I had just reviewed it several days before, and was intrigued as to the cause of the corruption.

After an internet search (and being from the point and click generation), I determined that Gsmartctl could provide some of the information I required to answer those nagging questions. I was pleasantly surprised to find it in the repository. After loading the program from the repository (you will need to load the gui also) I started it up to have a look see.

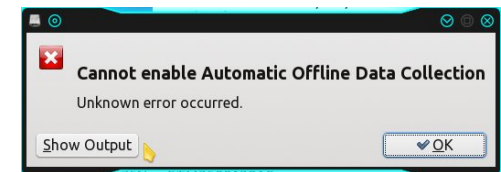
I found it in the main menu/more applications/monitoring section after installation.

Let's take a look at the GUI. Before starting, the program will ask for the administrator credentials. After we enter our root password a quaint little window opens up that shows what drives Gsmartctl has detected.

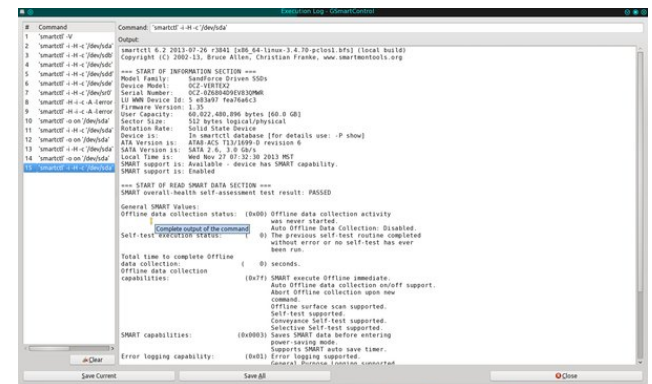


Expand the window to your taste and let your mouse hover over different areas for an excellent array of tooltips. This abundance of tooltips can be found throughout the program. Clicking on any device will change the basic information displayed at the top of the window to reflect the selected drives attributes.

We can see that the particular drive selected has passed the basic health test, SMART (Self-Monitoring Analysis and Reporting Technology) is enabled but the offline data collection is disabled. When we try to enable it we discover that this particular drive is possibly not manufactured with the option installed in the firmware.



Why don't we take a look at the output and see what that can tell us.

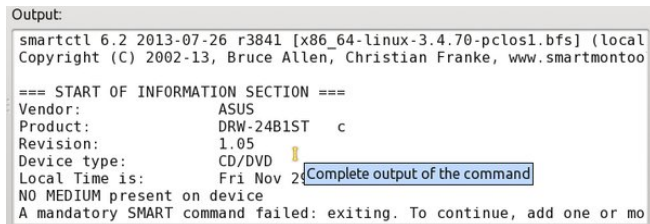


Wow! That's a lot of information. It appears that the drive may possibly be able to use the offline data collection feature if we just find a way to enable it. After performing an exhaustive online search, it became apparent that my particular ssd drives latest firmware did not support the offline data collection service. Hmmmm. Okay, let's move on. During the casual browsing of your other drives you may notice some displayed devices are not SMART supported either.

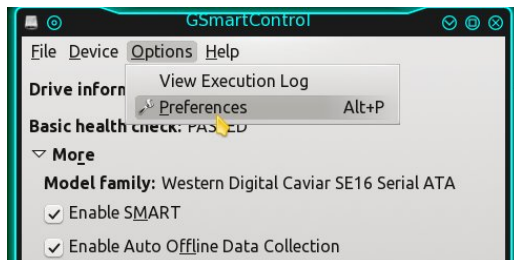
Keep Tabs On Your HD's Health With GSmartControl



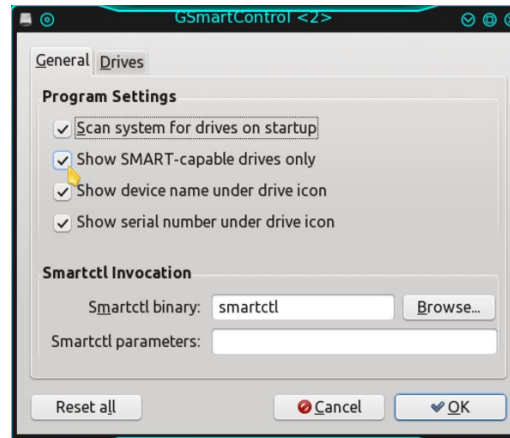
These are usually the flash and/or cd-dvd drives on the system. A quick check into the "show output" information informs us that this is our cd/dvd drive.



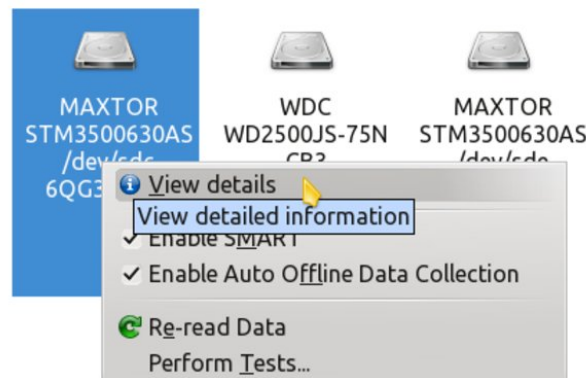
To remove the drives that are not SMART supported we simply go to options/preferences from the selection tabs at the top of the window.



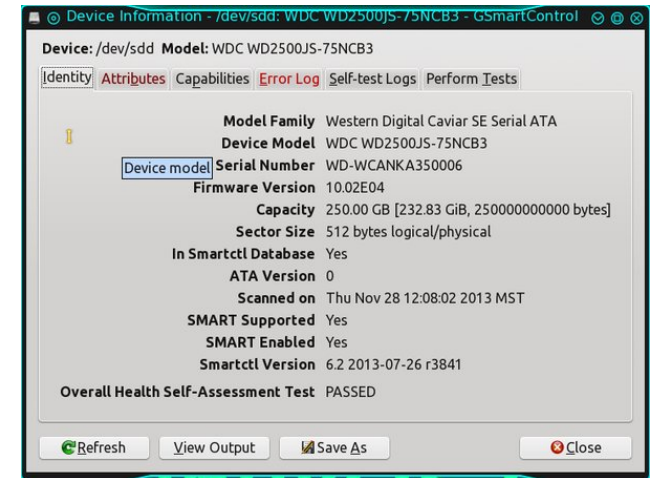
This new window will give us the options to select or disregard at our discretion. Ticking the "show SMART capable drives only" box is a personal preference but not a requirement.



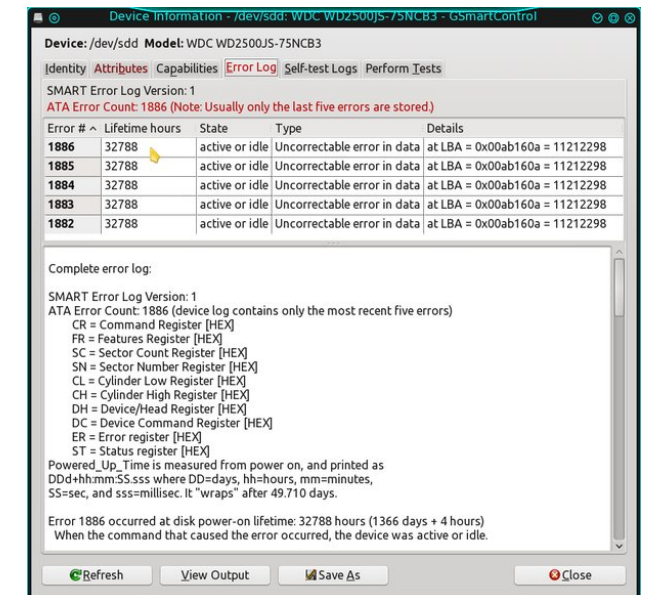
If you tick the box, the next time the program is started, it will not show the unsupported drives. Why don't we take a closer look at what the program has to tell us about one of our drives. We will select a drive, right click on it and choose the "View Details" option from the dropdown menu.



This new window we are presented with is full of features and contains the in depth information we are looking for (top, right).



At the top we see the various tabs that will lead us deep into the drive's SMART capabilities. The identity tab is pretty straightforward, showing the basic information about the drive. What I want to draw your attention to are the tabs that contain red font. This indicates there are recorded errors in the SMART data. I think it might be important to check the error log and see what it reports (noooo, no, no, no! YEP. Crud!)



Yep, SMART has recorded 1,886 errors on this drive so far (errrrrrrr). Looking closer, we see the error was recorded as "Uncorrectable error in data" at 32,788 hours. Hmm, you chump. Well, well well, let's see here, if we divide the total hours by 24, then divide again by 365 we get 3.7 years. Wow! This drive had been powered on for 3.7 years at the time of the last error. With a 3 year warranty I'm thinking this drive is uuuhhh, well, it starts after the letter E. I believe this one is about ready to be retired.

"I wonder how old the drive is now" I ask myself, which is actually an important question, because with the actual hour/age the drive is, now with a little math, we can discern when the error occurred and for some reason I now need to know. To find actual power on age, we go to the attributes tab. Yep, the other one with red font.

ID	Name	Failed	Norm-ed value	Worst	Threshold	Raw value	Type	Updated	Flag
1	Raw Read Error Rate	never	200	200	51	56	pre-failure	continuously	0x000f
3	Spin-Up Time	never	201	184	21	4950	pre-failure	continuously	0x0003
4	Start / Stop Count	never	100	100	0	828	old age	continuously	0x0032
5	Reallocated Sector Count	never	173	173	140	211	pre-failure	continuously	0x0032
7	Seek Error Rate	never	200	200	51	0	pre-failure	continuously	0x000f
9	Power-On Time	never	54	54	0	33792	old age	continuously	0x0032
10	Spin-Up Retry Count	never	100	100	51				113
11	Calibration Retry Count	never	100	100	51				112
12	Power Cycle Count	never	100	100	0				122
190	Airflow Temperature	In the past	64	40	45				122
194	Temperature (Celsius)	never	114	90	0				122
196	Reallocation Event Count	never	172	172	0	28	old age	continuously	0x0032
197	Current Pending Sector Count	never	200	200	0	1	old age	continuously	0x0012
198	Offline Uncorrectable	never	200	200	0	0	old age	on offline data collect	0x0010
199	UDMA CRC Error Count	never	200	200	0	0	old age	continuously	0x003e
200	Multi Zone Error Rate	never	200	200	51	1	pre-failure	on offline data collect	0x0009

Okay, seeing the total power on time in hours, we take that number, 33792 minus 32788 (time of last recorded error) = 1004 / 24 = 41.8 days ago. In actual power on state, this is when the last error was reported. Since I generally leave my PC running 24/7, I ascertain the last reported error occurred roughly about a month and a week ago. Hmmmm, if I recall correctly that's about the time I was transferring the drives etc to a more modern 4 core machine. I vividly remember that one of the drives slipped from my hand and fell about 8 inches to the desk. Owwwie, my liver! I was hoping at the time

that I hadn't ruined it. Well, it's not ruined, but apparently did receive some damage. Looking at the errors (highlighted in pink) the one that stands out is the Reallocated Sector Count. The reason it is noteworthy is because it falls under the pre-failure type. Let's see what the tooltip says.

Reallocated Sector Count
Number of reallocated sectors (Raw value). Non-zero Raw value indicates a disk surface failure.

When a drive encounters a surface error, it marks that sector as "unstable" (also known as "pending reallocation"). If the sector is successfully read from or written to at some later point, it is unmarked. If the sector continues to be inaccessible, the drive reallocates (remaps) it to a specially reserved area as soon as it has a chance (usually during write request or successful read), transferring the data so that no changes are reported to the operating system. This is why you generally don't see "bad blocks" on modern drives - if you do, it means that either they have not been remapped yet, or the drive is out of reserved area.

Note: SSDs reallocate blocks as part of their normal operation, so low reallocation counts are not critical for them.

Notice: The drive has a non-zero Raw value, but there is no SMART warning yet. This could be an indication of future failures and/or potential data loss in bad sectors.

The tool tip informs us that there is no SMART warning yet but the raw value (actual value on drive) is not zero and this could indicate an impending failure. The threshold for this error is 140 and we have a raw value of 211, quite a bit above the flag limit (threshold) that is why it has been flagged. If your curiosity gets the best of you and you're wanting a more indepth description of the whats and whys of the attributes section go here: https://en.wikipedia.org/wiki/Self-Monitoring,_Analysis,_and_Reporting_Technology. Now it's time to look at the perform tests tab (right, top).

The first test I will run is the Conveyance self test because it is for detecting transport damage, which is what I suspect happened when I dropped it. Later, I will run the other tests, just for good measure. The conveyance test finished with positive results (right).

Device: /dev/sdd Model: WDC WD2500JS-75NCB3

Self-tests are built-in tests within the drive designed to recognize drive fault conditions. All self-tests are safe to user data. The tests can be performed during normal system operation, but will take longer to complete if the drive is not idle. You will not be able to access the drive's SMART data while a test is in progress.

Test type: Conveyance Self-test Estimated duration: 6 min Execute

Conveyance self-test is intended to identify damage incurred during transporting of the drive.

Test completion: 10%; ETA: 5 min Stop

Refresh View Output Save As Close

Test completed Stop

Test result: Completed without error.

After running all three tests without error, I have decided that the drive is ok to use, but based on the hours, errors and warranty, it may possibly need replacing soon. I also copied some gigantic files to the drive, filling it up and did not get any new errors in the error log. My curiosity is satisfied at the moment, but I will be keeping a close eye on this drive for sure. It must be noted that SMART is in no way a foolproof plan to determine if the drive will fail or if your data will be safe, but it can be a great tool in helping you make informed decisions as to when the drive may need replacing, or why it's been acting "funny"

SAMSUNG HM160JI /dev/sdj S0W6J10P3346

DRW-24B1ST c /dev/sr0

Device: /dev/sdj
Serial number: S0W6J10P334653
SMART status: Enabled
Automatic Offline Data Collection status: Unsupported

ALERT: The drive is reporting that it will FAIL very soon. Please back up as soon as possible!

View details for more information.

or this

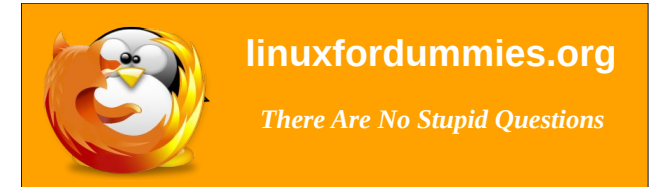
Device: /dev/sd Model: SAMSUNG HM160J

SMART Attributes Data Structure revision number: 16

ID	Name	Failed	Normed value	Worst	Threshold	Raw value	Type	Updated	Flag
1	Raw Read Error Rate	never	253	25	0	0	pre-failure	continuously	0x0000
3	Spin-Up Time	never	253	25	3008	3008	pre-failure	continuously	0x0007
4	Start / Stop Count	never	1	1	0	961094	old age	continuously	0x0032
5	Reallocated Sector Count	new	4	4	100	100	pre-failure	continuously	0x0019
7	Seek Error Rate	never	253	25	51	0	Reallocated Sector Count		
8	Seek Time Performance	never	253	25	15	0	Number of reallocated sectors (Raw value). Non-zero Raw value indicates a disk surface failure.		
9	Power-On Time	never	253	25	0	123h4			
10	Spin-Up Retry Count	never	100	100	51	185			
11	Calibration Retry Count	never	99	99	0	111h			
12	Power Cycle Count	never	98	98	0	2667			
187	Reported Uncorrectable	never	12	12	0	585h			
188	Command Timeout	never	100	100	0	41			
190	Airflow Temperature	in the past	76	31	40	24 (M)			
191	G-Sense Error Rate	never	1	1	0	1527			
192	Head Retract Cycle Count	never	100	100	0	620			
193	Load / Unload Cycle	never	6	6	0	95641			
194	Temperature (Celsius)	never	76	31	0	24 (M)			
195	Hardware ECC Recovered	never	100	100	0	30			
196	Reallocation Event Count	never	4	4	0	902			
197	Current Pending Sector Count	never	96	89	0	41			
198	Offline Uncorrectable	never	253	253	0	0			
199	UDMA CRC Error Count	never	200	200	0	0			
200	Multi Zone Error Rate	never	253	100	0	0			
201	Soft Read Error Rate	never	253	253	0	0			
223	Load / Unload Retry Count	never	99	99	0	111h			
225	Load / Unload Cycle Count	never	6	6	0	956411			
255	Unknown Attribute	never	253	100	0	0			

Buttons: Refresh View Output Save As Close

You may be convinced that GSmartctl is smarter than you thought. Use your own discretion and enjoy all things Linux.



Screenshot Showcase



Posted by daniel, on 12/2/13, running KDE.

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ms_meme's Nook: PCLOS Will Shine

HAPPY NEW YEAR 2014

PCLOS will shine tonight PCLOS will shine
PCLOS will shine tonight love its design
PCLOS will shine tonight PCLOS will shine
So sit right down and boot it up PCLOS will shine

PCLOS will shine tonight PCLOS will shine
PCLOS will shine tonight it is so fine
PCLOS will shine tonight PCLOS will shine
So sit right down and boot it up PCLOS will shine

PCLOS will shine tonight PCLOS will shine
PCLOS will shine tonight it is so devine
PCLOS will shine tonight PCLOS will shine
So sit right down and boot it up PCLOS will shine

PCLOS will shine tonight PCLOS will shine
PCLOS will shine tonight I'm glad it's mine
PCLOS will shine tonight PCLOS will shine
So sit right down and boot it up PCLOS will shine

PCLOS will shine tonight PCLOS will shine
PCLOS will shine tonight time to make it thine
PCLOS will shine tonight PCLOS will shine
So sit right down and boot it up PCLOS will shine



MP3



OGG

Computer Hardware 101: Power Supplies

by horusfalcon

The power supply unit, or PSU, is arguably the beating heart of any computer system. Without clean, reliable power, all the “go-fasters” in that system become useless. It is ironic, then, that the PSU is often the most overlooked item in a system.

The PSU's basic functions are to convert AC line voltage into the various DC voltages used by the computer, and to provide *wiring harnesses* with proper connectors to support the various loads needing power.

We'll wrap up this intro with some common-sense safety precautions.

So-called “house current” computers use for power **can kill you** if you don't treat it with the respect it deserves. When working on a PSU, or anywhere inside a computer chassis, PULL THE PLUG and “SAFE” THE SYSTEM. Work at Zero Energy State.

Stored voltages in a PSU are also a danger. The best way to ensure no stored voltages are present is to disconnect the AC cord, then push and hold the power button on the front of the case for long enough (ten seconds or so) to extinguish all standby lights on the motherboard (check once the case is opened, and repeat if needed until all LEDs are dark).

In the testing procedures which follow much later, I eliminate any need for having power applied with the case covers open. It's much safer that way if something unpleasant does happen.

Troubleshooting is another matter. Some of that must be done with power applied. Most advanced

troubleshooting is beyond the scope of this article, but we do cover use of a Power Supply Unit Tester, and the proper precautions when doing so.

Often, the simplest and safest way to treat the PSU is like it's a “black box.” AC power comes in the back, and DC power to the loads goes out the front. Everything else in the middle is not so important. Why do I say this? *Repairing a PSU is usually neither safe nor cost-effective, and is not recommended without proper knowledge, tools, facilities, and test equipment.* It's safer, simpler, and cheaper in most cases to just swap the unit out with one known to be working. If this cures the problem, recycle your old unit and buy a new one. Don't open it up! **Stored voltages in even a small, low wattage PSU can kill.**

Basic Terminology:

Advanced training in electronics or computer science is not needed to be able to select and install a PSU. Some familiarity with basic terms, though, will be useful. Here's a short list:

MTBF – Mean Time Between Failures. Measures the average time a unit may be expected to perform before failing. Different vendors determine MTBF in different ways, so care should be used in making comparisons based on this statistic. Usually expressed in some multiple of hours.

Noise – also called Ripple, or Periodic and Random Deviation (PARD). This is a measure of the amount of unwanted variation in the DC outputs of a PSU, so it refers to electrical noise, not sound. It is usually expressed as a voltage, or as a percentage of the output voltage. Generally the lower this value, the better.

Power Rail – A power rail (or buss) is an independent output provided by a PSU. Many PSUs provide multiple power rails. If so, these will be called out on the unit's nameplate.

Photo: Typical PSU Nameplate (from an old Compaq Presario)



Wiring Harness – for a power supply unit, wiring harnesses provide the connectors needed to connect the PSU to the components in the system. There are usually several different harnesses which support different types of components.

Other terms will be explained as they are used. A list of references is at the end of the article for further reading.

Power Supply Safety Certifications:

There are many [safety certification marks](#) that apply to PSUs, most of which cover use of a unit in a particular country or region. Here's a partial list of certifying organizations:

UL – United States
 CSA – Canada
 NOM – Mexico
 ETL – United States
 CE – European Union
 INMETRO – Brazil
 CCC – China
 GOST-R – Russia
 S-Mark – Argentina
 emc-Mark – Australia, Japan, Canada, U.S.

There are many more, and links to more complete listings are given in the references section at the end of this article.

At least one of these marks should appear on your power supply. The biggest reason for these standards is to assure safe grounding measures are taken so that a unit fails safely without undue risk of fire or electrical shock.



Note that UL's more familiar marks will not usually show up on a PSU. Look for their Recognized Component mark, shown above, instead.

Power Supply Efficiency Certifications:

There are two major certifications for computer components which rate their energy efficiency: *Energy Star* and *80 Plus*. Much has been made about these in the popular press, but they are not the only considerations to be used when selecting a PSU.



Energy Star is a program established by the U.S. Environmental Protection Agency. It's intent is to help promote the production and use of more

energy-efficient electrical appliances. More about Energy Star ratings can be found at the link in the references for this article.

Power Supplies are not usually Energy Star-rated *apart from systems*, so trying to find an Energy Star-rated PSU might needlessly narrow your choices. That said, most computer equipment for home use should already be Energy Star compliant. It's not a deal breaker. Gamers, especially, tend not to be much impressed by Energy Star gear.



80 Plus is a certification created by the [Electric Power Research Institute](#). It asserts the efficiency of a certified power supply is 80% or greater across its range of operation.

There are various "levels" of certification that go beyond the "basic" 80 Plus. Bronze, Silver, Gold, Platinum, Titanium, *Unobtanium*, whatever – all these can mean somewhat better efficiencies, but *all things for a price. For most home systems, plain old 80 Plus or 80 Plus Bronze is more than adequate without needless expense.*

It is wise to remember that *EPRI is an industry group*, and one of its major aims for 80 Plus is to provide *a marketing tool for vendors*.

For more information about 80 plus, visit the EPRI website and the [Ecova Plug Load Solutions](#) website given in the references.

Note that neither Energy Star nor 80 Plus say anything truly specific about how well-regulated a PSU is! Units meeting these standards are generally quite reliable, but look at all the information available on a unit prior to selecting it for use, and do your own research!

Power Supply Form Factors

In the "bad old days" before the IBM PC and its clones, computer power supplies were big, heavy, bulky, noisy, and hot, and no two makers made them quite the same way. Nowadays lighter weight, modularity, and standardized *form factors* (physical sizes and plug connections) make it simpler to source a good PSU from a wide variety of vendors for a reasonable price.

NOTE: Even now there are proprietary holdouts, some of which even look like "standard" PSUs, but have different wiring at their connectors, or slightly

	Internal Power Volts AC	Power Factor Correction	Efficiency @ 20% Loading	Efficiency @50% Loading	Efficiency @100% Loading
=====					
80 Plus	115/230*	0.90@100%	80%	80%	80%
80 Plus Bronze	115/230*	0.90@50%	82%	85%	82%
80 Plus Silver	115/230*	0.90@50%	85%	85%	85%
80 Plus Gold	115/230*	0.90@50%	87%	90%	87%
80 Plus Platinum	115/230*	0.95@50%	90%	92%	89%
80 Plus Titanium	230 only	>0.95@20%	94%	96%	91%
(Note: Titanium level supplies are 90% efficient at 10% load.)					
<u>80 Plus Unobtanium Are you kidding? I know I was!</u>					
=====					
* - Note: Specifications given for 110 VAC operation. Specs for 230 VAC are slightly different.					

Table 1:

**80 Plus
 Certification
 Level
 Comparisons**

different physical form factors. It is wise to check your system documentation to see if a special PSU is required, otherwise system damage or installation problems could occur. (Older units from Compaq & HP, especially, tend to fall into this category.)

There are a lot of different PSU form factors. We will only cover the more popular ones here. More information about less widely used form factors is available in the references.

The ATX Form Factor



Photo: Rainer Knäpper, Free Art License
(<http://artlibre.org/licence/lal/en>)

ATX grew out of an Intel specification first published in 1995 to replace earlier XT, AT, and Baby AT machines. The best reference for this spec as it applies to PSUs is in the Intel document [Power Supply Design Guide for Desktop Platform Form Factors, release 1.1](#), also linked in the references.

Without getting too technical, ATX's major differences from its predecessors were more pins (to carry more current), better keying on power connectors (to make them "goof proof"), and "soft" start and stop which allowed the computer's operating system to shut off the power after a

system is safely shut down, or "wake it up" by a remote signal sent over a network.

ATX was at its height during the time when Intel's Pentium III, and AMD's Athlon line of processors were in popular use. It's main power plug has 20 pins, in two rows of ten. There was also a six-pin molex 2 X 3 plug which provided "auxiliary" power where needed.

The ATX12V Form Factor

Around the turn of the century, the ATX specification was extended to include four more pins on the main power connector, and a four-pin (2 X 2) 12V connector to support CPU power for Intel's then-new Pentium IV processor. As time has moved on, this specification has seen many revisions, however, newer units are backward-compatible with older ones within this same family. Many units of this type have a 20+4 design for their main connector that makes it also backward-compatible with older ATX 20-pin types.

Later ATX12V designs also provided one or more 6-pin PCIe power plugs to accommodate higher-end video adapters. If you have one or more of these video adapters in your system, make sure the PSU

you select has enough of these plugs to provide the needed power.

One "big deal" in later revisions is the use of a single "brute" 12V power rail. Earlier designs split the 12V power onto two or more rails for different purposes. This uncomfortably limited power in certain high-power systems. All the power is passing through one transformer, anyway, so using a single larger power rail for all 12V loads means fewer restrictions, and fewer losses. (It also meant a simpler, less expensive design, which helped lower cost.)

"Modular" ATX12V Form Factors

Many manufacturers began to cater to a growing "modder" market which wanted to be able to eliminate those wiring harnesses not actually used in a system build. The idea was to get rid of clutter and streamline the airflow in a system's interior to improve cooling.

While not truly a "standard" form factor, most of these modular units feature a plug bay on the interior side of the unit such that the various wiring harnesses may be connected as needed. Some even feature multiple lengths of certain popular type harnesses to adapt to larger and smaller cases.

These types of supplies are usually a bit more expensive than non-modular units, but can make for a much neater and better managed build. I have seen some articles suggesting the difference in airflow is significant, and others which say it makes no effective difference. In my own experience, the case interior is a few degrees F cooler, and a whole lot neater.



Photo: Modular vs. Non-Modular PSU
(courtesy Ni-Sama at Wikimedia Commons)

If neatness is a factor, and you're big into the fit and finish of your build, or if you're the type who is constantly in and out of the case, this type of PSU might be of interest to you. If not, a few velcro strips and cable ties will bind up the unused ends of a normal non-modular PSU quite nicely.

Other Form Factors

There are a wide array of other form factors that might be encountered when shopping for a PSU. This is a partial list. For more on this, see the references at the end of the article.

microATX: a variant of ATX used for small, low power systems

Mini-ITX: a form factor developed by Via Technologies for small, low power systems

EPS12V: a variant of ATX used for some workstations.

Vendor-Specific PSUs

We've talked about this a bit in the intro, but it bears repeating. There are some (mainly older or "all-in-one") systems which use PSUs that may *look compatible* but are wired differently or provide different outputs. I like to call these the "gotcha" form factors.

If you already have one of these machines and need to replace the power supply, your best bet will be to try to acquire one from the manufacturer (often too expensive to be cost-effective) , or look into after-market suppliers for your specific type. Consult any documentation you may have or can obtain if you suspect this note applies your system.

Very often, sad to say, it's better and more cost-effective to replace a non-standard computer system

with one which is better supported by off-the-shelf hardware.

Selecting a PSU for Your Build

Generally, there are three different reasons to shop for a PSU: either a new system is being built, an old one is being repaired, or a system is being upgraded.

In the case of of the system being repaired, it's always good to be able to tell for certain your present PSU is really the problem. We'll cover more in-depth troubleshooting later on, but, for now, let's start by answering some **basic yes-or-no questions** about the original PSU in your system:

Is the PSU more than five years old?
Yes No

Does the PSU have a burnt or acrid smell?
Yes No

Do the cooling fans for the PSU squeal, grind, or rumble?
Yes No

Is the PSU really, really dirty or dusty inside?
Yes No

Does the computer shut down randomly (not for CPU temp)?
Yes No

Does the PSU make any arcs, sparks, or smoke?
Yes No

Does the computer not power up at all?
Yes No

If the answer to three or more of these questions is "Yes", suspect your PSU. If the answer to five or more of these questions is "Yes", consider replacing it anyway because if it hasn't failed it will, and soon. If you have suspicions about your present PSU, do

the troubleshooting mentioned later before buying a replacement unit.

In the case of a new system being built, or an old one being upgraded with new equipment, selection becomes a matter of finding the right form factor, connector harnesses, and enough power to supply all the loads in your system without being too powerful. This brings us to our next topic, estimating a power budget.

Estimating a Power Budget For Your System

To avoid buying too much or too little power, the first thing to do is estimate a power budget for your system. A power budget is estimated by adding the power consumptions for all the devices in a system.

Of the tools I've seen to do this, the **eXtreme Power Supply Calculator** (I use the free "Lite" version) is one of the best. Its extensive database and detailed hardware selections make getting a power estimate for your system a snap. The "Pro" version (\$2.00 – cheap) lists many more features, but these are only needed if you're building a piece of high-end hardware like a big workstation or server.

A calculator like this one does all the technical math for you, and will give you at least a reasonably good figure for your system's power requirements without too much fuss.

The screenshot shows the eXtreme Power Supply Calculator interface. On the left, there are dropdown menus for System Type (1 physical CPU), Motherboard (High End - Overkill), CPU Brand (Intel), CPU Socket (LGA 1155), and CPU (Intel Core i3-2100). The CPU list is expanded, showing various Intel Core i3 and i5 processors. On the right, there are sections for SSD Drives (Flash SSD and DRAM SSD), PCI Cards (SSK PCI Modem, SSK PCI NIC, etc.), Additional PCI Card (avg), Additional PCI Express Cards, and External Devices. At the top right, the Minimum PSU Wattage is 591 W and the Recommended PSU Wattage is 641 W. At the bottom, there are fields for Voltage (340V), Current (1.2), and Power (340W).

Screenshot (previous page): eXtreme Power Supply Calculator Lite Version

Choosing a Form Factor

There are four basic considerations here: physical size, cooling, line voltage, and outputs.

Physical size is a simple requirement – can the PSU you're looking at fit properly into the space provided, and mate up with the mounting hardware correctly? If not, you're really not going to be happy with the result.

So, how do you figure this out from an online advertisement? Start with the advertised form factor. Look closely at the documentation for your system, or on the nameplate of any existing PSU for clues. Read reviews on the unit. Take measurements of the existing PSU if all else fails.

Form factor specs give physical dimensions for their PSUs. If a vendor does not list dimensions in their advertisements, ask for them. Most will be happy to provide them by email or even over the phone. In this case, yes, size does matter.

As rated output of a PSU goes up, there is a tendency by some manufacturers to extend the depth of the unit to get more volume for components. Be sure the depth of the new unit will clear any obstructions during installation. Measure the clearances to be sure if there is any doubt. (*For safety's sake, please take measurements with the power OFF.*)

Cooling is usually done by one or more fans moving air through the unit. Power supply fans in modern units move air *out of the case*. Some earlier ATX units pushed warm air from the PSU into the case. (I know, right?) If you are replacing an older unit with a newer one, it may be necessary to change the way air flows in the system, but in most instances cooling will improve with a newer style unit.

Many newer units use bigger fans turning more slowly to move the same amount of air. This is to provide quieter operation at normal power levels, and to allow for some reserve cooling capacity at higher power. There are also fan-less PSUs for special applications where silent operation is a real priority. (These generally come at a premium price.)

Line voltage on most PSUs is selectable via a small recessed slide switch on the back of the unit. Before installation, be certain this switch is set to the proper line voltage value for your region. **System damage can result if this switch is set incorrectly!**

Outputs are the wiring harnesses & connectors that provide DC power to system loads. The plugs for these need to be the right style and size for your motherboard and for any devices requiring power. This gets more important with older hardware such as IDE drives, which use a different power connector than more modern SATA drives do.

General Ruggedness & Reliability

Not all PSUs are created equal. Some models are better than others, even in a single vendor's product line. It pays to do your own research when shopping for a PSU.

Technical reviews by recognized writers can be a big help, as can user reviews on vendors' websites. Check the references for some good sites to get you started.

Whatever you do, don't just throw money at this problem. Paying more does not always mean you will get more. Read, research, and inform yourself on how a given vendor does business, how they rate their equipment, and how well others rate it.



Installing A New Power Supply Unit

Generally, it is simpler to install a PSU in a new computer case than it is to replace an existing unit. Nothing is in the way, power is already off, and the case is usually empty at this point. Stab the unit in the case, screw it down, and *hook that bad boy up*. What could be simpler, *right?* Well, that's *basically* it, but there's a bit more to the process if you're doing it correctly.

Replacing an existing unit gets a bit more interesting. If you've never done any of this before, it can seem complicated, so let's run through some basic steps. Remember **SPIRE**:

- * Safety
- * Plan/Prepare
- * Inspect
- * Remove/Replace
- * Ensure

There's one extra step for an installation. It's crucial to ensuring proper system operation.

- * Test

For both removal and replacement, it is important to clean up and square away the work area when work stops. It's safer, neater, and will keep things better organized.

Now that we've covered the basics, let's get into all this in more depth, starting with Safety.

Safety

Whether you are doing removal or replacement of a PSU, it is imperative for your safety and to prevent equipment damage that ALL WORK be done with the AC CORD DISCONNECTED and the unit at Zero Energy State. Shut down the system if it's running, and unplug the power cord from the back of the unit and the wall outlet, and set it aside.

To “safe” the unit after unplugging it, press the front-mounted power button for several seconds to discharge any stored voltages before opening the case. After removing the cover, put it aside, out of the work area where it will not be in the way while you are working. Visually check for any lit LEDs on the system board. If found, hold down the power switch again until these all go out.

Be aware that a computer case can have sharp edges and pinch points. Use good lighting, and look carefully before you put your hands anywhere in the case.

Plan/Prepare

Planning the work and preparing the work area with the correct tools, materials, and equipment can make your workflow much more efficient, safer, and less stressful.

The work area should be well-lit, reasonably clean, and provide a table or workbench on which work will be done. If working on a kitchen table, consider using an old tablecloth or an old bed sheet to protect its surface while you work.

The tool list for a power supply replacement job can be as short as a single screwdriver if no cable management is anticipated. When I'm on a house call, I typically bring a full tool bag, but here's the bare minimum:

* **Screwdrivers** – Philips, Posi-Drive, and Flat screwdrivers may all prove useful. I find that an Ace Hardware 10-in-1 screwdriver has all the bits I need for most computer work. Bring what works for you.

* **Cutting Pliers** – a pair of 4" cutting pliers comes in handy for cutting cable ties that may be anchoring wiring harnesses to a chassis. Radio Shack sells a good pair that does the job and isn't too expensive.

* **Needle-nosed Pliers** – A pair of these can be handy for fetching screws or washers dropped in tight places. They also help in pulling up cable ties during installation.

* **Flashlight** – no matter how well-lit the area might be, there will always be dark corners in any computer case. A small flashlight with a bright beam helps brighten these up. I personally recommend the Gerber Option 50 LED flashlight.

Materials should include at minimum the hardware needed to mount the PSU, some small and medium sized cable ties for dressing wiring, and a roll of vinyl electrical tape. Permanent markers or wrap-around wire labels can help with identifying where connectors mate up. (I use a Dymo labeler with paper tape for this task.)

Optional cable management aids like spiral wrap, velcro strips, heat-shrinkable tubing and braided wire sleeving kits can also enhance an installation, but are not absolutely necessary (and might require other tools such as scissors and a heat gun).

A **power strip with a master ON/OFF switch** can be useful during testing. The master switch gives you a way to quickly de-energize a unit if something goes wrong.

Lay out your tools and materials in such a way that they are ready to hand, but not in the way. Think ahead about how much room you will need to work, and lay out the area accordingly.

Inspect

Look over the power supply section of your case, noting any special features it may have. Some cases provide power supply latches, or frames for mounting the PSU which swivel or slide out of the case for inspection or maintenance. Most cases, though, simply screw the unit to the back of the case with four small screws.

There may also be rubber mounts or gaskets provided for sound isolation. If these are used, *be sure to look carefully before disassembling to see how to ensure proper grounding.* This is usually done with a short length of green wire fastened to the metal of the case and PSU by screws and toothed (tessellated) washers. These washers help the screws bite into the metal surfaces and make a better electrical connection.

Look for any sharp edges, removable fixtures (like drive bay cages), or pinch points. Use vinyl electrical tape to cover sharp edges before starting work.

Look at what's connected to where. Take pictures or label what wiring is connected to what devices or motherboard plugs. Look at how wiring is routed in the chassis *before disconnecting anything.* Note also any system board interconnections that might become dislodged or disconnected during removal of the unit. (CPU fans are particularly subject to this.)

Note especially any SATA drive connections and their cable routing. SATA power and data connectors on devices are delicate and easily broken. If it becomes necessary to disconnect a SATA cable to clear the PSU into the chassis, check for and *unlatch* any latch present before attempting to disconnect. Disconnect the plug by pulling gently but firmly straight back once any latch has been released. DO NOT SIDE-LOAD or FORCE a SATA connector! Doing so will likely damage the device's edge connector, not the cable end.

Look for any odd or out-of-place things. I once found a dead lizard inside a computer. Remove any debris, dust, etc. prior to beginning work.

Finally, the new PSU should be prepared for installation by *setting its voltage selector switch*, checking its wiring harnesses for any broken wires, cut insulation, or other damage *now, before installation proceeds.* Its hardware kit, if any, should be checked for any missing parts.

Remove/Replace

Here's where the fun begins. Removal of an existing unit proceeds as follows:

- * **Cut cable ties** anchoring the wiring in place to the chassis. Remove the cut cable ties from the chassis as they are cut (clean as you go). Be careful to not cut wiring!

- * **Clear** any obstructions from the removal path. It may be necessary to disconnect other cables, remove drive bay cages or other modular case features to clear a path.

- * **Disconnect** all PSU connections to the motherboard and any peripheral devices like drives, video adapters, fan controllers, etc.

- * **Remove Screws** which are holding the PSU in place. Provide support for the unit to prevent it from falling as screws are removed. (Remember: PSUs can be heavy!)

- * **Unlatch** any latches or other mechanical means still securing the unit in place.

- * **Extract** the PSU from the chassis, taking care to clear all wiring harnesses so they do not foul on the motherboard or other internal features.

- * **Check** all other cables not intentionally disconnected are still securely connected.

- * **Clean Up** any loose objects, cuttings, trash, debris, dust, etc. to prep for replacement.

There may be a delay in performing the replacement. If so, review the first three steps of SPIRE: Safety, Plan/Prepare, and Inspect. Re-familiarize yourself with the work area, ensure the system is still de-energized and safe for work, and inspect the chassis and all existing interconnects before performing the replacement. When ready, proceed as follows:

- * **Insert** the PSU into its bay in the case and

- * **Ground** the PSU to the case per the instructions provided with the unit. NOTE: this may be done differently than in the original unit.

- * **Fasten** the unit securely with its provided fasteners. Use washers as required.

- * **Latch** any PSU retaining latches or secure any straps to make the unit fast to the chassis.

- * **Re-Mount** any modular case features originally dismounted to clear the new PSU.

- * **Route wiring harnesses** neatly to their destinations. Use cable ties and other cable management aids as needed to give a neat appearance and clean air flow in the chassis. Test-fit before making final routings to avoid wasting cable ties.

- * **NOTE:** cable ties should not bite into wiring bundles so hard as to smash insulation or kink wiring. Only apply moderate force to tighten them.

- * **Connect** all data and power connections needed for proper system functions.

- * **Check all connections** in the chassis are correct, properly made, and secure.

- * **Clean Up** any loose objects, cuttings, trash, debris, dust, etc., to prepare the unit for service.

Ensure

In this step, make one more thorough sweep of the case internals. Look for such things as:

- * **Loose Connectors** - Don't confine this examination to just PSU wiring. Look at all system power and data connections, auxiliaries such as case and CPU fan connections.

- * **Fouled Wiring** - re-dress any tangled wiring as your are finishing up. Again, don't confine this to just the PSU wiring. Everything has to work together.

- * **Dirt, Dust, Debris** - the "3-D's" are death to a computer. Keep the unit clean, however, and it will serve you well for a long time.

- * **Finish Up** - Close the side cover on the unit and check for any obstructions (poorly routed wiring) before latching or securing fasteners in place.

Testing Procedure

At this point, the system is ready for testing. Proceed as follows:

- * **Verify** the line voltage selector switch is set to the proper value.

- * **Check** for a rear-mounted power switch on the PSU. If found, set it to OFF.

- * **Connect** a power strip with a master ON/OFF switch to a convenient wall outlet.

- * **Connect** the provided AC power cord set to the unit and then to the power strip.

- * **Energize** the power strip at the Master Switch.

- * **Be aware** that, in the absence of a rear-mounted power switch, the unit may energize immediately when the AC cord is plugged in to power.

- * **OBSERVE.** Watch the unit for any arcs, sparks strange noise, or magic smoke.

- * **IF any of these are present – KILL POWER at the Master Switch.**

- * **IF none of these is present – continue**

* **Energize** any rear-mounted power switch.

* **OBSERVE.** The unit may briefly power up for a fan check, or it may start a normal power up cycle. If it starts, and nothing appears to be amiss, allow the system to start completely.

* **Press** the front panel power button if the unit is not already starting up.

* **If the unit fails to start normally – KILL POWER** at the Master Switch.

* **If the unit starts normally and runs, open a cold one, kick back with some pretzels, and celebrate!**

Troubleshooting Power Supply Problems

Power supply units are generally simple to figure out. The basic yes/no questions given earlier can sort out whether or not to suspect a PSU is going or has gone bad, but more testing should be done to verify these suspicions.

The basic problems PSUs experience are overheating (caused by dust or fan failure), improper outputs, short circuits, open circuits, intermittent operation, and total failure. These can cause a variety of symptoms.

Repairing a PSU is usually neither safe nor cost-effective, and is not recommended without proper knowledge, tools, facilities, and test equipment. It's safer, simpler, and cheaper in most cases to just swap the unit out with one known to be working. If this cures the problem, recycle your old unit and buy a new one.

All that said, the simplest way to test a power supply unit is to either install it in a working system, or use a Power Supply Tester. These are available from many vendors online, and will provide enough load for the power supply to start up and indicate whether

all the proper voltages are being produced. Some of the more sophisticated ones have LCD display panels built in, but most just have indicator LEDs that show whether supplied voltages are in the proper range for system operation.

Power Supply Testers are not terribly expensive. If you do not have the luxury of having a spare system lying around, consider obtaining a tester and learning to use it safely. (Always follow the manufacturer's instructions.)

If testing a PSU "on the bench" (outside the system case, or with a case cover removed), *wear eye protection*. If the PSU has been out of the case for more than five minutes without being connected to an AC outlet, it will be safe to plug the tester in per its included instructions.

Once the tester is connected, plug the AC cord into the unit, and then into a power strip with a master ON/OFF switch. The unit should power up immediately, and the tester should begin indicating.

More sophisticated testing is best performed by a qualified electronics technician, electrician, or computer systems technician. The results of a PSU tester, however, are enough to make a determination as to a PSU's functionality without need for these more expensive tests.

Under no circumstances should non-technical persons open up a PSU. Stored internal voltages can linger for a very long time unless the unit is properly "safed" and grounded.

The long and short of it: if the PSU is shown by a reliable PSU tester to have failed, replace it.

Conclusions

Power Supply Units for many different purposes are available at prices more reasonable than at any previous time. Many improvements have been

made to design and features which make modern units more efficient, more stable, and less massive than previous models.

We have explored the basics here in this article of how to select, remove, replace and test a Power Supply Unit in a modern computer. For those who want more information, the references following this paragraph are provided. I wish you every success in your computing endeavors!

References

General Information

[Tom's Hardware Power Supply Guide](#)
[Techpowerup.com: A Detailed Look into PSUs](#)
[Learning About Computers - Basic Troubleshooting Tutorial](#)
[SMPS.org Power Supply Selection Guide](#)

ATX Form Factor

[ATX Power Supply Selection Guide](#)
[Wikipedia article on the ATX Specification](#)
[Intel Reference Document on ATX v. 2.01](#) (courtesy Boston University)
[Intel Reference Document on ATX v. 2.03](#) (courtesy youngyear.com)
[Intel Reference Document on ATX v. 2.2](#) (courtesy formfactors.org)
[Power Supply Design Guide for Desktop Platform Form Factors](#), release 1.1

Certifications

[About Energy Star](#) - [energystar.gov](#) (government website)
[80 Plus](#) - [Ecova Plug Load Solutions website](#)
[80 Plus: What the PSU Certification Stands For](#) (courtesy pcgameshardware.com)
[Electric Power Research Institute Website](#) (industry group which created 80 Plus)
[Underwriter's Laboratories Power Supply Page](#)
[Technick.net Certification Marks Page](#)

Other Form Factors

[Mini-ITX Addendum v. 2.0](#) (courtesy Intel Corp.)

[EPS12V Specification v. 2.92](#) (courtesy Enermax)

Tools

[Newegg.com Power Supply Calculator](#) - a simple power budget estimator

[eXtreme Power Supply Calculator Lite](#) - a much more detailed power budget estimator.

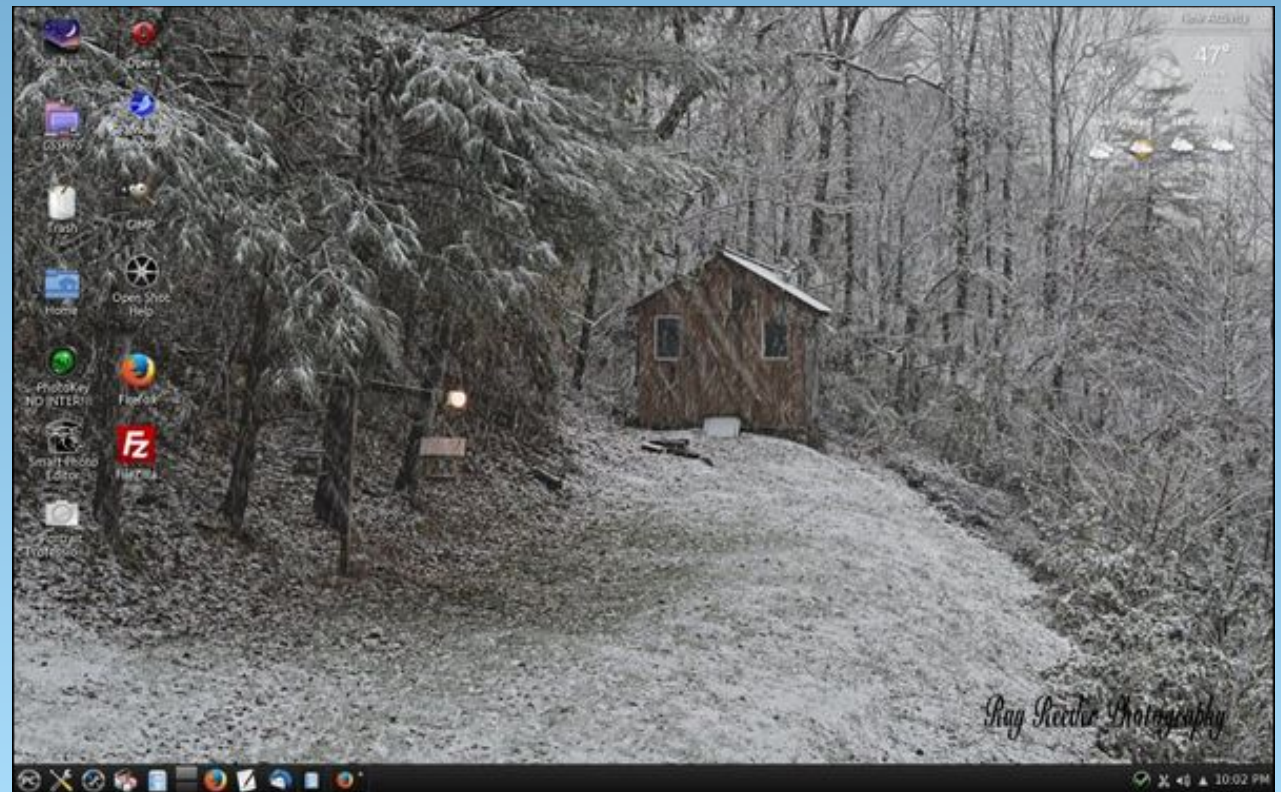
[Thermaltake Dr. Power II PSU Tester](#) - page at Newegg.com

[Xoxide.com "Ultimate" PSU Tester](#) - page at Xoxide.com - unit is made by Coolmax.

DISCLAIMER: Inclusion of a product or service in these references does not constitute an endorsement, either of product, service, or vendor by the author of this article, and are intended to serve as examples of same in current use. Such products or services should be evaluated carefully by the reader to determine any suitability for a given purpose.

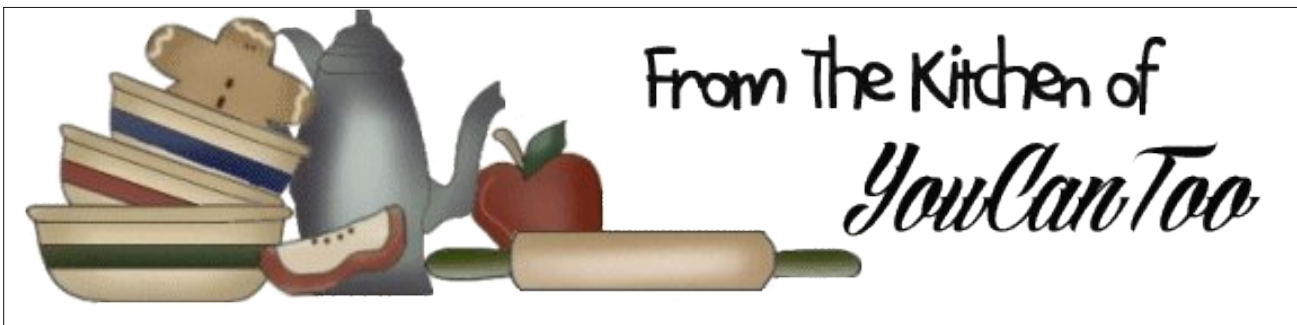


Screenshot Showcase



Posted by ff103, on 12/2/13, running KDE.

PCLinuxOS Recipe Corner



Cinnabon Style Cinnamon Rolls

Ingredients

You will need the following for the cinnamon roll dough:

1/4 cup warm water
2 1/2 teaspoons yeast
1 tablespoon of white sugar

3/4 cup warm milk (110°F/45°C)
2 eggs, room temperature
1/3 cup margarine, melted
4 - 4 1/2 cups bread flour
1 teaspoon salt
1/2 cup white sugar

Here's the list for the cinnamon filling:

2 cups dark brown sugar, packed
4 tablespoons ground cinnamon
1/3 cup butter, softened

And finally the cream cheese frosting, this was the hardest part to perfect (I usually end up making a double batch):

1/2 cup butter, softened

1 teaspoon vanilla extract
1/4 teaspoon salt
1 (8 ounce) package cream cheese, softened
2 2/3 cups confectioners' sugar - aka powdered sugar

Note: Conversions to metric measurements can be found [here](#).

You will do a few things differently when making these cinnamon rolls compared to other cinnamon rolls.

Mix the water, yeast, and sugar. Let sit for 10 minutes to make a slurry.
While the slurry is forming add the dry ingredients for the dough together in a mixer with a dough hook.
When slurry is done add all remaining wet ingredients to the dry ingredients, mix for 5 minutes.
Put the dough in an airtight container and let double in size (about an hour)

While the dough is proving you can mix up the sugar and cinnamon mixture that will go inside the cinnamon rolls. I know it seems like a lot of cinnamon, but the cinnamon rolls are going to be big.



Once the dough has fully proofed, you will need to roll it out on a large surface to roll it out on. Lightly dust the surface with some bread flour so the dough does not stick.

Roll dough into a 16 x 21 inch rectangle (about 1/4 inch or 64 mm thick).
Spread dough with 1/3 cup (79 ml) butter.
Sprinkle evenly with sugar/cinnamon mixture.
Roll up dough and cut into 12 rolls.

Make sure to reserve about a 1/4 cup of the cinnamon sugar mixture to coat the bottom of the pan to help the rolls come out of the pan easier.

It will be a little tough to start rolling up the roll. As you roll it up lightly tug on the roll to slightly stretch the dough to help hold it together.

I decided to give baking the rolls their own section, because you are going to use your oven as an industrial bread proofer to get them to double the second time. What I usually do is turn the oven up to about 200°F for a few minutes to get it nice and

warm, put in a small shallow pan with some water in it in the oven while the rolls are proofing.

Place rolls in a parchment paper lined 9 x 13 inch baking pan. Let them rise until nearly doubled again (about 30 minutes).



After they are done rising for the second time, remove the rolls and preheat the oven to 385° F (200 degrees C).

Bake for 15 minutes while the entire pan is covered in aluminum foil.

After 15 minutes remove the foil and bake for an additional 3 to 4 minutes to lightly brown the tops (watch it, they will brown quickly!).



I want to give the frosting its own section as well, because this was actually the hardest part about making the cinnamon rolls.

You will need to add the ingredients for the frosting in precisely this order:

- 1/2 cup butter, softened
- 1 teaspoon vanilla extract
- 1/4 teaspoon salt
- 1 (8 ounce) package cream cheese, softened
- 2 2/3 cups confectioners' sugar

When you first put the butter in make sure it is at room temperature, and after it is been whipped for about 2 min. you will need to put the bowl in an ice bath to lower the butter down to right around 45°F. As soon as the butter has stiffened up just slightly, whip it with the mixer again and you will noticeable fluff up significantly more this time.

While the mixer is still running, add in the vanilla, salt, and the cream cheese and whip for another 2 min. After everything is been incorporated add in the confectioners' sugar 1/2 cup at a time.

The end result will be a very creamy fluffy frosting that will melt slightly when spread on a roll.

As soon as the rolls come out of the oven put a glob of frosting on each of the rolls and put it back in the oven for 1-2 minutes to lightly melt some of the frosting and let it seep in between the rolls.

Let cool for 10-15 minutes, then enjoy your warm homemade Cinnabon style cinnamon rolls.

If you let the cinnamon rolls come down to room temperature you will be able to freeze them for up to three months in the freezer, as long as they are in an airtight bag.

Even though these take a while to make, the taste is exceptional and you will never be able to eat another cinnamon roll out of a can again!

International Community PCLinuxOS Sites



Say It Loud With googlesay

by critter

I have an announcement...

Texstar recently introduced a new utility, called **googlesay**, to forum members. Install the file from the PCLinuxOS repository, along with any dependencies.

To use it, type something along the lines of:

```
googlesay "Welcome" en
```

Anything inside the quotes will be spoken, and the 'en' is the language code. Since I live in the UK, I get a British English accent. To make it an American accent, use en-us. Similarly, you can use de, fr, it etc., to add an accent to the spoken language. Try

```
googlesay "Wilkommen" de
```

The googlesay utility is actually a small bash script, and as such, it understands things like environment variables passed in the text.



To make use of this I wrote the following script:

```
#!/bin/bash
# welcome.sh
```

```
DAY=$(date +%A')
MONTH=$(date +%B')
DATE=$(date +%e')
googlesay "Welcome to $HOSTNAME, Today is
$DAY $MONTH $DATE" en-us
```



I made it executable with the command **chmod +x welcome.sh**.

I then added it to my start up files. To do this in KDE, open **Configure Your Desktop > Startup and Shutdown > Autostart**. Click on **add script** and browse to the script. If you are not using KDE and don't know how to do this, then you could have a look at one of the excellent special editions on the magazine website. Most desktop types have been covered.

I now get reminded of the date every time I restart my computer.

If you would like to add a comment when you start up an application, it can be done in a similar manner. For example, to create a new document in

LibreOffice, and be asked which type of document you want, you could use this.

```
#!/bin/bash
# office.sh
$(sleep 2 ; googlesay "Please select a
document type" en-us) &
libreoffice4.1
exit 0
```

The sleep command is to allow the application to appear before the speech starts, and you may need to adjust this. Also, if you are using a version of LibreOffice other than 4.1, then adjust this value. Name the script **office.sh**, save it to your home directory, make it executable with **chmod +x office.sh** and then add the following to your .bashrc file.

```
alias office='~/office.sh'
```

Type office in a terminal to run it (You may have to restart the terminal to activate the new alias). Alternatively, you could add an icon to your desktop or panel. Open a text editor and enter the following text:



```
[Desktop Entry]
Name=systeminfo
Type=Application
Comment=Show System Infos
Terminal=false
Exec=systeminfo %U
Icon=systeminfo.png
Categories=Infos;System;Monitor;
GenericName=Systeminfos
Encoding=UTF8
```

Save it as office.desktop and then drop it onto your desktop.

If you have a home network and you are the administrator (have access to other accounts), you could leave a birthday or anniversary message for a family member. In fact, you could get up to all sorts of mischief if you were so inclined.

Now, with googlesay, you can not only just launch a program, but you can announce it aloud.

*Looking for an old article?
Can't find what you want? Try the*

**PCLinuxOS Magazine's
searchable index!**

The **PCLinuxOS** magazine

Screenshot Showcase

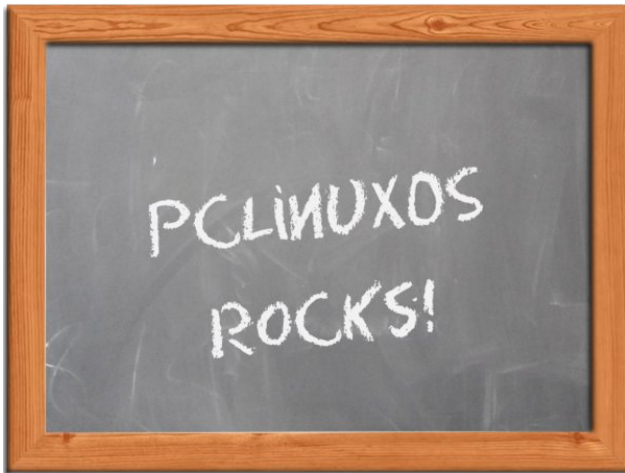


Posted by francesco bat, on 12/6/13, running icwm.

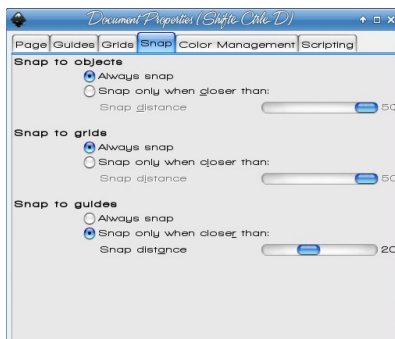
Inkscape Tutorial: Make a Chalkboard

by Meemaw

In an [earlier article](#), we made an oval picture frame with ellipses and applied a filter to make it look a little more like a wood frame. This time we're going to make a rectangular wood frame with a chalkboard inside. I used a wood and a chalkboard [graphic](#), and a font called [Eraser](#), but there are also several fonts that look like chalk that you could use.



Opening Inkscape, you will already have a blank sheet. It doesn't need to be very big, so go to **File > Document Properties** and change the size to 640 x 480 (landscape). While you are there, make sure that on the **Snap** tab, **Snap to Object** and **Snap to Grid** are checked.



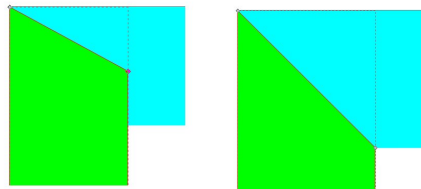
Also, go into your Inkscape Preferences. In the list at the side, towards the bottom of the list, choose **Steps**, and make sure the setting for "Rotation snaps every ___ degrees" says 15.

OK, so let's get started on the frame. Draw two rectangles on your page, one of them 640 x 40 and the other 40 x 480. The long one will go at the top of the page and the long one down the left side. Make sure the **Stroke** is set to none on both of these. Making them each a different **Fill** color will help you to see what you are doing. We're going to end up with wood-grain anyway.



You want to select each of these rectangles and click **Path > Object to Path**. We're going to move a node on each.

Starting in the top left corner, choose the left side rectangle with your **Nodes** tool. Grab the node on the top right corner and pull it down until it is even with the bottom of the top rectangle. Shown below, I have pulled it partway down on the left and finished on the right.



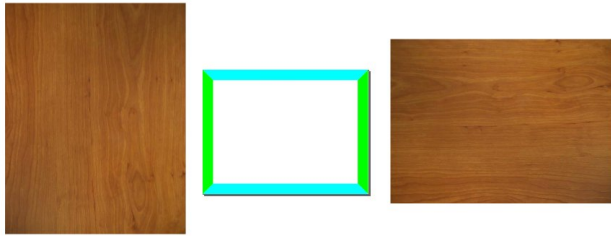
Now choose the top rectangle and do the same, making a mitered corner there.

Choose your left side rectangle and duplicate it. Move the duplicate to the right side and flip it. Your corner is already done there but not on that end of the top rectangle, so do that one. Then duplicate the top rectangle and flip and move it to the bottom. Do any corners that aren't done yet. When we are finished both ends of all rectangles should have the mitered corners. Try to make sure they match up: if you have a white space in between the objects, there will be a white space between the corner pieces of your frame.



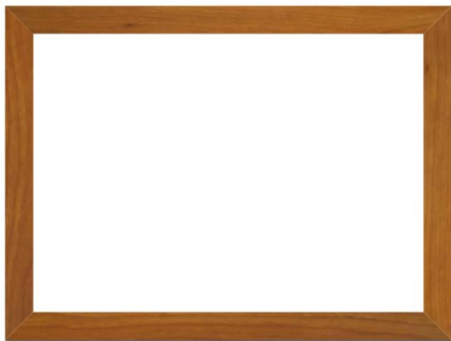
We're going to add the wood texture now. Choose your top and bottom rectangles (above, the blue ones) and group them. Do the same with the left and right ones (green above). Import the wood texture graphic into your drawing, and make a duplicate of it. Rotate the duplicate 90 degrees. Now it should look like this (next page, top left):

Position the horizontal wood texture behind your frame and deselect it by clicking somewhere else in the window. Select the top and bottom grouped rectangles, hold down the **<Shift>** key and select



the wood texture. Now click on **Object > Clip > Set**. Your wood texture should now be visible in your top and bottom. Do the same thing for the left and right group. Remember to select the frame before the texture.

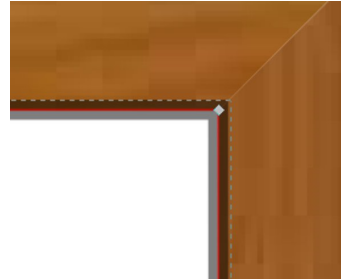
Now we have a nice wooden frame for our chalkboard.



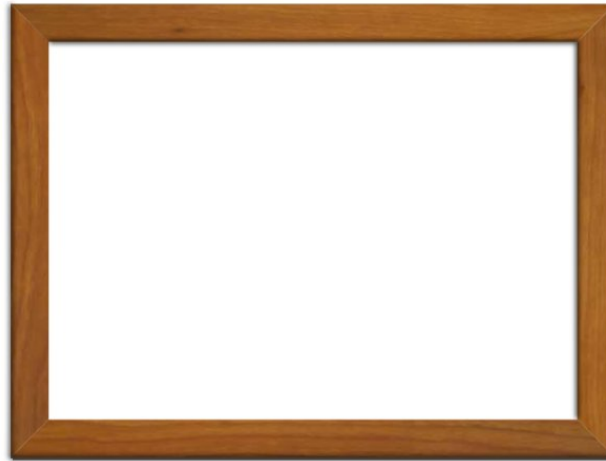
OK, before we put anything in our frame, let's give it a little depth. Using your Bezier tool, draw a line inside the frame from the top left corner to the top right corner, then from there to the bottom right corner, right along the edge of the frame. Make the stroke 3 px wide and try to make sure it is centered, covering both the frame and the white inside. You can always set your transparency down to about 50% so you can see, then set it back up to 100% (center, top).

Also, make sure that the ends of your lines stop a little short of the frame edge. Make sure your opacity is set back to 100%, then change your blur to 1. You

will get a nice shadow on two sides of your frame that will give the illusion of depth.

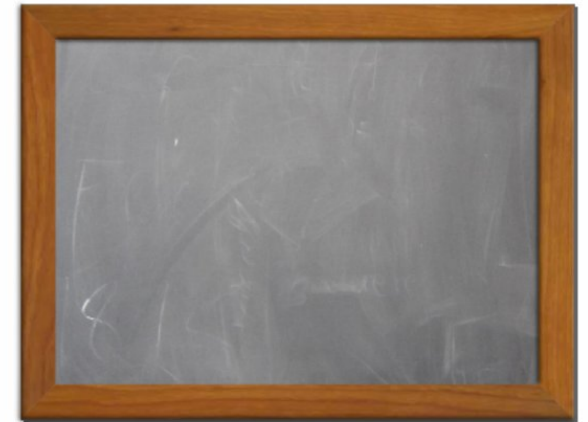
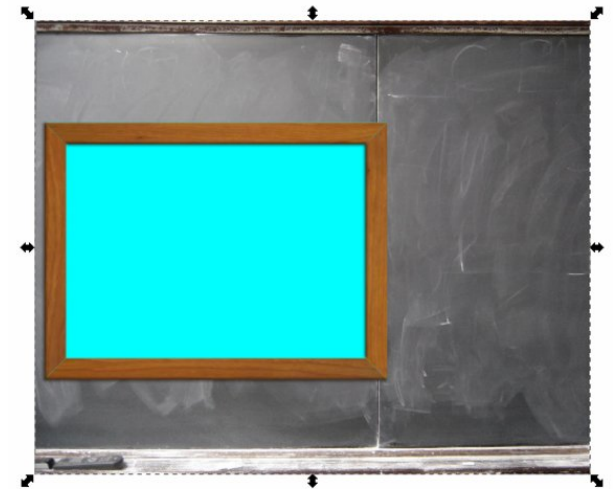


Using the other two sides of your frame, but on the outside of the frame, do the same thing again.



Let's add the chalkboard. Draw a rectangle the same size as your drawing (640 x 480). Make the fill any color you want with no stroke. Slip it behind the frame. Now, import the chalkboard graphic. It's large so you will have to resize it. Make sure it's still big enough that whatever you put into the frame looks the way you want it to look. There is a seam in the graphic you might want to leave out of your project (top, right).

Just as before, click on the rectangle, then on the chalkboard, then click **Object > Clip > Set** (right).



We're almost finished but let's do one more thing for depth. Using your Bezier tool again, draw another line on the inside of the frame on the other two sides (left & bottom). Make that line white, stroke size 1. Zoom in to get it just on the edge of your frame, but not all the way to either corner. In your Fill & Stroke window, change the color to a radial gradient. Click on the Gradient tool and drag the corner handle to a spot outside and to the bottom left corner of the frame. In your toolbar, you will see the gradient. Click the edit button on the right and add a stop (next page, top left).

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PCLinuxOS Magazine Web Site:

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PCLinuxOS Magazine Forums:

<http://www.pclinuxos.com/forum/index.php?board=34.0>

Does your computer run slow?

Are you tired of all the "Blue Screens of Death" computer crashes?

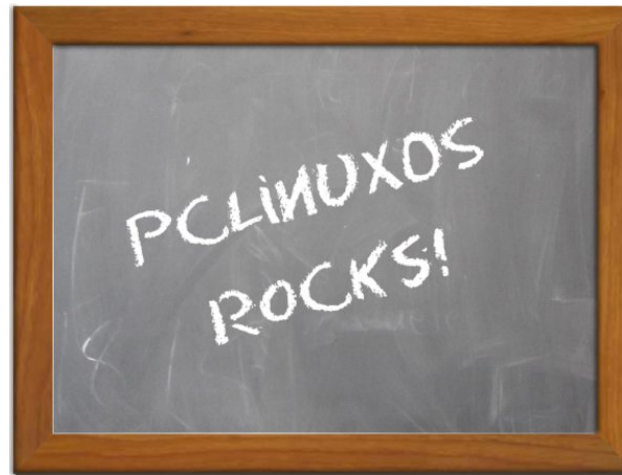
Are viruses, adware, malware & spyware slowing you down?

Get your PC back to good health TODAY!

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Here's another version with the font Chalkboard:



This one was fun! With different graphics, you can make a white board and use a blue marker, or make just the frame for your favorite photo. The possibilities are endless!



The PCLinuxOS Magazine

Created with Scribus 1.4.3



You then want to edit your gradient so it shows a little white on the two edges but not all along both sides of the frame. My gradient looks like this in the toolbar:



But yours could look however you want.

The last thing is to write on our chalkboard. A tutorial I read says you can design your own filter to make text look like chalk, but I opted to use the [Eraser](#) font.

Click on the text tool at left and then click where you want to write. Type whatever you want, then highlight the word(s) you typed. Click on the text toolbox in the top toolbar, and a window will pop up. This is the Text Formatting window. Change your font, size, alignment and spacing here. When you get it the way you want it, you can Apply and Close that window.

Now, if you select the text with your cursor, you can rotate the text if you like, or leave it straight. You can also make it a bit bigger, too. Save your work when you are satisfied, and export your project (center, top).

KDenLive: Part Two

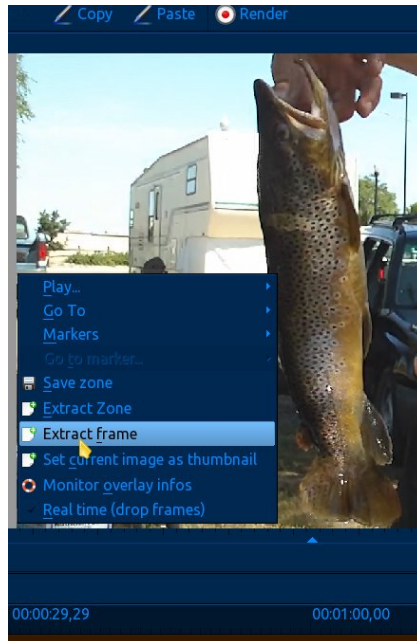
by loudog

In part two of our KDenLive article, we will be working with single video clips, and some of the different things we can do with them. It is important to have studied the KDenLive part one article first and look over the screenshots closely, as we continue to build on what we have already learned.

The first clip we will be working with is a fishing video. In the video, there is some footage of the catch, in particular, the big fish of the day, and we want to capture an image of it. We load the video into the project tree and start it playing in the monitor. When we get to the area where the desired image is, we pause the player. Using the mouse, grab the timeline arrow below the player and zero in on the image you like best.



Now we right click on the displayed image and select extract frame.

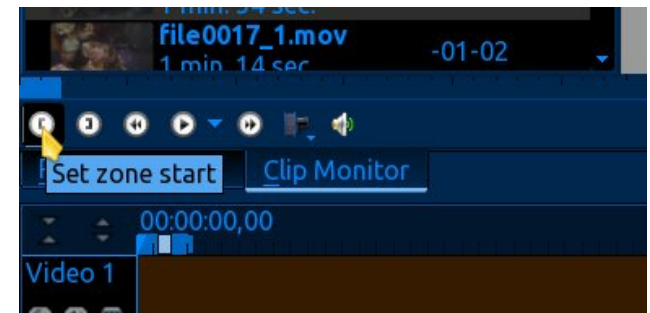


The typical window, asking you to name the file and storage location appears, and the image is saved with the default extension being .png. Now, that is the easy, simple method to extract an image from your video, and it works well if your video is fairly high quality, as this one was. Unfortunately, people, animals, cars etc. have a way of moving around so much it can be tough to get that exact frame we want to show in the player.

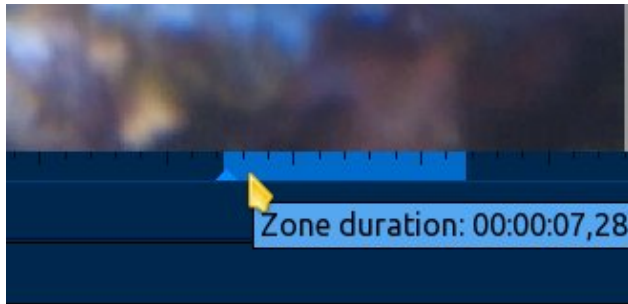
How do we find that perfect image? We need to look at the individual frames of the video and select one from there. I will be using an old video clip of my aquarium with very poor quality and attempting to capture an image of a moving fish. First, let's take a closer look at the window that shows the "extract frame" option. Notice the other options presented.

The "set current image as thumbnail" is very handy, enabling you to quickly recognise the clip by its thumbnail instead of filename. The "Real Time (drop frames)" option is for converting the reference signatures from 30 fps (frames per second) to 29.97 fps. This has to do with the timeline vs. physical address aspect of different frame rate ratios and will be covered later rather than sooner, as it is primarily used in professional video editing. As for now, the default is fine. "Save zone" will just save the zone we create to a file we can use later, good for movie making.

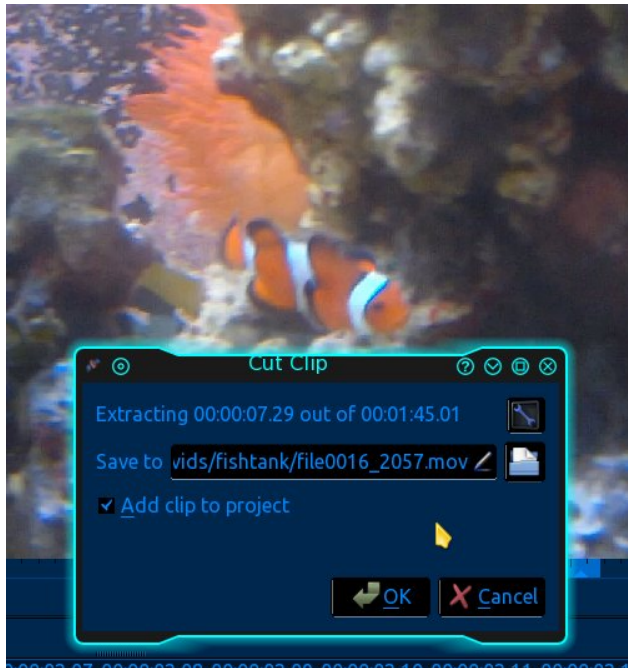
We will be focusing on the "extract zone" option for this next part. Creating a "zone" is a fairly simple task, and just means we will be selecting a portion of the clip and excluding the rest. The first thing we need to do is find the image we desire with the timeline marker as we did earlier. When you have found it, back up the timeline just a hair, and go over to the player controls and select set zone start.



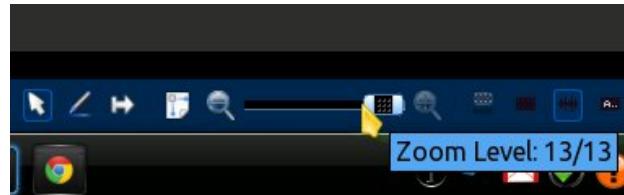
Next, move the timeline just a hair ahead and select set zone end. This newly created zone will be highlighted on the timeline. Check to see that the zone is about 5 seconds long by hovering the mouse over the highlighted area. Mine is about 7 seconds long. Note: This is not actual time per se but the physical addresses of individual frames. For now it's a close enough comparison.



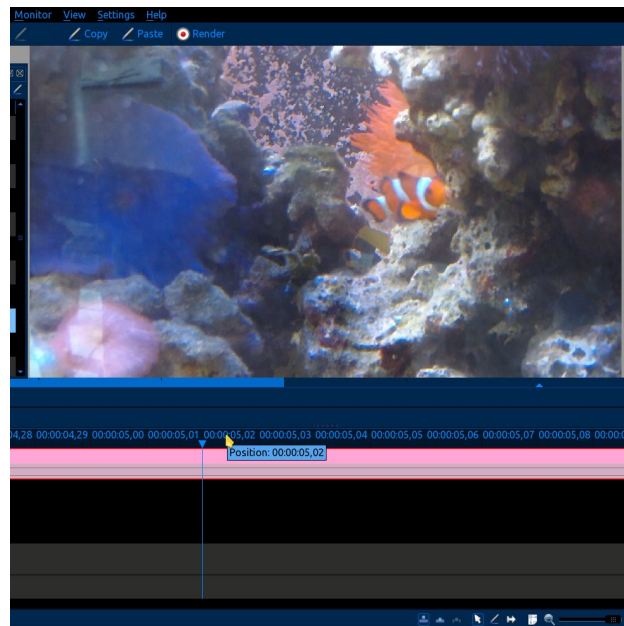
Now we want to select the “extract zone” option. Right click the “zone” in the timeline. This brings up the extract window with the typical options. The default is to add the zone to the project tree and this is what we want.



Since this was shot with a little cheapo video camera years ago, it will take a little time to find a fair quality image to extract. The next thing we want to do is add the newly created clip to the video timeline by the drag and drop method described in part one. Next, using the zoom option at the bottom right, we zoom in as far as we can.



Now that the clip is stretched out, we can look at each frame individually by clicking on the timeline. I have decided this image is about as good as it's going to get for the quality of the video. Notice the time signatures (or more appropriately addresses) denoting each individual frame at the bottom.

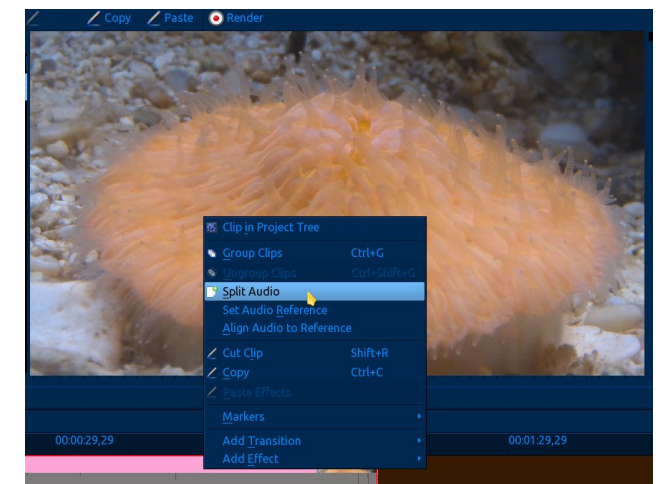


If the image you're wanting is out of the viewable timeline, there is a slider at the bottom you can use to adjust your orientation. Now, it's a simple matter of extracting the image. I will work this one over in Gimp later to polish it up a bit (something I learned in earlier magazine articles). The zone creation and extraction technique is a fantastic tool to trim unwanted video from your clips, such as those shaky beginnings and/or cutting out that annoying someone, (you know who I mean) or something you just don't want in the clip. The other thing you can do is extract small zones of different individuals talking

and stitch them together to make it appear they are engaging in a conversation. This works great with pets, especially when the audio is supplied by you the editor (and we will be getting to that). My personal favorite is the ability to video several scenes of our homemade movies (yes an actual home-scripted movie) at the same time and cut the zones for reassembly into the proper sequence later.

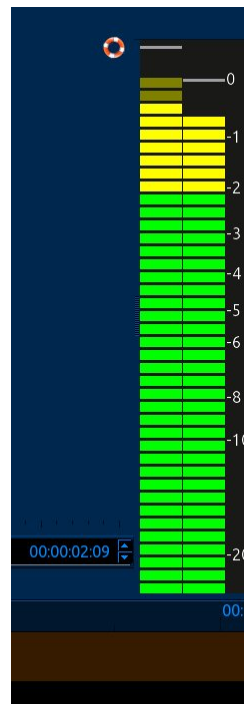
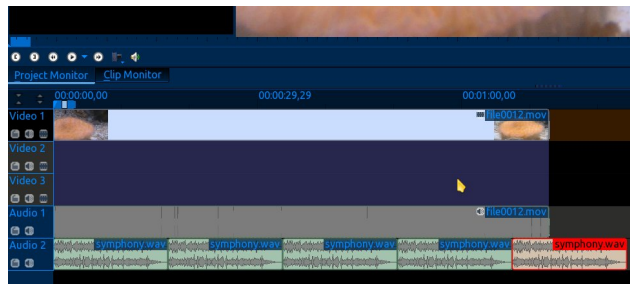
Now it's time for something different, something to help us build on our ever growing knowledge of KDenLive. More effects. Effects that you can implement into your videos with an astounding impact. And guess what? You can't see the effect ... at all. At least not literally. You know, sometimes that footage of the children or pet doing something silly was great at the time, but somehow lost some of its joyful or happy feeling in the raw playback. Really, it kind of sucks now and you never want to play it again. Why? What happened to the “feeling” there?

The answer for this is the addition of some playful background music to recreate that feeling again. So let's do this. I am using a small narrated clip of a particularly hard to keep stony coral that is flourishing in my reef tank. As I narrate on the coral's healthy attributes and the images of things rarely seen in captivity, I want a happy healthful feeling to envelop the viewer's subconscious. The first thing



we will do is import the video clip into the project tree, drag it into the video timeline, right click the video in the timeline and select split audio. You will see the video's audio track move into the first audio timeline.

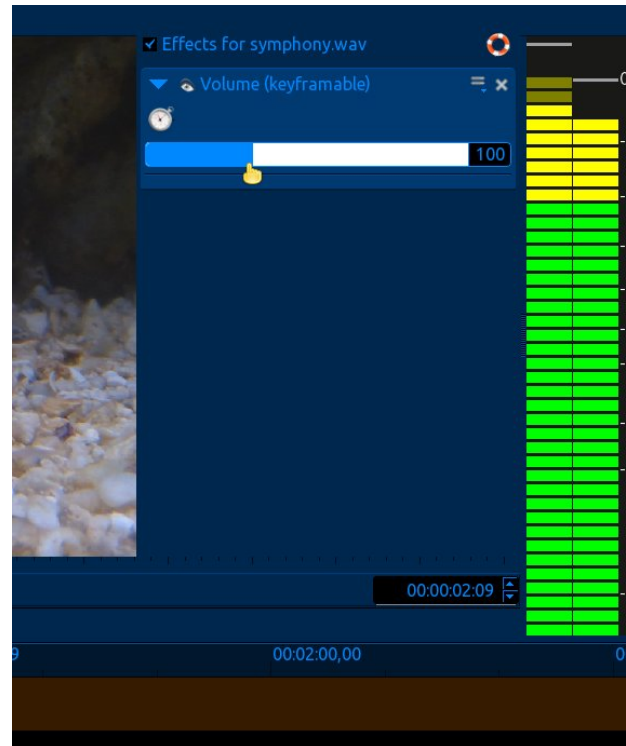
Next we want to add the background music audio clip. I selected a nice happy symphony clip from the online resources option and added it to the second audio track timeline. Since the audio clip is not as long as the video clip, I just kept adding it over and over until it overlapped the video.



Cutting and merging audio clips together will be covered in future articles, as will the benefits of splitting the video and audio tracks. For now, we are still in the basics. When we play the project in the monitor, we notice the background audio overpowers the narration until it's unintelligible. To fix this, we need some more tools, so up to the view tab we go. Select the audio signal option. Play the project and adjust all windows accordingly so you see something like this on the right hand side of the screen. This is the audio output decibel indicator.

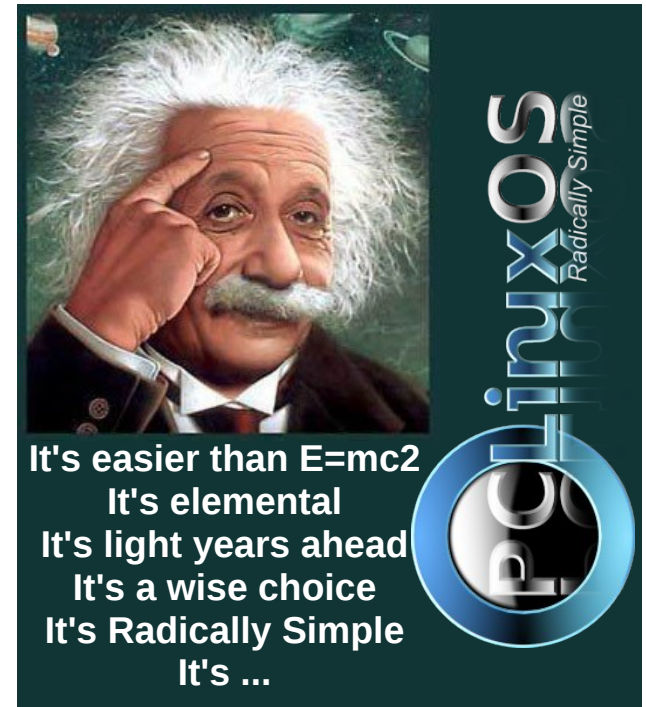
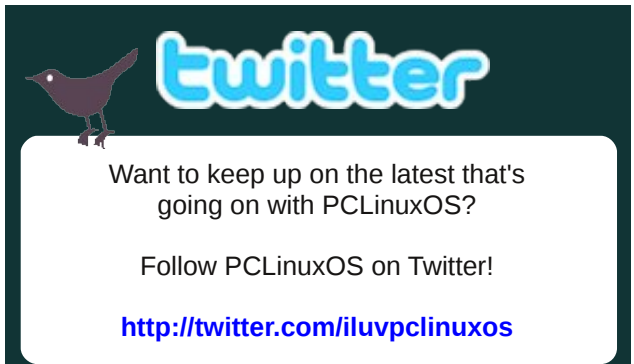
OK, that looks good. Now it's back to the view tab to select the Effect Stack. Again, adjust the windows (this may take a little time) to fit it in the appropriate place. I use the right side of the monitor screen.

Now right click the music clip in the timeline, select add effect/audio correction/volume (keyframable). You will see the volume adjuster show up in the effects stack window.



Adjust the volume slider and replay the project until you find a happy blend of background music and video audio. This effect can be used on any audio clip, including the split audio from the video, to boost or suppress the output. It is important though to remain vigilant of the audio output decibel indicator while doing this, as you do not want to see it jump into the red (audio clipping) to retain optimum audio quality. I have fun with this by adding my own smart remarks to an existing video of my family talking

together. Imagine the friend watching the video and saying "I can't believe you said that to them" or "I can't believe they didn't kick your butt for saying that". Yes we can all be stinkers and I'm high on the list. So, until next month, ta ta.



Bored? Twenty Ideas To Help

by Paul Arnote (parnote)

Let's face it. PCLinuxOS *is* stable. It just plain, flat out works. Thanks to the diligence and dedication of the developers, things – like updates and new software installations – just go too easy. For users accustomed to always having to tweak and fix their computers, the fact that everything works can leave them feeling rather bored. If you find yourself in this predicament, here are some ideas you might want to try in order to break the boredom cycle. Plus, the beginning of the New Year is an excellent time to perform many of these tasks.



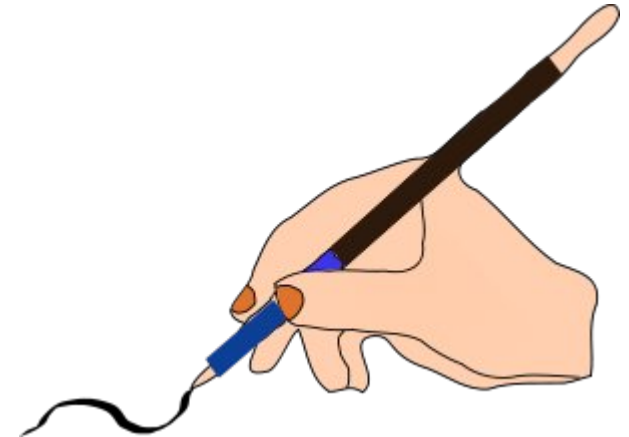
1. Organize your wallpaper files. If you're like me, you probably have a literal ton of wallpaper files. Whenever I see an image I like, I download it to my computer and store them in my ~/Wallpaper directory. But after a while, all of your space images are mixed in with your still life images, which are also mixed in with all of your landscape and abstract photos. After a while, things can become a real mess – and a favorite wallpaper file can become rather difficult to find. Top that off with the fact that I

have set up my [NatGeo](#) and [Bing](#) scripts to automatically download images every day, via a cron job. Yes, I have amassed quite a collection of wallpaper files.

Make folders within your ~/Wallpaper directory, each with the name of the category of the images within it. For example, here is a partial list of directory names within my ~/Wallpaper directory: Abstract, Animals, Flowers, Holidays, Landscapes, Linux, Misc, Nature, PCLinuxOS, Personal, SciFi, Space, Weather. Because of running the NatGeo and Bing scripts (as I mentioned above), I also have Bing and NatGeo directories. The more specific you make them, the more order you can make from the chaos created by just shoving all the files into one catch-all directory.



2. Learn how to package. There are resources in the PCLinuxOS Knowledge Base for learning how to package for PCLinuxOS. Texstar and the rest of the developers would surely appreciate the help. Plus, you'll be giving something back to your favorite Linux distro.



3. Write a magazine article. I will tell you straight up – we welcome and appreciate article submissions to The PCLinuxOS Magazine. Fire up one of the programs you use a lot, and write up a detailed tutorial on how to use it, or how to accomplish a specific task within that program. I guarantee that there are many users who will benefit from your knowledge and insights.

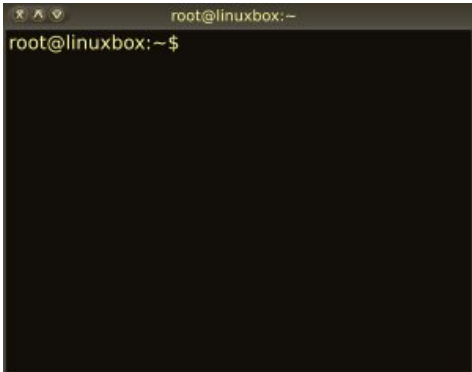


4. Find and read some new technical blogs. You can't even begin to imagine how many technical blogs there are. Just on the [technorati.com](#) website, there are over 47,000 technical blogs listed. With all

of those blogs, surely you can find something that piques your interest. Who knows? You may also learn some new things along the way.



5. Catalog your “collections.” All of us have collections, of some kind. It could be collections of music, movies, videos, stamps, coins, insects, bird feathers ... or anything else. You could create your “catalog” in a spreadsheet, or you could go one step further and create a database with advanced search capabilities. Either way, it’s a task that will help you not only find out what all fills your collection, but also may help reveal items that may be missing from your collection.



6. Learn the Linux command line. There are hundreds, if not thousands, of websites out there just waiting to teach you the Linux command line. Knowledge of the Linux command line, while not

essential with today’s GUI desktop environments, is helpful. Armed with knowledge of the Linux command line, you can leverage your PCLinuxOS installation in ways you may not even envision. Plus, you may find some easier and faster ways to perform some of the daily tasks you undertake on the computer. One great place to start would be to download The PCLinuxOS Magazine’s [Command Line Interface Intro Special Edition](#), filled with all of the excellent articles by PCLinuxOS user Pete Kelly, a.k.a. critter.



7. Learn bash scripting. The obvious choice after learning the Linux command line is to learn how to create bash scripts. Pete introduces bash scripting in his Command Line Interface Intro articles, but there’s a lot more to learn. While there are hundreds of resources available to help teach bash scripting, I can highly recommend two (and not to the detriment of any of the others ... these are just the ones that I use). Both are available as PDF downloads. First, there is the [Bash Guide For Beginners](#), by Machtelt Garrels. Second, there is the [Advanced Bash Scripting Guide](#), by Mendel Cooper. Downloading them to your computer makes them an ever-ready reference source.

You may initially think that the second one follows the first (and to an extent, that is somewhat true), you will do yourself a huge favor in viewing these two books as companion works. Sometimes, if

there’s a concept you’re not grasping in the beginner’s guide, looking at examples in the advanced guide can often help.

Another thing that can be a huge help is to view bash script coding examples. One great source is [GitHub](#). Joining (or creating an account) is optional. You can still view code examples, even if you don’t join. Let’s say you want to take a look at bash scripts that work with MP3 files. Enter MP3 in the search box, and press the Enter key. Along the left side of the screen, you’ll see a column that lists the languages of the “programming” languages represented (JAVA, JavaScript, Ruby, Python, Perl, Shell, etc.). Select the “Shell” category, and you will find all of the bash scripts that work with MP3 files.

The more you look at bash script examples, the more this stuff starts to make sense. Plus, think of the sense of accomplishment you will have after you create your first bash script. Trust me ... it will fuel your desire to create more.



8. Backup your files. Face it ... many (most) of us are negligent (lazy) about backing up our files. Take the time to backup your files, either to the cloud, or more preferably, to a USB connected external hard drive. I definitely understand the reluctance some users may have against storing items in the “cloud.” With the recent revelations of spying on ordinary citizens by the NSA and the British GCHQ (among others, I’m sure), it has made even non-paranoid

users think twice about storing their personal files in the cloud.

Armed with an external USB hard drive, it's relatively easy to backup your files. There are some choices of programs to use, too. One is LuckyBackup, while another is Grsync. Both are in the PCLinuxOS repository. There are others, but these are the two that immediately come to my mind.



9. Browse YouTube. If you just want to kill some time, while being entertained in the process, browse videos on YouTube. 100 **hours** of video are uploaded to YouTube every minute of the day. So, the chances that you've seen everything is ... well ... none. Here's a link to the [first video](#) uploaded to YouTube. It was uploaded at 8:27 P.M. on Saturday, April 23rd, 2005. The video was shot by Yakov Lapitsky at the San Diego Zoo, and uploaded by YouTube co-founder Jawed Karim. There's even a [compilation video](#) of the first 20 videos uploaded to YouTube (there are links to each of the 20 originals in the "sidebar" on the video page). After watching that, I can say that I don't see a lot of difference between then and now. Well ... ok ... maybe the picture quality is a bit better. At any rate, you could spend a LOT of time just browsing videos on YouTube.

10. Re-examine personal finances. It's easy to allow our personal financial situation to rapidly get out of control. Bills sometimes come in faster than the money does to pay them. Couple that with unexpected "emergency" expenditures, and things can go south very fast. One strategy most every



financial planner suggests is to write down **everything** that you spend during the month. That means every candy bar, every soda, every coffee, every latte, every single thing that you buy. Food, utilities, clothing, medical bills, medicines and all the other "essentials" should also be listed. At the end of the month, add them all up. You will be surprised how much money is spent on unimportant, impulse purchases. The goal, upon looking at the totals, is to eliminate as much of the unimportant purchases as you can.

Other things that can help include finding a way to consolidate credit card bills, refinancing your home at a lower interest rate, moving money from lower interest savings accounts to higher interest accounts, and signing up for online bill pay.

11. Review your online wish lists. I have a confession. I **hate** Christmas shopping. The malls, the poor parking, and the crowds are among the irritants that make Christmas shopping unenjoyable. So, for as long as I can remember, my wife and I maintain a wish list on Amazon throughout the year. Then, when October or November rolls around, we share that wish list with one another, and we each



do our Christmas shopping for one another entirely online.

The benefits are many. First, we are able to purchase things for one another that we know the other one wants. No need to worry that the other one knows what they are getting for gifts. The lists are always way longer than what we can afford, so we pick items from that list. Second, we don't fight crowds, nor the poor parking. We just order and wait for the parcel delivery service to deliver them to our doorstep. Third, there is usually quite a few unpurchased items that remain on the list that we can refer back to those wish lists for birthday gifts, and any other time throughout the year that we want or need to purchase a gift for the other. Fourth, we can share that same wish list with other friends and family members who may be searching for gift ideas for us.

After the holidays is an excellent time to update your wish list. What? You don't have one? Then it's also an excellent time to start one. Just don't forget to add things throughout the year as you stumble across items you might like to have. To facilitate adding things to our Amazon Wish List, we both have the Amazon "Add To Wish List" [Firefox extension](#) loaded into our Firefox browsers. This simple add-on places a button on Firefox's toolbar that allows us to add anything we stumble across on the internet to our Amazon Wish List, even from non-Amazon sites.



12. Organize your music collection. The great philosopher Plato is quoted as saying, *"Music gives a soul to the universe, wings to the mind, flight to the imagination and life to everything."* All of us find music enjoyable. Granted, not all of us like the same kind or genre of music. But music tends to permeate many, many aspects of our lives. As such, many of us have collections of our favorite music. Some of it might be on CDs, while other parts of our collection might be MP3 or OGG audio files.

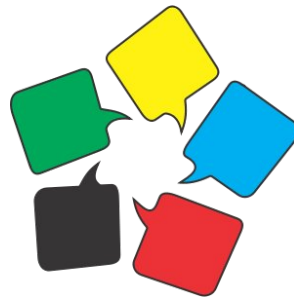
To begin, it might be helpful to convert our CD collection to a digital format, to make it easy to listen to either on our computer, or on our portable devices. There are several utilities in the PCLinuxOS repository to rip your audio CDs to digital audio files. They go by such names as abcde, asunder, atunes, goobox, grip, jukes, K3B, kde-services (adds service menus to KDE's Dolphin and Konqueror), rubyripper and soundkonverter. Pick the utility that rips your music to the format you want or need, and one that is easy for you to use.

Next, organize your digital files in a method that makes sense to you. Don't worry how others say you should organize them. If your organization method means separating the files by artist, album name, track number, and track title, then that's what you should do. The structure of your organizational delimiters is entirely up to you. Whatever method you use, it's important to be consistent. Otherwise,

all of your preparations will be for nothing, and you might end up with a bigger mess than you started with.



13. Change your passwords. We've covered this [previously](#) this year in the September 2013 issue of The PCLinuxOS Magazine. Far too often, most of us get lazy with our passwords, and once we have them in place, almost never change them. You should at least change them annually, and preferably more often. If you choose to change them annually, pick a time of year to do it, then use that date to change them every year. Normally, I would say that changing them as the New Year rolls around would work, but if you consume alcohol, I would suggest another time. You wouldn't want your password choices to be made after you've consumed alcohol, or when you have a hangover.



14. Learn a new language. In the U.S., most people speak one language. In other parts of the world, it's

not nearly as uncommon to be multilingual. Thanks to the internet, learning a new language is actually pretty doable. Let's say you want to learn to speak Spanish. Google netted 261,000,000 hits when I used ["learn spanish online free"](#) as my search criteria. Want to learn to speak French (414,000,000 hits)? How about Portuguese (32,500,00 hits)? German (250,000,000 hits)? Dutch (56,100,000 hits)? Russian (152,000,000 hits)? Just replace the word "spanish" in the search criteria with the language you want to learn.



15. Learn to play an instrument. If you ever wanted to learn to play an instrument (or a new instrument), the internet can also be a great resource for free lessons. Learning to play an instrument (or learning music) has been linked to higher math scores and a keener intellect. First, you will need an instrument, if you don't already have one. Search Ebay, Craigslist and other online classified ads for a working and affordable instrument. You can also check local music stores for affordable used instruments. The latter will help insure that you get an instrument in relatively good shape. There's nothing quite like a malfunctioning instrument to sabotage your attempts to learn to play an instrument.

Next, search for free lessons online for your chosen instrument. For example, Google came up with 24,400,000 hits when I used ["learn to play guitar online free"](#) as my search criteria. Similarly, you can

search for other instruments – such as saxophone, trumpet, flute, piano, clarinet, etc. – simply by replacing “guitar” with the instrument you want to learn.



16. Digitize your old photos. Most of us have access to old photos from the pre-digital era, including collections of heirloom photos. Spend some time digitizing those photos with an image scanner. Not only will you be preserving those photos from inevitable deterioration, you can share the digital copies with all members of your family by burning the digital copies to optical medium. When you're done, everyone can have copies of the images to enjoy for years, and even make their own prints. An added benefit is that you can restore images that might have become damaged over the years. Follow the tips in Meemaw's series of graphics editing articles in The PCLinuxOS Magazine to learn the necessary skills to restore damaged images.



17. Organize your emails. Whether you use a standalone email client or stay strictly with webmail,

take the time to create filters and folders/labels for your email. Don't stop until you've processed every email in your inbox. In the end, it'll make it easier to find items when they aren't all lumped together in one massive, collect-all inbox.

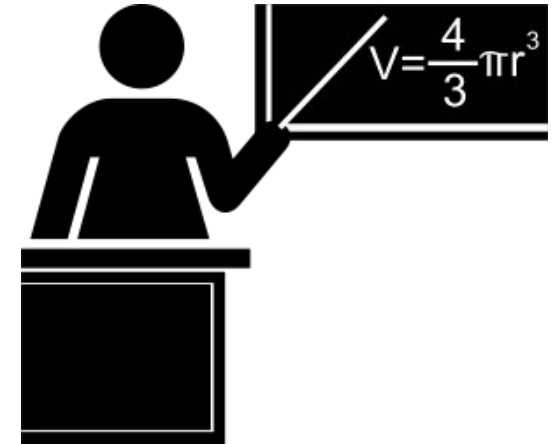


18. Browse Linux man pages. Spend some time browsing [Linux man pages](#), even for commands you know and use a lot. For example, browse a simple command like “ls” and you may be surprised at the breadth of available options.



19. Get out from behind the keyboard and start an exercise program. Your physical health is just as important as your mental and intellectual health, so get started on an exercise program. You can set the intensity of those workouts to a level that's

comfortable. If you can afford it, you can join a gym. Some gyms even provide guidance from a personal trainer for the monthly membership fee. Or, you can buy a bicycle and start bicycling (trust me ... the higher quality bicycles from a reputable bike shop are worth the extra money, especially when compared to “department store” bicycles, from Wal-Mart and other mass retailers). Be sure to check with your personal physician before embarking on any exercise program, especially if you have a history of medical problems.



20. Take a free online college course. Are you ready for this? Google returned 263,000,000 hits when I searched with “[free online college courses](#)” as my search criteria. Surprisingly, quite a few of these courses can be taken – for free – for college credit. Some of these free courses are available from such prestigious colleges as MIT, Yale, Stanford and Harvard. Knowledge is power, so empower yourself.



Linux Docs
Linux Man Pages

PCLinuxOS Puzzled Partitions

				3		9		
	3		8	7	4			
	1							2
	8		2			6		5
7	2						9	3
3		6			5		4	
8							6	
			5	8	1		2	
		1		6				

SUDOKU RULES: There is only one valid solution to each Sudoku puzzle. The only way the puzzle can be considered solved correctly is when all 81 boxes contain numbers and the other Sudoku rules have been followed.

When you start a game of Sudoku, some blocks will be prefilled for you. You cannot change these numbers in the course of the game.

Each column must contain all of the numbers 1 through 9 and no two numbers in the same column of a Sudoku puzzle can be the same. Each row must contain all of the numbers 1 through 9 and no two numbers in the same row of a Sudoku puzzle can be the same.

Each block must contain all of the numbers 1 through 9 and no two numbers in the same block of a Sudoku puzzle can be the same.



SCRAPPLER RULES:

1. Follow the rules of Scrabble®. You can view them [here](#). You have seven (7) letter tiles with which to make as long of a word as you possibly can. Words are based on the English language. Non-English language words are NOT allowed.
2. Red letters are scored double points. Green letters are scored triple points.
3. Add up the score of all the letters that you used. Unused letters are not scored. For red or green letters, apply the multiplier when tallying up your score. Next, apply any additional scoring multipliers, such as double or triple word score.
4. An additional 50 points is added for using all seven (7) of your tiles in a set to make your word. You will not necessarily be able to use all seven (7) of the letters in your set to form a "legal" word.
5. In case you are having difficulty seeing the point value on the letter tiles, here is list of how they are scored:
 - 0 points: 2 blank tiles
 - 1 point: E, A, I, O, N, R, T, L, S, U
 - 2 points: D, G
 - 3 points: B, C, M, P
 - 4 points: F, H, V, W, Y
 - 5 points: K
 - 8 points: J, X
 - 10 points: Q, Z
6. Optionally, a time limit of 60 minutes should apply to the game, averaging to 12 minutes per letter tile set.
7. Have fun! It's only a game!

Tux Scrappler

E₁ A₁ D₂ R₁ L₁ Q₁₀ E₁

Blank tiles

T₁ R₁ I₁ R₁ P₃ E₁ N₁

Blank tiles

Y₄ M₃ F₄ L₁ A₁ I₁ S₁

Blank tiles

Double Word

Z₁₀ R₁ T₁ E₁ P₃ L₁ E₁

Blank tiles

K₅ R₁ A₁ A₁ E₁ B₃ Y₄

Blank tiles

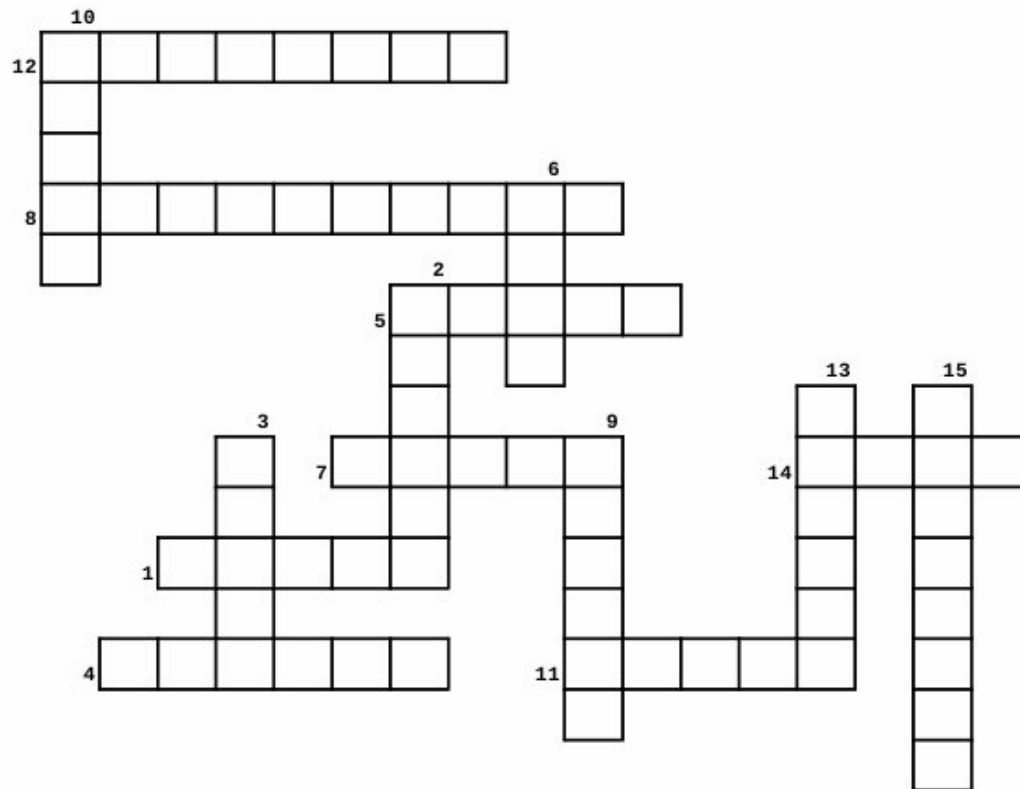
Triple Word

Possible score 222, average score 155.

Download Puzzle Solutions Here!

PCLinuxOS Crossword Puzzle: January 2014

Chef's Words



1. to cook a food in liquid.
2. a cooking technique in which food is briefly immersed in boiling water or fat.
3. a method where the food is cooked by heat from an open flame or coals.
4. a boneless cut of meat, usually a tender, high quality one.
5. technique for moistening the surface of roasted items with some type of liquid
6. the colorful outer layer of the citrus peel.
7. to work dough by hand to develop the glutens in the flour.
8. when carbohydrates like sugar are heated to higher temperatures, causing them to turn brown.
9. to coat an item of food in flour or bread crumbs prior to cooking it.
10. to cut into very small pieces.
11. a coating, as of syrup, applied to food.
12. to immerse a food in an acidic liquid to tenderize and flavor.
13. a cooking method is used for less tender meats by browning it first, then cooking slowly in liquid.
14. a mixture of equal parts fat and flour used for thickening sauces and soups.
15. a method of cutting vegetables into small, thin strips.

[Download Puzzle Solutions Here!](#)

Cooking Word Find

```

F Y W K J X Z Q W G B F S E H T E P V X M E K K O F U C T A
H K N O Q S I U A A J V B T P V E T T O Q N W T U P L S G E
M E I M W J D Q R X A R D I U I R L U O A N H Y L Q Q L B O
K Y B V T P B V P N Q K R O N X U E Z I L E M A R A C Y W V
E Z A L G A S Z J P X R H D M G P D W D B I T Q T J J W J P
H D U M D J V U R U M E S R H B S L F C B L E M T J F X D Q
O W E D A F B R F S C O N W R Y S Z I A Y U F W U S H S Y N
G H B X E H A B O C I M M K G P R L X P J J P M Q A F Y J Z
B A E L J G L W O U X P E X T S I K O N Z E Y Z Y A S H D Q
Q S E J F T Z Z T V X P I C T X B R O I L Z Z Z I I K J X E
Q C S L J L G H U M R E O P Z W G Q W A P X I F L Q Z Y I G
S U M H M A Z V C H G Y O C C H W G V X W P R J B P C O B O
T M C O H E V Y F N T O A G T U U C O U A S R A S W L Z U S
S E H X L N K A X V A U O S P B S U S I P Y Z X E D R V E L
A M G B B R A I S E M L W E I T H A Z O R Y H Q B B K U W J
O E Y D I N O U O T Z M B I Q O E E L B M J H Y B I K N O E
T M T H E N M V X B D H M T D D C L M O V X O M V O G R Y O
V C U S N R U O U L Q I C F N E A Z B K J F W D A L Q X Q D
G T S P G V D P W P C G E H L C C Z K F U Y U V A B G Y H P
A A E P I L L P V F G T I S S E J I E S U U B Z J E E K Q O
R Q V I K M C H I X S K G D P M X R D N E C N I M T N A H U
N G J N C A V H B J E Z P E E X T D S H B B G P M E B K T W
I N M P E E I H R H H C T O Z C P R U T S P M K W L E B F N
S C U O F R H X V H S S H Y Q S C W Z O N M S A S L W X W J
H R Z A X C S X E B A Q E Z V L X G Y I G V P I L I T O M E
F X S C X A E W L B F J T S E Z T M I T N H M S G F N Q T J
V P I H W U A M F P E T A N I R A M E L B M A R C S W U S W
F A M B O D R L F R A E R S K X Z I C G E E W X O H A T A G
B F W Y O R W J C E B O G B L S U F U R G X B Z O S U C O E
Z L E A V E N I N G L E E K K Y F R O J J L F X Z F T P R H

```

Baste
 Beat
 Blanch
 Braise
 Broil
 Caramelize
 Cream
 Dice
 Dredge
 Drizzle
 Fillet
 Flambe
 Garnish
 Glaze
 Grate
 Julienne
 Knead
 Leavening
 Marinate
 Mince
 Poach
 Puree
 Roast
 Roux
 Saute
 Scallop
 Scramble
 Sear
 Simmer
 Toast
 Whip
 Zest

Almost 10 Years Here, And Loving It

by izto

Early 1995 was the year I discovered the game Doom by accident, and I was in awe. That motivated me to get my very own first computer, which I built myself. It had a whooping 4MB of ram! So in order to play games, I had to use Windows.

Over time, my addiction to games exploded, and I built myself a new computer every two years or so, salvaging whatever was still usable from the previous box. That also made me known to friends and relatives as someone who could help them with their Windows problems.

The well known Windows vulnerabilities meant I always had work fixing other people's PCs, almost always for free. That in itself was terrible enough, but I also knew darn well that all my precious pictures and songs and documents could go up in smoke anytime if left in the custody of Windows. I was fed up, but had heard of no alternatives.

The first time I heard about Linux, and in fact about other OSes like BeOS, was in a magazine article. The magazine was Boot, later renamed MaximumPC. To be honest, BeOS impressed me more, and I bought it, and used it for a while. But then it went to OS Heaven, and I had to look around for another option.

So I tried this Linux thing.

First I tried Libranet, but then the only maintainer died. Then I tried Mandrake and stayed there for a year or two, until for some reason I don't remember now, I switched to PCLinuxOS.

I've been a PCLinuxOS user since the late betas, release candidates or whatever they were called. I have been a forum member under different names for nine years now, and I can sincerely confess to you, after all these years, that I LOVE IT HERE.



Let me count the ways (in no special order):

Safety, security. Well, no surprises here. Using free and/or open source software is peace of mind.

Command line is optional. I work supporting IBM mainframes. A mainframe console is... like the equivalent of a Linux terminal only, 1) you get to see the equivalent of the Linux syslogs (everything that happens in the OS and applications) onscreen, in real time, and 2) You can't see the console history like a Linux terminal can. I work on way more than 100 LPARs, so yes, that's a lot of console work. So I'm not afraid of working on the terminal on Linux ... it's that ... after doing that all day at work ... really, I'm not in the mood of using it at home. The fact that

I rarely have to use the command line here, if ever, is a big plus. But the option to use it is always there, for when the need truly arises. Fine with me!

Hardware support. On all the hardware I've bought over the years, PCLinuxOS has always worked right, except once, and because I bought something too far ahead of the curve, so Linux had had no time to adapt to it (it was sound on a motherboard).

TVtime. PCLinuxOS has always included TVTime as default, which works wonderfully with my TV tuner card. There's no other TV tuner software on Windows that can look as good, or switch channels as fast as TVTime. It's the best TV application, bar none!

Rolling release. I keep telling my 7-month-old son David (even though he still can't understand, I know): "Son, you seem to love that bottle too much, but once you get to taste bacon, butter, avocados, tomatoes, etc, you won't miss that bottle one bit." On the software side, it's the same thing: Once you get to live PCLinuxOS' true rolling release update methodology, you can only wonder how you could keep up with all that install-the-new-version-of-a-distro-every-6-months other distros use, all along. This is a KILLER FEATURE of this OS, and NO ONE ELSE DOES IT BETTER.

In fact, IMHO, the motto of this OS should be The Rolling Release Experts.

Repositories. The repos are very complete. The only thing I wish that could be there that isn't, is Plex Server, but that's not in your hands to do so, so that's fine.

Easy installation of new kernels, graphics drivers, other desktop environments. I REALLY

LOVE THIS! Different kernels, Nvidia or Radeon drivers, and other desktops like Openbox, Mate, etc ... are found in Synaptic like any other software. You just install them and the system does the rest! No fiddling with text files! Of course, on first boot after that, the startup process takes longer than usual, but that's just once and so, it's a very minor inconvenience.

The forums. The forums are terrific. The camaraderie, the humor, the anecdotes, the help to others who have questions or personal problems ... This is the best forum I've even been to, only equal to the now defunct Laser Squad Nemesis forums.

The magazine. I didn't think much about the magazine the first few issues, let me tell you. But this last year I've grown to read it cover to cover. One article in the latest issue was so good and eye-opening that I wrote a thank-you message to the author. My personal favorite section: Community member profiles!

Steam. Steam works smoothly!

Texstar and team. Here's a brilliant guy who takes no BS from anybody, and yet, zero bad attitude. His work of love is palpable. We couldn't be in better hands. And the team around him is awesome too.

I've always tried to send a yearly donation, but now that I can do it monthly, contributing is easier. It's money well spent. Or should I say, invested, in my peace of mind.

One last confession: During my daily commutes, I daydream. I fantasize that I win the Texas lottery, and donate Texstar enough millions to fund PCLinuxOS. I imagine how he first pays up his mortgage, then buys some land near his home and builds the PCLinuxOS Test Labs: A building where he assembles computers with the newest parts, and installs the OS to test that everything works right. I've imagined the Lab in many shapes and configurations, lately, in high pillars to defend from

floodings, with solar panels nearby to save on the utility bills. I envisioned the interior as circular, with all desktops organized in circles at different heights, and Texstar's main desk as above all the computers, attached to a rail in the wall, and that he can move

the desk along the rail and around the Lab, so he can be closer to any point inside, or to look outwards towards his home, or towards the solar panels, or the emergency power plant, or the parking lot, etc.

Screenshot Showcase



Posted by jogurtmen, on 12/7/13, running KDE.

A Wallpaper Slideshow For ANY Desktop

by Paul Arnote (parnote)

All of us like to change our desktop wallpaper from time to time. Some like to change it very frequently, like every 30 minutes or every three hours or every day. Judging by some posts in the PCLinuxOS forum, there is a good number of folks who want to be able have their wallpaper change *automatically* after a predetermined amount of time, creating a wallpaper slideshow, of sorts, on their desktop.

A couple of months ago, I wrote an [article](#) on how to use Xfce's built in wallpaper slideshow utility, along with a couple of Thunar custom actions to allow you to set it up. In recent months, I've been seeing a number of users clamoring for such a utility under the Mate and LXDE desktops. Reusing some of the code from the [NatGeo](#) and [Bing](#) wallpaper scripts, I've managed to come up with a script that creates a wallpaper slideshow not only on Xfce, but also on KDE, Mate, e17 and LXDE.

Yes, there are other "wallpaper slideshow" programs in the PCLinuxOS repository. However, some of them are specific to certain desktop environments. Others are just clunky to use, at best. My goal was to create something that works across *all* of the desktop environments available to PCLinuxOS users, with the "clunkiness" removed.

Before we go too much further, here is the short script (below). You can enter it by hand, copy and paste it from the pages of the magazine (into your favorite plain text editor, such as Mousepad, Leafpad, Geany, Kwrite, Kate, etc.), or [download](#) it from the magazine website. If you choose the latter, don't forget to remove the ".txt" file extension, and to make the file executable (chmod +x, for example). KDE users will need to also install **xdotool** from

```
1. #!/bin/bash
2. 3. function make_js {
3.     js=$(mktemp)
4.     cat > $js <<_EOF
5.         var wallpaper = "$X";
6.         var activity = activities()[0];
7.         activity.currentConfigGroup = new Array("Wallpaper", "image");
8.         activity.writeConfig("wallpaper", wallpaper);
9.         activity.writeConfig("userswallpaper", wallpaper);
10.        activity.reloadConfig();
11.    _EOF
12. }
13.
14.
15. function kde_wallpaper {
16.     make_js
17.     qdbus org.kde.plasma-desktop /MainApplication loadScriptInInteractiveConsole $js > /dev/null
18.     # sleep 2
19.     xdotool search --name "Desktop Shell Scripting Console - Plasma Desktop Shell" windowactivate key ctrl+e key ctrl+w
20.     rm -f "$js"
21.     dbus-send --dest=org.kde.plasma-desktop /MainApplication org.kde.plasma-desktop.reparseConfiguration
22.     dbus-send --dest=org.freedesktop.DBus /org/freedesktop/DBus org.freedesktop.DBus.ReloadConfig
23.     dbus-send --dest=org.kde.kwin /KWin org.kde.KWin.reloadConfig
24.     # kbuildsycoca4 2>/dev/null && kquitapp plasma-desktop 2>/dev/null ; kstart plasma-desktop > /dev/null 2>&1
25. }
26.
27. function xfce_wallpaper {
28.     xfconf-query -c xfce4-desktop -p /backdrop/screen0/monitor0/image-path -s "$X"
29. }
30.
31. function lxde_wallpaper {
32.     pcmanfm -w "$X"
33. }
34.
35. function mate_wallpaper {
36.     gsettings set org.mate.background picture-filename "$X"
37. }
38.
39. function e17_wallpaper {
40.     OUTPUT_DIR=~/.e/e/backgrounds
41.     FileName="$X"
42.     edcFile=~/.tmp/SlideShow.edc
```

```

43.
44.     echo 'images { image: "'$FileName'" LOSSY 90; }' > $edcFile
45.     echo 'collections {' >> $edcFile
46.     echo 'group { name: "e/desktop/background";' >> $edcFile
47.     echo 'data { item: "style" "4"; }' >> $edcFile
48.     echo 'data.item: "noanimation" "1";' >> $edcFile
49.     echo 'max: 990 742;' >> $edcFile
50.     echo 'parts {' >> $edcFile
51.     echo 'part { name: "bg"; mouse_events: 0;' >> $edcFile
52.     echo 'description { state: "default" 0.0;' >> $edcFile
53.     echo 'aspect: 1.334231806 1.334231806; aspect_preference: NONE;' >> $edcFile
54.     echo 'image { normal: "'$FileName'"; scale_hint: STATIC; }' >> $edcFile
55.     echo '}' >> $edcFile
56.     edje_cc -nothreads ~/tmp/SlideShow.edc -o $OUTPUT_DIR/SlideShow.edj
57.     sleep 2 && rm -f ~/tmp/SlideShow.edc
58.     echo 'Enlightenment e17 SlideShow.edj file created'
59.     enlightenment_remote -desktop-bg-del 0 0 -1 -1
60.     enlightenment_remote -desktop-bg-add 0 0 -1 -1 $OUTPUT_DIR/SlideShow.edj;
61. }
62.
63. function usage {
64.     printf "%s\n%s\n\n%s\n%s\n\n%s\n\n%s" \
65.     "Automatically set a random image as the desktop wallpaper," \
66.     "from the user's ~/Wallpaper directory." \
67.     "Idea from a script by Just17. Written by Paul Arnote for PCLinuxOS." \
68.     "Originally published in The PCLinuxOS Magazine (http://pclosmag.com), Jan. 2014" \
69.     "Works for KDE4, Xfce, LXDE, Mate and e17 desktops." \
70.     "Usage: $0 [arguments]" \
71.
72.     printf "\n %s\t%s" \
73.     "-h, --help" "This help text"
74.     printf "\n %s\t\tSetup for the %s" \
75.     "--xfce"      "XFCE4 Desktop" \
76.     "--mate"      "Mate Desktop" \
77.     "--lxde"      "LXDE Desktop" \
78.     "--kde4"      "KDE4 Desktop" \
79.     "--e17"       "Enlightenment Desktop"
80.     printf "\n"
81. }
82.
83. DIR=$HOME/Wallpaper/
84.
85. if [ "$1" == "--help" ] || [ "$1" == "-h" ] || [ "$1" == "" ]; then
86.     usage
87.     exit
88. fi
89.
90. while true; do
91. X=`find $DIR -type f \( -name '*.jpg' -o -name '*.png' \) -print0 | shuf -n1 -z`
92.

```

Synaptic, and e17 users will need to enable the DBus Extensions module. The line numbers below are just to help keep you oriented, and can be (must be) omitted.

How It Works

Like I mentioned earlier, I've "reused" some of the script code from the [NatGeo](#) and [Bing](#) wallpaper scripts, which appeared in the [September 2013](#) and [October 2013](#) issues of The PCLinuxOS Magazine, respectively. These "code blocks" specifically set the wallpaper for each of the desktop environments. Why reinvent the wheel? Let's just use that which we already know that works.

As it is setup, the script looks for your wallpaper files in your **/home/username/Wallpaper** directory. For me, and a lot of other users, it's advantageous to keep all wallpaper image files in their own directory, separated from other image files. I recommend this approach to keeping your files organized. If you don't have a /home/username/Wallpaper directory, create one and fill it with your wallpaper image files. If you have your wallpaper image files organized differently, feel free to change line 83 to reflect your desired directory.

Line 90 sets up a loop. In line 91, a random *.jpg or *.png file is read by the find command, and is stored in the "X" variable. This variable is then used by the various desktop subroutine functions to set the desktop wallpaper.

Still within the loop, line 117 of the script sets up the delay before the next random wallpaper image is displayed. The script is set up to change the wallpaper every 10 minutes (hence, the sleep 10m command). If you want your wallpaper to change every 30 minutes, for example, change the sleep 10m command to sleep 30m.

If you want some offbeat time, such as changing your wallpaper every 10 minutes and 23 seconds,

```
93.  # For Xfce
94.  if [ "$1" == "--xfce" ]; then
95.      xfce_wallpaper
96.  fi
97.  # For LXDE
98.  if [ "$1" == "--lxde" ]; then
99.      lxde_wallpaper
100.  fi
101.  # For Mate
102.  if [ "$1" == "--mate" ]; then
103.      mate_wallpaper
104.  fi
105.  # For KDE4
106.  if [ "$1" == "--kde4" ]; then
107.      kde_wallpaper
108.  fi
109.  # For e17
110.  if [ "$1" == "--e17" ]; then
111.      e17_wallpaper
112.  fi
113.  #
114. # If using Cairo-Dock add the following line
115. #           killall cairo-dock && sleep 0.3 && exec cairo-dock
116.
117.     sleep 10m
118.
119. done
120. exit 0
```

you will have to change the command to sleep 623s (10 minutes x 60 seconds = 600 seconds + 23 seconds = 623). The “s” parameter tells the sleep command to use seconds, rather than minutes. Seconds is the default time interval for the sleep command, so sleep 623 works just as well as sleep 623s.

Alternatively, you could also use 10.383m, since sleep is one of those rare commands that will recognize and use a floating point number, rather than just using whole integers as most other commands want. During testing, I had the sleep command set to sleep 10s, so my desktop wallpaper changed every 10 seconds. Finally, the loop is closed in line 119.

Caveats

Because of the reuse of the code from the previously mentioned scripts, the same caveats for those scripts also apply to this script. Instead of rehashing them here, I'll refer you to the articles that discuss those previous scripts.

If you have Xfce set up to manage the wallpaper slideshow with its own built-in utility, using this script will cause the Xfce desktop wallpaper manager to revert back to single image mode.

Usage

First, be sure you've saved the script to a directory that exists in your path statement. I have a “special”

directory within my /home directory, called “Scripts” (without the quotes), that I've inserted into my system's path statement. I put all of my custom scripts there, and it makes it simple to call them from a terminal session, from a Thunar custom action, or any other place where you enter a command. Alternatively, you will have to enter the full path and full filename of the script, if you place it in a directory that is not in your path statement.

As with the other scripts in its “lineage,” you launch the script with the command line switch that matches the desktop environment you are running. Hence, slideshow.sh --kde4 will launch the script and tell it to use the KDE subroutines/functions to control the changing of the wallpaper. The other command line switches are --xfce, --lxde, --mate and --e17. Issuing the slideshow.sh command, without any parameters – or with either the --help or -h command line switch – will display the command line switches, and then exit.

With this script, it makes it easy to issue a command in your favorite desktop environment's startup utility to automatically start the script every time you log into your desktop.

Summary

Now, the users of **all** desktop environments can enjoy a wallpaper slideshow, without having to resort to utilities that work only on one or two desktop environments, or having to deal with clunky interfaces or commands. Now, users can gather around ONE tool that handles a desktop wallpaper slideshow, regardless of the environment. Users who have installed multiple desktop environments should find this particularly beneficial.



commandlinefu.com

Game Zone: Assault Android Cactus

by daiashi



About The Game

Description

Assault Android Cactus is a manic twin-stick arena shooter for the PC with screens full of enemies, buckets of bullets and high scoring combo chains! Take on the role of Cactus, an enthusiastic police android, who responds to a stranded space freighter only to discover it under siege by its malfunctioning robot workers. Cut off from the outside and in over her head, Cactus and the androids she recruits along the way battle through the crippled Genki Star to reach the brain of the ship and put things right before it's too late.

History

Assault Android Cactus started as a simple twin-stick prototype with fun characters and lots and lots of effects. Over time, the mechanics were refined and

the game was tightened until it became an intense skill-based game requiring aggressive strategies and fast reaction times.

Features

Multiple playable androids with unique weapon set and play styles.
Dynamic stages change conditions and rearrange themselves during play.
Heart pounding soundtrack that dynamically shifts, based on your performance.
Giant robot bosses that unleash bullet hell and stage covering special attacks.
Up to four player local co-op, supports mouse and keyboard and joypad.

If you want a good two stick shooter with an arcade style and you do not mind the cartoon characters, give it a whirl. It's just plain fun. There have been comments all over the net, mostly good, about this one. There is not much about the company, though they do have Twitter and Facebook pages. This one comes with several awards under its belt as well.

System requirements:

PCLinuxOS and Steam

Hardware:

Minimum:

OS: PCLinuxOS
Processor: Core 2 Duo
Memory: 2 GB RAM
Graphics: Intel HD Graphics
Hard Drive: 1 GB available space

Recommended:

OS: PCLinuxOS
Processor: Intel Core i5 or Amd equivalent
Memory: 4 GB RAM
Graphics: NVidia GTX 460
Hard Drive: 2 GB available space

About The Company

Witch Beam is an independent games team in Brisbane, Australia. They build the kinds of games we want to play and are committed to creating polished arcade style experiences.

Early History

Tim Dawson, Sanatana Mishra and Jeff Van Dyck first worked together at Sega Studios Australia. After Tim and Sanatana left their jobs to pursue independent games development, they contacted Jeff for advice on audio design, and he ended up joining the team.

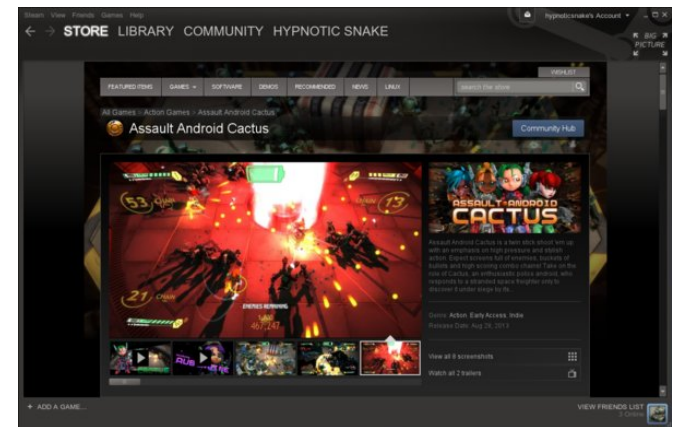
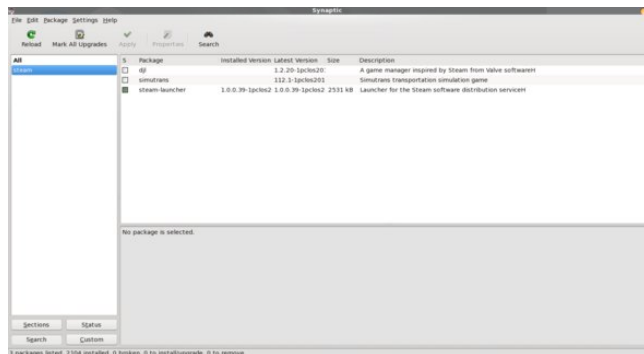
Some Gameplay Screenshots





Getting It To Run

Install Steam (if you don't have it installed already), then start it. You will need to create a new account, if you do not already have one. Once you have Steam up and running, go to the store tab. Click on the Linux tab and search for Assault Android Cactus. If you have updated your system, including graphics drivers, you should be good to go.



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PCLinuxOS
 Radically Simple



Fail2ban - Installation and Configuration

by YouCanToo



What does fail2ban do

Fail2ban scans the log files (e.g. `/var/log/apache/error_log`) and bans IPs that show the malicious signs -- too many password failures, seeking for exploits, etc. Generally, Fail2Ban then updates firewall rules to reject the IP addresses for a specified amount of time. Out of the box, Fail2Ban comes with filters for various services such as (apache, courier, ftp, ssh, etc).

System Requirements

The only required dependency needed to run Fail2ban is Python. Python is installed by default in PCLinuxOS.

Main Features

Here is a list of the main features available in Fail2ban.

- Client/Server architecture.
- Multi-threaded.
- Highly configurable.
- FAM/Gamin/Pyinotify support.
- Parses log files and looks for given patterns.
- Executes commands when a pattern has been detected for the same IP address for more than X times. X can be changed.
- After a given amount of time, executes another command in order to unban the IP address.

- Uses Netfilter/Iptables by default but can also use TCP Wrapper (`/etc/hosts.deny`) and many other firewalls/actions.
- Handles log files rotation.
- Can handle multiple service (sshd, apache, vsftpd, etc).
- Resolves DNS hostname to IP address (use with caution, disable by `usedns = no`).

Installation

fail2ban is in the Synaptic repository. Please install it using Synaptic. Once installed using Synaptic you will need to start the service.

In a console window as root enter the following

```
service fail2ban start
```

You should see something like this

```
[root@laptop dwmoar]# service fail2ban
start
Starting fail2ban:          [ OK ]
[root@laptop dwmoar]#
```

Checking the fail2ban server status:

In a console window as the root user enter the following.

```
service fail2ban status
```

You should see something like this.

```
[root@laptop dwmoar]# service fail2ban
status
Fail2ban (pid 5166) is running...
Status
|- Number of jail:          1
```

```
`- Jail list:                ssh-iptables
[root@laptop dwmoar]#
```

Note: the jail list you see may be different, depending on the services you are using, as setup in the `jail.conf` file.

Configuration

You can configure Fail2Ban using the `/etc/fail2ban/fail2ban.conf` file.

It is safe to leave it with the default settings.

Editing the `/etc/fail2ban/jail.conf` file: In the [DEFAULT] section we want to check the following variables

ignoreip = 127.0.0.1/8 <-- we want to allow our local machine

bantime = 3600 <-- This is 3600 seconds or one hour in time. Increase the number of seconds to extend the time the ip address is banned from your system.

maxretry = 3 <-- The number of times the user can fail before getting banned. It is best not to set this value too high.

In the `[ssh-iptables]` section we want to check the following:

enabled = false <-- change this to **true**

action = <-- Make sure to change the dest to your email address

maxretry = 5 <-- Do not set this too high. Actually, I reduced mine to only 3 attempts

DO NOT change any other sections unless you are using that service. For example proftpd, vsftpd etc.

If you made any changes to the jail.conf file, you will need to restart the fail2ban service.

In a console window as the root user, enter the following command

```
service fail2ban restart
```

You should see something like this

```
[root@laptop fail2ban]# service fail2ban
restart
Stopping fail2ban:          [ OK ]
Starting fail2ban:          [ OK ]
[root@laptop fail2ban]#
```

Running fail2ban

fail2ban is automatically setup to run in PCLinuxOS on startup or a reboot of your system.

Setup fixes

If you are Using Very Secure FTP (VSFTP):

Fix 1: Configure VSFTP for "dual_log_enable=YES", and have fail2ban watch /var/log/vsftpd.log instead. This log file shows the incoming ip address instead of the DNS name.

Fix 2: Add "use_localtime=YES" to /etc/vsftpd/vsftpd.conf and restart the vsftpd service.

More Information

For more information about fail2ban, You can access their [online manual](http://www.fail2ban.org/wiki/index.php/MANUAL_0_8) at http://www.fail2ban.org/wiki/index.php/MANUAL_0_8



Screenshot Showcase



Posted by meemaw, on 12/17/13, running Xfce.

PCLinuxOS Family Member Spotlight: Smileeb

by smileeb



How old are you?

I will be 79 in July.

Married, single or what?

Married to a wonderful Polish woman, and in January it will be 54 years.

Children, grandchildren?

I have two daughters and one son. One step-grandson and two granddogs that we doggie day care when the kids are at work.

Retired or working and for how long and at what.

I worked at many things and learned a lot. From shoe repair shop, electric wiring, Bond Clothes,

Taylor Instrument, to my final jobs at Kodak. The first 28 years, I worked in production. Movie film perforating (running different machines that punched hole for the sizes of the film and printed their codes on the edges). Later, a film slitter that slit 54" wide rolls into 83 film rolls maybe 3300 feet in length (the length could vary, depending on the order). My last 10 years were spent as an alarm mechanic working on and installing intrusion alarms, fire alarms, cameras, motion detectors, smoke detectors. Kodak, at one time, had more master boxes and pull box systems than many towns and cities in the country.

What is the area you live in like. Weather, Quietness, Scenery

The city is located along Lake Ontario, which at times is a great influence on our weather. We have the four seasons, some better than others.

Are you handy with your hands and have any hobbies.

I can do some carpentry work, electric, plumbing, but I'm in no way a professional.

What is your education level?

I'm one of those dull pencils in the box, only a year and half of high school.

Do you like to travel, go camping?

I used to love driving when we traveled (bad eyes now). Use to have a travel trailer or two, but I gave that up.

What caused you to try Linux and join this forum?

Not being a geek, but just a user of computers, and following instructions on how to do things, I ran Windows until the slowness and always needing to stay ahead with the constant updating of antivirus programs got to me. Being on the Soundbytes forum ever since, I started using computers and hearing about Linux. I decided to try it and messed with a few of the live CDs: Knoppix, Mepis, Puppy, Damn Small, then bought Mandrake. These encounters were not very successful. I next tried Ubuntu and that and their forum turned me off, but I did try Mint and got it to run. The fact is, it was running when I tried PCLinuxOS 0.98 and the hook got bitten.

If I'm not mistaken, O-P and Archie were two of the first to help me out when I had problems. Way back, O-P and I would have chats in Gmail, and discovered we had done some of the same things when we were growing up. Another reason why I like Linux. A few years ago, my kids bought me a laptop computer, and it had Windows Vista on it. The sixth time I started it up, it stated it could not find the operating system. That problem got solved real quick when PCLinuxOS was put on it and that error message has yet to appear again.



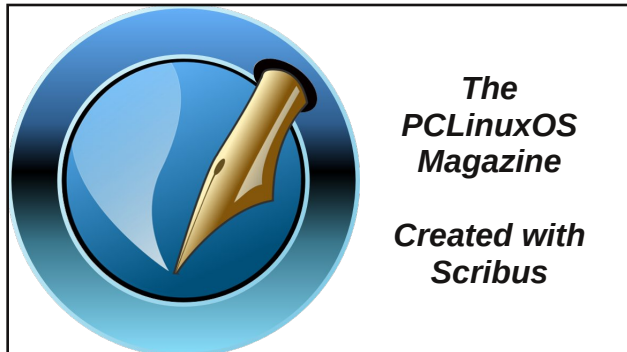
Here (previous page) is the cottage the kids now own and I spend a lot of time there during the better weather.



Here is my cave.

PCLinuxOS Family Member Spotlight is an exclusive, monthly column by smileeb, featuring PCLinuxOS forum members. This column will allow “the rest of us” to get to know our forum family members better, and will give those featured an opportunity to share their PCLinuxOS story with the rest of the world.

If you would like to be featured in PCLinuxOS Family Member Spotlight, please send a private message to smileeb in the PCLinuxOS forum expressing your interest.



Screenshot Showcase

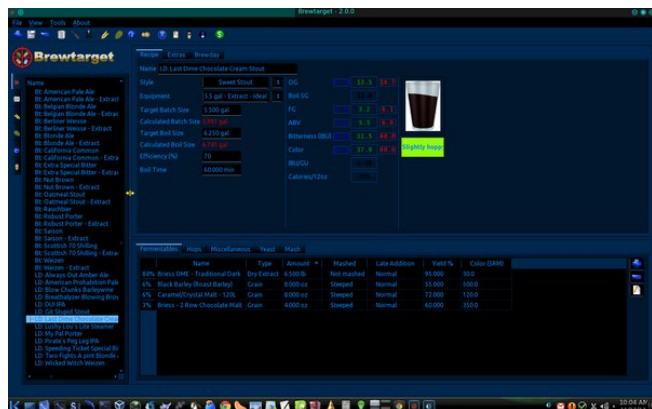


Posted by nymira, on 12/1/13, running KDE.

Enhance Your Home Brews With Brew-Target#, Part One

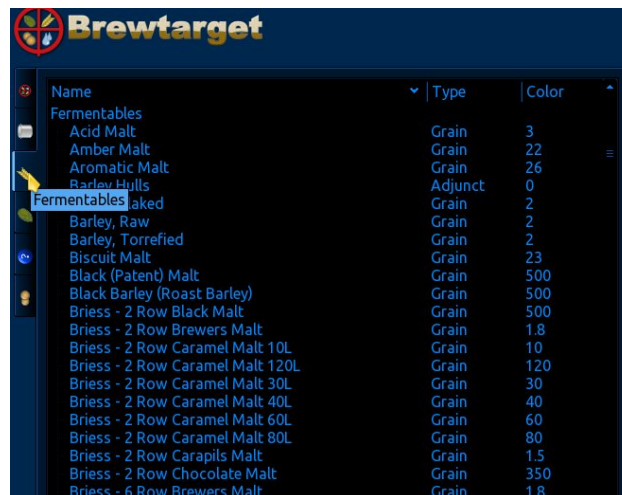
by loudog

Tis the season to be jolly, and what better way to do that than make some home brewed beer. We can be certain that Tux enjoys an occasional refreshing malt beverage, because his friends have created this exceptional beer brewing database for us. Although Brew-Target# is not a beginner's guide to beer brewing, it contains all the necessary information for the novice to try their hand at different recipes. Using my prior experience at home brewing, it is my intention to provide all the information needed to utilize this program, even if you are a complete newb. I believe Tex, err I mean Tux, is in agreement with me and is awaiting a complete, comprehensive, and enjoyable tutorial on how to use Brew-Target#. Let's start by opening the program, shall we?



The first thing I would like to draw your attention to is the window to the left side of the image. This is the general information window. As you can see by my cursor, the window is expandable. The recipe tab (upper left) is currently selected. Brew-Target# has many recipes loaded by default, from a heavy Barleywine to a light bodied Belgian Blonde Ale. It

also allows you to add your own recipes to the database (more on that later). If we check the tabs for the general info window, we see selections like hops, fermentables, yeast and the like. Clicking on any of these tabs brings up plenty of information on the particular subject. The image shows a partial fermentables list.



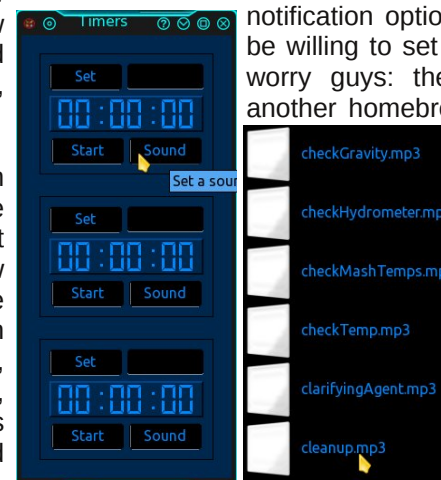
Double clicking on most items opens up a new window with a detailed analysis of the item. This new window is editable to suit your particular needs, and some of the items have their own sub menu (right, top).

As we examine the choices at the top of the program window, we see new recipe, a save button, delete recipe, and the list goes on. One very important button not to miss is the donate button. We all know the value of donations, and many open source projects would not exist without them. An experienced brewer will know what most, if not all, the information contained in these options means, being able to utilise them readily. A couple of buttons that I thought were interesting were the timer and



the refractometer choices. The timer is versatile, with 3 different timers that you can configure independently. The timers can also be set for different audible notifications that you select from the dropdown menu.

I'm sure the ladies appreciate the cleanup notification option. They might even be willing to set it for you, but don't worry guys: there's also a "have another homebrew" notification. For



some reason, a few of the other notifications bring to mind the BFS scheduler. Hmmm. The reason I enjoy the refractometer option is because that's the tool I prefer to use.

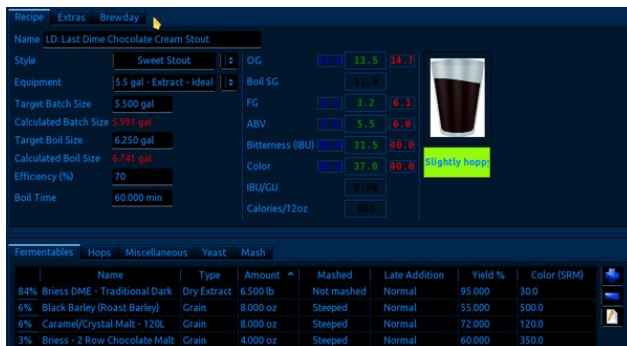
Enhance Your Home Brews With Brew-Target#, Part One



The standard tool for reading SG (specific gravity) and FG (final gravity) is a hydrometer, which allows you to know how much dissolved solids, primarily sugars, are in the liquid. If you know how much sugar is in the mix, then you will have a pretty good estimate on how much ABV (alcohol by volume) will be in the final product. It will also give you an indication when the sugar is all used up in the wort. The refractometer, on the other hand, gives the amount of sugar the liquid contains whether fermentable or not, in the form of a brix reading.

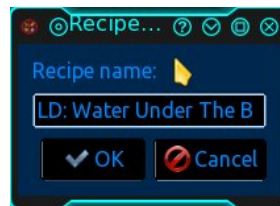
The refractometer is primarily used for the harvesting of fruit, the farmer squeezes a couple drops out of the fruit onto the lens, looks through the eyepiece, and depending on the amount of sugar the brix reading tells him is in the fruit, he knows if it's ready for harvesting or not. The same can be said for the beer except on the opposite hand; the less sugar in the liquid the closer the beer is to harvest. I also enjoy the cleanliness and sanitation benefits the device provides.

Another handy item is the configuration option located in the tools menu. This allows you to change languages and measurement standards to fit your geographical location. Now let's look at the recipe window. Double click on any recipe in the list and it will load into the recipe viewer.



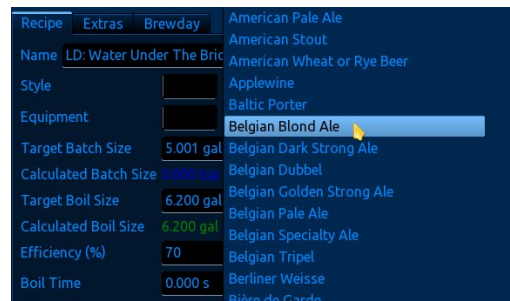
You will see the basic information about the beer you are thinking of brewing, from the color, taste, ingredients, OG, FG, ABV etc. Now this will be Greek to many of you, but will become clearer as the article proceeds. I told someone once that I understand every language but Greek. He quickly rattled off some Spanish to me and all I could say was, "sounds Greek to me." Okay, all joking aside, let's get back to Brew-Target#. For those that have some experience, this is an exciting playground of information. At the top we see three tabs: recipes (open now), extras, and brewday. If we select the extras tab, we find information on the brewer, time to age in the fermentors, temperatures, etc. This is also the place to record things you did while brewing this recipe in the notes section.

The Brewday tab gives instructions on actually brewing the beer, although it will be slightly vague to beginners. We will focus on the brewday tab later in the tutorial. This is a recipe I added to the database and we will now go through the steps to add your own. First, go up to the new button (top left main window), and click it. This will bring up the "name the recipe" window.

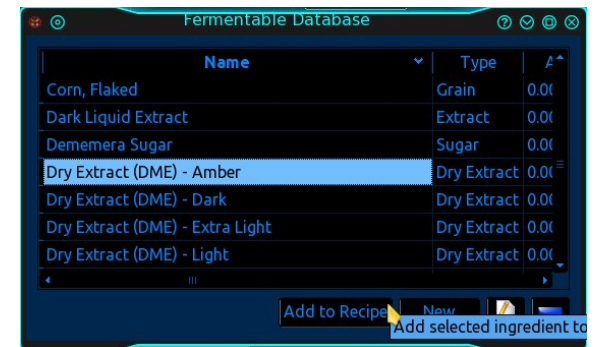


Make sure to start with your initials for future identification, then the name of your brew. After clicking OK, it will be added to the recipe list and show in the main recipe

window. Next, we select the style of beer it is from the dropdown menu.



From the equipment menu, we select Extract-Ideal, as this is an extract brew. Next, you see another window asking if you want volumes calculated, etc. Select yes. This will give some information on water volumes/evaporation, etc. that is helpful for getting the proper water to malt extract ratio, plus a whole lot more. Now its time to add the ingredients. In the lower section, select the fermentables tab, then over to the right click the big + button (add a fermentable) to bring up the fermentables menu. This menu is expandable.



Select your fermentable and click the add to recipe button. It will show up in the list. You must enter the amount of extract, grains etc. the recipe calls for.

Fermentables							Hops	Miscellaneous	Yeast	Mash
	Name	Type	Amount ^	Mashed	Late Addition	Yield %	Color (SRM)			
0%	Dry Extract (DME) - Amber	Dry Extract	0.000 oz	Not mashed	Normal	95.000	13.0			

Continue to add your ingredients, hops, misc, yeast and the amounts required as you go. Each ingredient tab will bring up a similar selection menu when you click the + button. *Note: I have encountered a bug in the miscellaneous add ingredient menu. After selecting the ingredient and clicking add to recipe, it adds something different than what you had selected. Other strange behavior has been reported with the misc. section. You can get around this by the drag and drop method (next page, top left).*

Update: This bug has been fixed in the updated version but was not ready for distribution as of the time I contacted the developers. When you are done



adding all the ingredients, we will take a closer look at the parameters table.



The parameters table is full of useful information about our recipe. The center column shows the characteristics the final product will possess based on our input into the database (I tend to ignore the bottom box). The left column shows the minimum criteria, and the right column the maximum for the style (belgian blonde ale) that we specified in the

beginning. Looking at the glass of beer, it says, "way hoppy!" Hmmmm. If we look in the bitterness row we see a rating of 72.6. According to the min/max values our recipe either has too much hops or too bitter of a hop. Other parameters are also not within tolerance for our selected style.

Something is really wrong with our recipe. No wonder it never tasted like a belgian ale. Whoever made this recipe must have had one homebrew too many. Actually, I purposely chose some wrong ingredients to get these results to illustrate the depth of the database. Now you may begin to understand some of the really exciting potential of the database. You can create your own recipes from scratch, check an existing recipe for possible reasons why it doesn't taste quite "right." Experiment with existing recipes, while checking to see if you're staying within the style parameters. If you happen to have some leftover grains, hops, etc, lying around and decide to brew a camper's mix beer, you can search through the style menu to find out what to call it based on the ingredients. All without brewing one single drop.

You can also load the recipe, go to the brewday tab and select generate instructions to get a simple step by step brewing guide, although you will have to do some sorting out in the steps order. Brew-Target# is an absolute joy to play around with, and at the same time, provides everything a novice needs to get to some serious home brewing. I am by no means an expert home brewer, and some of the methods and information I will be presenting here may not be in the traditional fashion, but my friends all enjoy my brews. Speaking seriously, did I mention I was going to include an in depth tutorial for the newbies, so they would possess enough information to brew at home, by themselves, with the help of this program? Why yes, by golly, I did!



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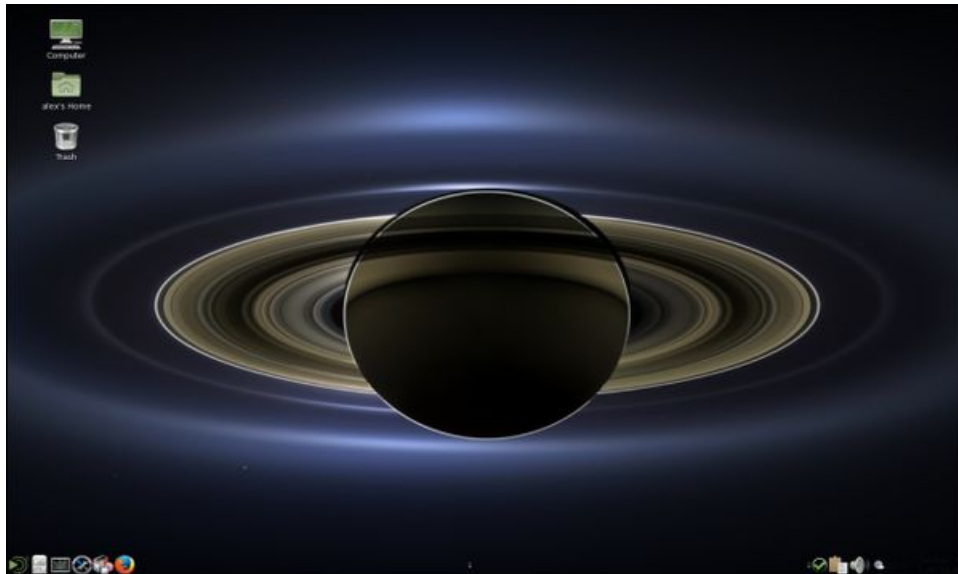
More Screenshot Showcase



Posted by parnote, on 12/14/13, running Xfce.



Posted by Agust, on 12/13/13, running e17.



Posted by alex25502, on 12/7/13, running Mate.



Posted by Crow, on 12/2/13, running KDE.