

Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and related technology. Our aim is to provide an exchange of information between users of digital devices. We are not in any way affiliated with any computer manufacturer or software company.

Program Meetings

No admission fee for non-members. Everyone is welcome! Second Tuesday of every month, except August, from 6:30pm – 8:30pm.

Help's Half Hour (Q & A)
6:30pm – 7:00pm. *Members and Guests are welcome to attend and bring their computer related questions with them to get answered.*

7:00 – 7:15, Club Business

7:15 – 8:30+, Main Presentation

Come and join in the fun and enjoy a snack! **You are welcome to bring a guest.**

Become a Member

Go to our website, www.rcsi.org, and download a printed form for use by the Post Office mail, **or** enter your info online and pay with a credit card or PayPal, **or** attend a meeting.

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The Rochester Computer Society, Inc. a computer/tech club open to everyone



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Tuesday, March 10, 'Browser Bloat & Service Workers: What to do about them?', a Mark Zinzow presentation

Tuesday, April 14, Video Night
'Global Warming, Latest Scams'
presented by Tony Dellelo

Tuesday, May 12, 'To Cloud or not to Cloud'
presented by David Williams, via Zoom

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Smart Devices in the home - With voice control

by Phil Sorrentino, Contributing Writer
The Computer Club, Florida

There are a whole host of smart devices available for use in the home now. Some of the most basic and least expensive ones are smart bulbs, smart plugs and smart cameras. (Yes, I know cameras can be expensive, but there are some fairly inexpensive indoor-only cameras.) First of all, what makes these devices smart? Well as I have alluded to in previous articles, it's all about Client – Server technology. The devices have some limited intelligence in them. Read "intelligence" as basic processing power, downloadable



“Your Computer User Group of the Air”, Saturdays from 12:00 pm to 2:00 pm, with Nick Francesco, Dave Enright, and Steve Rae. Broadcasting on JAZZ 90.1 FM (WGMC) from Rochester, NY. Call 966-JAZZ (585-966-5299) or 800-790-0415

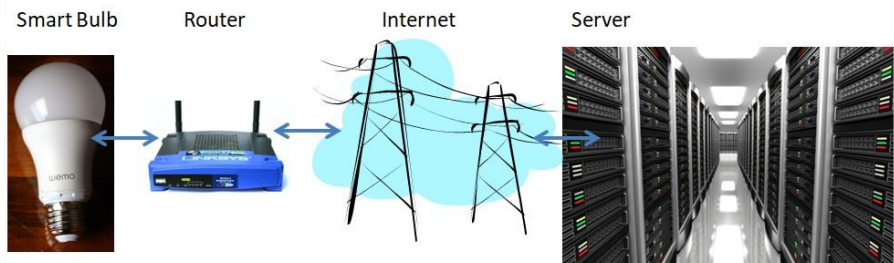
Sound Bytes is the longest running computer call-in show in the known universe.

Free copies of the RCSI 'Monitor' newsletter can be found in the following computer stores: Microworx, TSC Electronics, Pod Computers, and Just Solutions. Digital copies may be obtained from www.rcsi.org or my Pcloud storage at <https://tinyurl.com/tonydelrcsi> (this link works on PDF version only). Also includes presentation slides and articles too large for this newsletter.

Some Past Presentations:

Cut the Cord, Streaming Services
Autonomous Cars and Robots
Open Source and Free Software
Protecting Your Identity
Keeping Mobile Devices Secure
3D Printing, ENABLE project
Flash Drives-Not Just for Storage
Features, Mac OS X & Windows
Tablets, the Programs and Uses
Personal Finance Software
Amazing Browser Tips
Linux is Like Cars
Drones and Their Many Uses
Gifts and Gadgets for the Holidays

firmware, and wi-fi electronics. This allows them to be able to communicate with a local wi-fi router, which in turn allows them to access the Internet. Once they can access the Internet, they can take advantage of the servers on the Internet (sometimes referred to as “in the cloud”). The intelligence in the accessed server is where all the magic happens. Here read “intelligence” as very fast, very powerful, server computers capable of handling millions of requests for service per second. So it’s the combination of the smart device, the Internet, and the server that really makes the smart device: smart.



Once you have your smart device ready for installation, it is the App on your smartphone that takes over and steps you through the installation process. (Yes, a smartphone is required for the installation, either Android or Apple.) The App that you will use for installation will be the App from the specific smart device manufacturer. So for example, if you have a TP-Link smart bulb, you would have to get the TP-Link App for your smartphone. In this example that would be the “Kasa” App. Similarly, if you have a Wyze smart bulb you would use the Wyze App for the installation. These Apps are free and are intended to work with the servers from the specific manufacturer. (So just as an aside, think about this. If the company that operates the server, the smart device manufacturer, goes under and the server goes away, your smart device will no longer be smart. The bulb may not even be able to be turned on if there is no server to command it to turn on.)

The installation process is usually pretty easy; after all, it’s the App that is doing all the work. The first thing you have to do is get the device ready for installation. The App will usually start this by having you select something like “add a device,” or “add a product”, or maybe you just have to select the “+” on the screen (as found on the Kasa App) to add a device. You will have to let the App know what type of device you are adding. This is usually done by just selecting the device type from a list of device types manufactured by that specific manufacturer. Once the device type is selected, you are ready to go into the setup mode. The App will give you instructions for getting the device into the “Setup” mode. On a smart plug with a push-button switch it is really easy because pushing the button as directed by the App will get the smart plug ready for installation. With a smart bulb, usually you quickly turn the power on and off maybe three times and the smart bulb goes into the Setup mode. You will know the device is in setup mode when whatever you were watching changes. With a smart bulb, the light may start to pulsate slowly, with a smart plug, the small light on it may blink or change

Special Interest Group

Linux Sig

We are back!



Linux Workshop,
third Saturday of the month
Sat, March 21, Noon-4PM

NEW LOCATION:

Gates Public Library
902 Elmgrove Rd, 14624,
between Buffalo Road and
531 Expressway.

The room we use is on the second
floor, SE corner, by the restrooms.

<https://www.meetup.com/Interlock-Rochester-Hackerspace/events/psggnqybcbxb/>

Come and get your questions about Linux answered. We have experts on hand to fix problems and answer questions about Linux and FOSS (free and open source software). **Bring your system in** so we can help you get the most out of it. Hope to see you there.

Carl Schmidtman

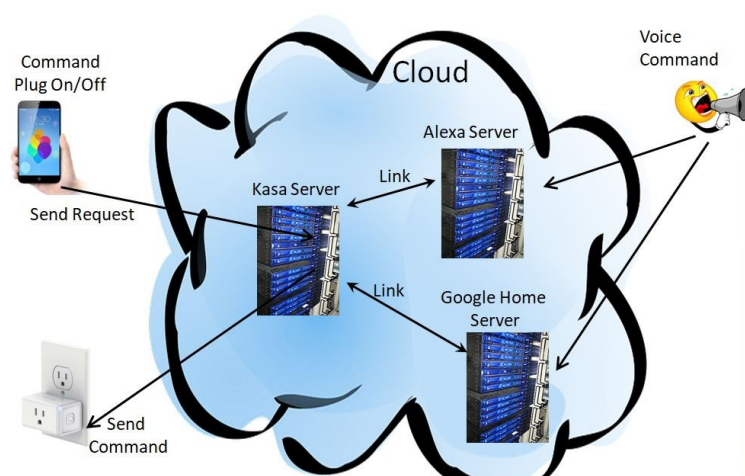
Free, Virtual Technology Conferences, ONLINE presented by APCUG

remaining 2020 Schedule
Saturdays:
Aug 15, Nov 7
from 1 – 4 pm, EST

For Conference Descriptions
& Registration Links, go to
apcug2.org/category/virtual-tech-conference

color. Once the device is in the setup mode, it will need to know the name of your wi-fi network and the password for that network. (Note: some devices only support 2.4 GHz networks only; not 5 GHz networks.) You may have to use your “Settings App” on the smartphone during the setup; just follow the directions from the App. Once you enter the wi-fi network name and the network password you may see a timer count down for a few seconds till the installation is complete. Finally you will be asked to name the smart device; something like “desk light” or “bedroom plug”. (Keep in mind that each manufacturer’s App will be a little different, this is just a general example.) The installation may seem complex but after you have done it once or twice it will probably become automatic. However, you might want to keep those instructions that you get with the device in a safe, convenient, place because you might have to go through the whole process again. (Before I lose the instructions, I scan them into a file and place the file in a “Home Automation” folder so I can review the directions when I have to do another installation. This was recently necessary when I changed my router and the new wi-fi network had a new name and new password. This forced me to reinstall every device that used the house wi-fi. At the time, I had 7 smart devices that had to be reinstalled.) So now with the smart device installed you can control it from your smartphone App. Typically, you can turn it on and off and maybe even set up a schedule.

Once the device is installed and working, it’s time to move on to voice control. Voice control is supported by Amazon’s Alexa and Google’s Google Home. You can use either of these or both. Amazon calls the link between Alexa and smart devices “skills.” Google Home refers to them as links. In either case you need to have the appropriate App on your smartphone; the “Amazon Alexa” App for Alexa, and the “Home” App for Google Home. Again, the Apps are free and available for Android and Apple. Once you have the appropriate App, you just have to follow the instructions to link your smart device. Typically you will have to select the type of device and the device manufacturer. On Alexa this is started by selecting the “+” on the “Devices” screen and then selecting “Add device,” and then the type of device, and then selecting the manufacturer of your device from a list of manufacturers. To make sure you are linking “your



RCSI Officers

Pres: Steve Staub 429-9877
srstaub1@rochester.rr.com
VP: Mark S. Lawson . . . 544-5377
mslawson51@peoplepc.com
Treas: Jerry Seward
jerry@jerryseward.com
Secretary: www.rcsi.org
Help's Half Hour . . Jan Rothfuss

Board Members at Large

Jan Rothfuss 347-6020
jan_rothfuss@hotmail.com, 9/22
Tony Dellelo 734-6149
tonydel@techie.com, 9/21
Bob Avery 385-4491
webmaster@rcsi.org, 9/20

Standing Committees

Linux SIG: . . . Carl Schmidtman
unixgeek@faultline.com
Programs and *Monitor* editor: . . .
. Tony Dellelo
Webmaster: Bob Avery
Membership: Steve Staub

Planning Meeting

Held on 1st Tuesday of each month
at 7 pm, at St. John's Meadows,
Briarwood building. ANY CLUB
MEMBER MAY ATTEND.

Newsletter Printing

* ON HOLD AT THIS TIME *

Club Mailing Address

Rochester Computer Society, Inc
2 Bambi Lane
Rochester, NY 14624

Alexa” to “your smart device,” the App will require the Username and Password for the manufacturer of your smart device. (So, as a general rule, make sure you know the Usernames and Passwords for all of the manufacturers of the smart devices that you use.) Once you have authenticated yourself with your Username and Password, a link will be made between the Alexa server and the smart device manufacturer’s server. And now you can control the smart device, at least to the extent that the skills allow, by voice control. Now enjoy the feeling of power.

This article is from the September 2019, www.sccccomputerclub.org,
Philsorr@yahoo.com.

Would you eat a 'steak' printed by robots?

By Emma Woollacott
Technology of Business reporter for the BBC

You might not know it, but if you wear a hearing aid, you are likely to be part of the 3D printing revolution. Almost all hearing aids nowadays are produced using the technique. Also known as additive manufacturing, 3D printing involves building up layers of material - plastic, metal or resin - and bonding them together, until eventually you have the finished product. "Previously, production had been the sole preserve of modellers who finished each unique piece by hand in a time-consuming and costly process," says Stefan Launer, a senior vice president at Sonova, which makes hearing aids. "Now, once an order is placed, it takes just a few days for the finished product to be delivered, and the customer receives a hearing aid with individual fit," he says.

When 3D printing began to emerge 20 years ago, its boosters promised that it would revolutionise many industries. And in many ways it has been a big success. In 2018, 1.4 million 3D printers were sold worldwide, and that is expected to rise to 8 million in 2027, according to Grand View Research. "In terms of the technology, there are constantly new applications discovered, with new materials and machines unveiled each year," says Galina Spasova, senior research analyst at IDC Europe. The technique has "revolutionised" the dental sector, she says, cutting the time it takes to make crowns and bridges, as well as making them more accurately.

On a bigger scale, Boeing is using 3D-printed parts in its spacecraft, commercial and defence aircraft, while BAE Systems uses the technology to make components for the Typhoon fighter. There is even a 3D printer on the International Space Station, where it is used to create spare parts.

But many applications are still on a smaller, experimental scale. For example, food can be 3D printed. Barcelona-based Nova Meat recently unveiled a plant-based steak derived from peas, rice, seaweed and other ingredients. Using 3D printing allows the ingredients to be laid down as a criss-cross of filaments, which imitate the intracellular proteins in muscle cells. "This strategy allows us to define the resulting texture in terms of chewiness and tensile and compression resistance, and to mimic the taste and nutritional properties of a variety of meat and seafood, as well as their appearance," says Guiseppe Scionti, the founder of Nova

Tidbits of probably useless information

Eating an apple is more effective than drinking coffee to stay awake. Coffee stimulates the senses and provides mental energy, but does not really give the body energy, unlike the apple. The natural sugar contained in the apple, which takes longer to digest, provides physical energy to the body over a longer period of time.

Cesar salad was invented in Mexico, by an Italian in the town of Tijuana.

Here are the top 5 most spoken languages (number in millions)

Mandarin Chinese (China, Singapore, Taiwan) 1080

English (USA, United Kingdom, Canada, Australia, New Zealand, India, Africa) 508

Spanish (Spain, Latin America) 382

Hindi (India, Pakistan) 315

French (France, Canada, Belgium, Luxembourg, Switzerland, Africa, Oceania, West Indies, Southeast Asia) 290

There are 7 different types of twins. Identical, fraternal, half-identical, inverted twins, chromosome twins mixed, superfecundation, and super configuration. The first two are very common, the others are quite rare. Inverted twins usually have 'mirrored' images of their features, such as a birthmark on the right shoulder for one and on the left shoulder for the other, one could be left-handed and the other right-handed.

Meat. By next year, he says, restaurants could be printing out the steaks for themselves.

One of the most exciting fields for 3D printing is medicine. For some time now, medical professionals have been 3D printing prosthetics, which can be made for a fraction of the usual price. They can also be easily personalised for the individual patient - indeed, earlier this year a cat in Russia was given four 3D-printed titanium feet after losing its own to frostbite. Medicines can be 3D printed - something that's particularly useful when treating small children, who need lower drug doses as standard. As co-director at NIHR Alder Hey Clinical Research Facility for Experimental Medicine professor Matthew Peak points out, "The majority of medicines available to children have not been designed with children in mind or, indeed, tested in clinical trials involving children." Last year, his team became the first in the world to give a child a 3D-printed pill; meanwhile, other researchers are creating pills that are personalised for the **individual** patient.

Media captionUS company Desktop Metal aims to make it possible to manufacture 3D-printed parts at industrial scale. Perhaps most extraordinary of all is the work being done to 3D print human organs. Researchers at Rensselaer Polytechnic Institute in the US recently announced that they'd developed a way to 3D print living skin, complete with blood vessels, that could be used as a graft for burn victims. There are still hurdles to overcome - the technique has been used only on mice so far, and work needs to be done to make sure the grafts aren't rejected. But, says associate professor Pankaj Karande, once grafted onto a special type of mouse, the vessels from the printed skin were able to connect with the mouse's own vessels. "That's extremely important, because we know there is actually a transfer of blood and nutrients to the graft which is keeping the graft alive," he says.

Some hope the technology can be used on a much bigger scale. "We believe 3D printing houses and buildings will change the way the world is built," says Kirk Andersen, chief engineer of New York firm SQ4D. Earlier this year, his firm built a 1,900 square foot house in just eight days, by using a robot to build up the walls layer-by-layer. The roof still has to be built by construction workers. The process "drastically" reduces the amount of material and labour costs used in construction, according to Mr Andersen. The firm estimates that its house costs 70% less to build than an equivalent property built using traditional methods. The technology is still under development, but a number of 3D-printed buildings have been [completed around the world](#), giving a sense of what could one day be possible.

While 3D printing is common in car making and aerospace where the technique is valued for making prototypes, tools and parts, most of the items you buy are likely to be mass produced on production lines for some time to come.

This article is the third in a mini-series on disruptive industries. You can find [the first on blockchain](#) here and [the second, on robotics here](#).

Editor's note: I took the liberty of printing this article, without asking for permission. The copyrighted images can be viewed at <https://www.bbc.com/news/business-51263266>.

Jere's Tech Tips

By Jere Minich, Apcug Advisor,
Region 5 (AL, FL, GA, SC)

HOW TO INSTALL THE NEW MICROSOFT EDGE

BROWSER – Microsoft's new *Chromium-based* Edge browser is now available for Windows, macOS, and mobile. Here's how to download and install it. Microsoft, in January, officially launched the final version of its new Edge browser. It's based on the Open Source Chromium code as Google Chrome and is available on Windows 7, 8, 10, and macOS. It's also available for Android and iOS with a version for Linux coming later this year.

The new Edge is going out to Windows 10 users automatically in a staggered rollout via Windows Update. But anyone can download and install it now.

Installing the browser is a straightforward process. However, there are a few advanced features you might want to note when installing it on your system.

Go to this Groovy Post web page and read about installing Edge on the PC and Mobile devices.
<http://bit.ly/2tp6Yrf>

HOW TO CHANGE THE PAPER SIZE IN MICROSOFT WORD

WORD – Documents come in different shapes and sizes, like legal or brochure. In Word, you can change the paper size to fit the type of document you're working on or change the default paper size for all new documents. We'll walk you through it! Go to this How-to Geek article and get the steps plus screenshots.
<http://bit.ly/2FrjxEz>

***** SOFTWARE and HARDWARE *****

How To Keep Using Windows 7 Safely After Support Ends

by Leo Notenboom, <https://askleo.com/>

Making Technology Work For Everyone

Yes, it'll be possible to keep using Windows 7 after it's no longer supported. However, doing so safely will depend on you.



//

I want to keep using Windows 7, but support is ending. Am I screwed?

No, you're not screwed. You may very well be able to keep using Windows 7 safely, just as a small number of people continue to use Windows XP to this day. You simply have to take responsibility for keeping yourself safe — even more than before.

Keeping Windows 7

The analogy I used in [the previous version of this article for Windows XP](#) was this: it's like keeping your old 1957 Chevy that still runs great.

Sure, it's a simpler vehicle, but it has no seatbelts, air bags, navigation system, backing-up camera, anti-lock brakes, nor whatever else we take for granted on modern vehicles. Getting leaded gas or an equivalent is a bit of a problem, and driving the old girl requires a different skill set — for example, do you still remember how (and why?) to pump the brakes?

And, of course, when something fails, you have a problem. You won't easily find a repair shop to help, not to mention replacement parts, and there certainly won't be any fixes or recalls. As long as you're willing to work around all that, you can certainly keep driving it until it fails beyond repair.

Staying safe with Windows 7

To be honest, there's nothing really new or special you need to do to use Windows 7 beyond its support window (which ends, as of this writing, January 14, 2020). You just need to pay more attention to the things you should be doing already.

Keep your security software up to date. Keep all your other applications up to date. Be even more [skeptical](#) when it comes to downloads and emails. Keep doing [all the things](#) that allow us to use our computers and the Internet safely — with a little more attention than before.

Diminishing support

Over time, more and more software vendors will stop supporting Windows 7. If that includes your security software, you'll need to find a replacement right away. Microsoft Security Essentials — my general recommendation — will keep working for some time independent of the Windows 7 cut-off date, but Microsoft won't support it forever. That's true for any security software you run. As long as it keeps supporting Windows 7, you can keep running it. The moment it doesn't, you need to find an alternative.

Scam Alerts

Say No to *72

The scam: A terrible phone call to a Sioux Falls, SD, man tells him of a death in the family, asks him to call another number for details and to begin his cell phone call with the code *72. What this actually does is transfer all calls sent to the cell phone to the number the caller has given — the scammer's own number.

The scammer then gives your number to his buddies anywhere in the world and they can phone him via your cell, with you picking up the charges — and knowing nothing about it — until you get your bill.

The solution: ***Don't use the *72 or any other forwarding code to forward calls to a number you don't know or recognize.*** You can enter *73 to clear call forwarding. (We're not sure if *72 and *73 are the forwarding codes for all cell phones. Check your cell phone manual or talk to your carrier.)

Cashing In On Tragedy

The scam: A sad story and a timely warning from the ever-popular classified ad site Craigslist. A guy raising money for a terminally ill parent tries to sell furniture and gets a reply offering to buy.

The "buyer" later says she's sent a check but it was for too much money — so would the seller mind cashing it and sending back the difference? A wicked variation on the overpayment scam.

Solution: Never accept a check for more than the asking price and then give a refund. The original check usually bounces and you end up holding the bag.

Pragmatically, that's true for any software you run: at some point, Windows 7 support will be dropped, and you'll need to either find an alternative, stop using that software, or upgrade to a supported version of Windows.

Outdated software as a security risk

The risk of using any unsupported software, but particularly an unsupported operating system, is this:

- At some point, a [vulnerability](#) will be discovered *that will not be fixed*
- [Malware](#) will exploit that vulnerability

You'll then be relying on *only* your security tools — and your own common sense — to protect you. Depending on who you talk to, this is either almost certain doom or a complete non-issue. Naturally, I fall somewhere in between.

As we've seen with Windows XP, predictions of catastrophe failed to materialize. As I said, there are folks happily and safely running it today. But there are also those who, faced with critical tools, favorite applications, and even hardware dropping support for the OS, have chosen to upgrade.

The same will likely be true for Windows 7; continuing to use it will eventually become more irritating than it's worth. Exactly how long it'll take for that to happen depends, of course, on you.

Most important of all is that you take the [steps to stay safe](#) and remain [skeptical](#).

#

My Experience with a subscriber VPN

Advantages, costs, pitfalls, workarounds Part 2 of a 2-part article
Author: John Krout, Member
Potomac Area Technology and Computer Society (PATACS)

In part 1, you learned about the need for VPNs and how a VPN secures your Internet communications. Also Part 1 identified several VPN services that are highly rated, including the one to which I subscribe, IPvanish.

This part explores some of the complications and workarounds that I have encountered.

REAL LIFE VPN IMPACT

As of late September 2019, I have a VPN installed on my laptop computer, two tablets, and my smart phone. As was the case at work, the VPN at home does not seem to impose any noticeable slowdown on those devices.

I use my second tablet primarily for its Roku app, which is a remote control for my Roku Premiere video streaming box. When I installed and

Some Interesting Websites and Internet Finds

by Steve Costello
scostello@sefcug.com

How To Clear Browser Cache In All Web Browsers

<https://www.fossmint.com/clear-your-browser-cache/>

There are times when the browser cache needs to be cleared. This post gives clear instructions on how to do it in Google Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera.

Exercises For Computer Users And Office Workers – Nerd Fitness

<https://www.thewindowsclub.com/exercises-for-computer-users>

As a computer user, I sometimes forget to get enough exercise. If the same is true for you, check out this post for some quick and easy suggestions to keep fitter.

Do You Need A 4K HDMI Cable?

<https://www.techhive.com/article/3330376/do-i-need-a-4k-hdmi-cable.html>

Just get a 4K TV for the holidays? Check out this post before going out to spend lots of money on a special 4K HDMI cable.

5 Ways to Get In-Car Wi-Fi for Internet Access on the Go

<https://www.makeuseof.com/tag/internet-car-wifi/>

Some cars come with in-car wi-fi. If yours doesn't and you want everyone to be able to access the Internet, check out this post for some ideas.

used the IPvanish VPN app on that backup tablet, the Roku app was no longer able to communicate with the Roku box on my home network.

Why did that happen? The tablet could not search the LAN for the IP address of the Roku box. This may be because the tablet communications were encrypted and our home LAN router was not. This led me to learn about another aspect of subscriber VPNs.

SPLIT TUNNELING

In operation, a VPN connection is sometimes referred to as a *tunnel*. That simply means the communication is hidden by encryption, as if concealed inside a tunnel, and cannot be read or understood by a Man in the Middle.

Split tunneling is a feature of the IPvanish app for Android. Many other VPN services offer split tunneling in their apps. The idea of split tunneling is that you can configure the VPN client app so that, for example, communications by a particular app on my tablet or phone should *not* be encrypted, not sent through the "tunnel" to the VPN server. Apps exempted in that way are *split* away from the encryption tunnel.

Split tunneling is configured on an app by app basis. Lucky me, the Android VPN app for iPvanish enables split tunneling, so I told the VPN app to exempt the Roku app. That way, I can use the app to control the Roku box even while the tablet is otherwise connected to the iPvanish VPN. Later on, I set up split tunneling for the Roku app on my smart phone. At that moment, when I applied the config change to implement the split tunneling, my smart phone VPN app was already connected to the VPN. I learned that for the IPvanish VPN client, it is best to set up split tunneling while the VPN app is *not* yet connected to the VPN. I tried when the VPN client app is connected to the VPN; the VPN client app then told me it had to disconnect and reconnect the VPN in order to implement the config change for split tunneling.

I started thinking about other types of in-home communications on a home Local Area Network. The **Internet of Things (IoT)**, meaning lights and appliances connected to your router, is one example. For a control app to communicate with those devices from a phone or tablet running a VPN client app, the control app would have to be split tunneled.

LAN PRINTERS AND VPNS

There is one very widespread present-day LAN use that will require split tunneling: I have my printer connected to my home router, so that computers around the house can print. The initial issue I have is that the Windows VPN client application from IPvanish does *not* permit split tunneling as of September 2019. The IPvanish help desk says the company is working on adding that feature. So I have to wait for IPvanish to update their Windows VPN client app.

Editor's note: it is now March, check it again.

If you choose a different VPN service, and you have a printer connected to the LAN at home, make absolutely sure that their VPN client app for your personal computer supports split tunneling, whether it is a Windows box, a Mac box, a Linux box, or a ChromeOS box.

Penguin Platform

By “Free John” Kennedy, Apcug
Advisor, Regions 3 and 6/7

3 REASONS WHY POP!_OS IS THE BEST UBUNTU-BASED LINUX DISTRIBUTION – Jason

Evangelho, Forbes Senior Contributor, recently produced a video guide showing how to get set up for gaming on elementary OS, an excellent, polished Linux distribution which he’s praised repeatedly. He received a perplexing comment explaining that he should just create one universal guide for all Ubuntu-based distributions, since “generally, the software installation steps are the same.” That couldn’t be further from the truth, and it inspired him to paint a detailed picture why.

Read more at
<http://bit.ly/2Ro2KsQ>

**EVERYTHING YOU EVER
WANTED TO KNOW ABOUT
INODES ON LINUX** – The Linux file system relies on Inodes. These vital pieces of the file system’s inner workings are often misunderstood. Let’s look at exactly what they are, and what they do.

Who deletes files? The elements of a file system, Inodes and file system size and more at this How-To Geek article
<http://bit.ly/37rQ9ul>

**HOW TO USE A DIFFERENT
GTK 3 THEME FOR SPECIFIC
APPLICATIONS** – This article, from Linux Uprising, explains how to apply a different GTK 3 theme to specific applications (a theme other than the global/desktop GTK theme). Read how to, here:
<http://bit.ly/2N1cYgO>

The second issue is that there are a *huge* number of personal computer applications that can print. Examples include all Microsoft Office applications, all LibreOffice applications, all web browsers, Adobe Acrobat Reader, Notepad, Wordpad, graphics image editors like Adobe Photoshop, general printing applications like PrintMaster (invitations, birthday cards, banners, et cetera), desktop publishing applications, and so forth. It is fairly difficult to identify valuable desktop applications that do *not* include the ability to print. Because split tunneling is so useful, I am researching other subscriber VPN services and their VPN clients’ abilities to support split tunneling. I will report on that in a later article.

DO NOT SPLIT TUNNEL THAT WEB BROWSER!

Now, of all the myriad of applications that can print, the one that is most often the target of snooping and therefore most in need of a VPN is a Web browser. Don’t set the VPN app to split tunnel that browser. If you habitually print one or more web pages using your Web browser, there are a couple of ways to work around that problem while connected to a VPN. The easy case is to connect the computer to the printer using a different method. Most, but not all, printers can be connected to computers by a USB cable.

The two following suggestions are provided in case you cannot do that.

For the special case of downloading and printing PDF files, you can download each PDF using your Web browser. In the VPN client application, apply split tunneling to **Adobe Acrobat Reader**, which is far less risky than applying it to your web browser. Then use Acrobat Reader to load and print the PDFs. For the more general case, when you need to print Web pages, you can print each Web page through a PDF print driver such as Microsoft Print to PDF or PDFCreator or PDF995. Those drivers create a PDF file instead of sending output to a printer. Then you use the same technique: apply split tunneling to Adobe Acrobat Reader, then use Acrobat Reader to load and print the PDFs to your LAN printer.

Sounds too complicated. But wait, all is not lost.

A MORE COMPREHENSIVE SOLUTION

Some VPN services also allow you to install a VPN client on a *home router*. What are the advantages of that approach? First, the router connects all of your devices to the internet via a VPN server, so long as those devices are at home and connected to the home LAN, either by ethernet or by Wi-Fi. Second, the router VPN client will do the work of VPN client encryption and decryption for all of your devices.

Using this approach, your devices at home need not run a VPN client. Effectively, your device count at home, from the viewpoint of your VPN service, is **one**: the router itself, which handles all VPN encryption and decryption for all your devices. Therefore, the home router must contain a fast CPU and a good amount of RAM and will be expensive. When all

*** * Computer Jokes * ***

Stolen from Everywhere

You Are Never Too Old to Learn

My grandfather has recently started a course called 'Computers for the Terrified.' He's nearly eighty and, although used to be an engineer within the British Royal Airforce, he is completely stuck when it comes to computers.

He came back from his first evening at this course. When asked how it had gone, he replied, 'Yes, it was really good. I really enjoyed it, but I really couldn't get to grips with my mole.'

I stopped for a second, completely puzzled, until I realised he was talking about the mouse.

5 More Reasons Why Computers Must Be Female

1. They are impossible to figure out.
2. They break down for no apparent reason.
3. They communicate only with each other, and in their own particular language.
4. They have motherboards inside them.
5. Sometimes it's difficult to find their on/off button.

devices use a home router VPN client, your devices at home can communicate with a LAN printer.

When all devices use a home router VPN client, your devices at home can act as the remote control for a Roku box and run an app to control home lights and appliances. I must say that the installation process for a VPN client on a router is complex and not for newbies. It often involves installing a third-party app called DD-WRT on the router as a prerequisite. I watched a YouTube video of how to do the installation for the NordVPN router client, and the process looked daunting to me.

This strikes me as an opportunity for a **user group lab**: work on the installations together during a user group meeting. It would require you to bring your home router to the lab meeting. Some VPN services even sell routers with the VPN client pre-installed. I think this is probably the best alternative for most folks who want to use a VPN client on a home router.

IPvanish publishes a list of router makes and models on which their router VPN client is known to be installable and is known to work. The list as of September 2019 includes high-end, expensive Linksys routers, Asus routers, and Netgear routers. I checked out the prices of those routers: the lowest I saw was about \$150. With the VPN client pre-installed, the price would increase.

When you are away from your home router, yes, you will still run the VPN client on your phone, tablet or computer. But typically you won't bring your Roku box or printer or your lights and appliances along with you.

ARE THERE WEB SITES THAT ARE NOT ACCESSIBLE WHEN YOU USE A VPN?

At some point in 2019, I read an article published in a user group newsletter which briefly described VPNs. The author made a broad claim, without details, that VPNs *prevent use of video streaming services and financial web sites*. The VPN service was not specified, the streaming service was not specified, the financial sites were not specified, and the browser and operating system used by the author were not specified. Perhaps the author was using a home router running a VPN client. Again, no details were provided.

As I was wrapping up this article series, I went looking for that article. I could not find it. That claim was *questionable*, in my opinion. The traveling public use those sites on the Web all the time while on the go, even overseas. Netflix in particular encourages use by travelers.

More generally, subscriber VPN services address *how* users access the Web, and do not act as content censors. Well, I admit VPNs of some corporations and government agencies block certain types of web content that they deem unrelated to work. And I suspect in some small countries the local banks lobby the government to prohibit access to foreign banks through the Web, a simple protectionism for the local banks. But that is another big reason why VPNs exist: to enable connections to foreign web sites with powerful security so that government snooping does not know what you are accessing on the Web. The only IP addresses the snoops can see are those of your device and the VPN server.

Odds and Ends

<https://davescomputertips.com/>

Acoustica Audio Converter Pro –

Convert your MP3, WAV, OGG, WMA & CDA files with a right click! Includes an integrated CD ripper for easy CD ripping! Professionals will find this tool indispensable. Home hobbyists will find Audio Converter Pro a very handy addition to their arsenal of audio tools. A great little program I use frequently to change formats and bitrates of my digital music. Converts mp3, WAV, OGG, WMA to any other format. You choose the bitrates. It's the best format converter I've used.

iWisoft Free Video Converter –

Free and easy to use with a simple polished interface. Excellent range of output profile presets plus plenty of settings to tweak bit rate, frame rate, video size, sample rate, etc.

VLC Media Player – A great free video and audio player. Supports most video formats without needing to download additional codecs. Brilliant range of features. Portable available.

Macrium Reflect – Create, save and restore entire disk images for free with Macrium Reflect. Features include: excellent compression, mountable images, save to network, USB, firewire drives and DVD. Linux based Rescue CD with Network access and full GUI.

Light Alloy – DCT's Media Player pick. Superb quality playback, abundant features, and a portable version is available.

So, as soon as I got my IPvanish account set up and I got the VPN client app installed on my laptop computer, I started testing access to financial web sites for the accounts I use, my stock brokerage, my credit card banks, and my checking account bank. I also tested watching a video on the Netflix web site.

Here's how I did that test. First, I connected to an IPvanish VPN server in the Boston Massachusetts area. I accessed all those sites and kept track of what happened. Second, I connected to an IPvanish VPN server in the London England area. Again, I accessed all those sites and kept track of what happened. My tests used a Toshiba Satellite laptop running Windows 10, and the Firefox web browser. The results appear on the **Illustration** shown on the last page of the 'web version' of this newsletter.

In short. I found that Netflix worked, my three-credit card bank web sites worked, my stock brokerage web site worked, and my checking account bank web site worked. That was true even when accessing those through the London England VPN server. I did learn also that Netflix and my stock brokerage site both require that I enable cookies. I did that. I also have my Firefox browser set so that, when I shut down Firefox, it deletes all cookies that were created by web sites during its current use.

Cookies are one way that snooping is implemented. But there are also good cookies. Cookies are used to "remember" your login ID on various web sites such as email, Amazon.com, and geocaching.com, so that you need not log in again when you revisit the sites. Cookies are also central to the way retail shopping and bank transactions are handled in your Web browser. So the lesson is: set up your browser to allow sites to install cookies, so you can shop and use the bank and stock brokerage sites.

To avoid keeping bad cookies, I set the browsers to delete *all* cookies installed during the current Web browser use, when I shut down the browser, after shopping or banking is done. That way I throw out the bad cookies, but I am forced to discard the good cookies too. And shut down your browser promptly. Don't let it run for days at a time. The regrettable side effect is that I must log into Yahoo! email, Verizon email, geocaching.com and Amazon.com every time I use the browser to access those sites. I can even checkmark the web site login box saying remember me. The remembrance works until I shut down the web browser and the cookies get purged. I am willing to live with that side effect.

Is my test a *comprehensive* test? No. I do not have an account for every bank and every stock brokerage in the US. Nor do I have an account with every VPN service. So a comprehensive test is just about impossible. But I think my test results provide good news. Not every VPN service causes such problems. Not every browser causes such problems. Not every web site experiences such problems.

From the www.patacs.org, jkrout75@yahoo.com.

Editor's Note: To continue reading the following articles, you may copy the long URL at the end of the article and enter it into a web browser **or** go to www.rcsi.org/newsletr.htm and click on the URL in the web version of the newsletter.

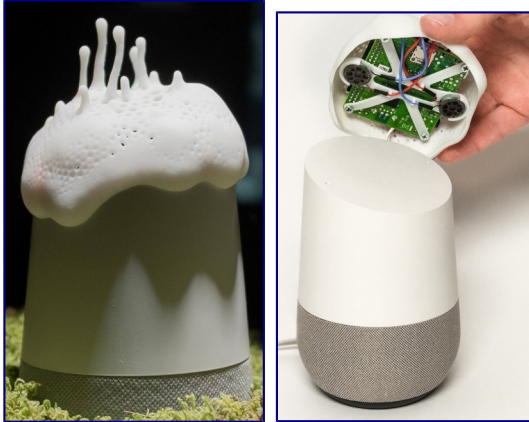
Alias Privacy "Parasite" 2.0 Adds a Layer of Security to Your Home Assistant

By [Tore Knudsen](#) and [Bjorn Karmann](#)

Time Required: 1-3 Hours

Difficulty: Moderate

Price: \$51-\$150



WHAT IS ALIAS?

Alias is a teachable "parasite" that gives you more control over your smart assistant's customization and privacy. Through a simple app, you can train Alias to react to a self-chosen wake-word; once trained, Alias takes control over your home assistant by activating it for you. When you're not using it, Alias makes sure the assistant is paralyzed and unable to listen to your conversations.

When placed on top of your home assistant, Alias uses two small speakers to interrupt the assistant's listening with a constant low noise that feeds directly into the microphone of the assistant. When Alias recognizes your user-created wake-word (e.g., "Hey Alias" or "Jarvis" or whatever), it stops the noise and quietly activates the assistant by speaking the original wake-word (e.g., "Alexa" or "Hey Google").

Printed from <https://makezine.com/projects/alias-privacy-parasite-2-0/>.

Editor's note: I probably shouldn't, but I will put this article on my cloud storage.

To self-drive in the snow, look under the road

Weather's a problem for autonomous cars. MIT's new system shows promise by using "ground-penetrating radar" instead of cameras or lasers. [Watch Video](#)

Adam Conner-Simons | MIT CSAIL

February 26, 2020

Car companies have been feverishly working to improve the technologies behind self-driving cars. But so far, even the most high-tech vehicles still fail when it comes to safely navigating in rain and snow. This is because these weather conditions wreak havoc on the most common approaches for sensing, which usually involve either lidar sensors or cameras. In the snow, for example, cameras can no longer recognize lane markings and traffic signs, while the lasers of lidar sensors malfunction when there's, say, stuff flying down from the sky.

MIT researchers have recently been wondering whether an entirely different approach might work. Specifically, what if we instead looked under the road?

A team from MIT's [Computer Science and Artificial Intelligence Laboratory](#) (CSAIL) has developed a new system that uses an existing technology called ground-penetrating radar (GPR) to send electromagnetic pulses underground that measure the area's specific combination of soil, rocks, and roots. Specifically, the CSAIL team used a particular form of GPR instrumentation developed at [MIT Lincoln Laboratory](#) called [localizing ground-penetrating radar](#), or LGPR. The mapping process creates a unique fingerprint of sorts that the car can later use to localize itself when it returns to that particular plot of land.

Lasers etch a 'perfect' solar energy absorber

University of Rochester, February 4, 2020

Rochester professor Chunlei Guo and his team have developed a technique that can be used to collect sunlight to heat etched metal surfaces, which can then power an electrical generator for solar power.

The [University of Rochester](https://www.rochester.edu/newscenter/lasers-etch-a-perfect-solar-energy-absorber-414902/) research lab that recently used lasers to create [unsinkable metallic structures](#) has now demonstrated how the same technology could be used to create highly efficient solar power generators.

<https://www.rochester.edu/newscenter/lasers-etch-a-perfect-solar-energy-absorber-414902/>

E-Waste Collection Event, Saturday, May 9, 9:00 am – 12:00 pm, *Rain or Shine*, Henrietta, NY.

Rush-Henrietta Central School District, Rush-Henrietta Transportation Center,
1133 Lehigh Station Road ... just drive through and we'll unload your electronics!

Limit of four CRT (tube) monitors or televisions per vehicle.

Sunnking, celebrating 20 years.

Chromebooks in area schools: additional info sent to our club from Hewie Poplock (last month's presenter)

Thanks. Here is some Rochester area reading for your group:

RCSD Begins Free Internet, Chromebook Roll Out for High School Students

<https://spectrumlocalnews.com/nys/rochester/news/2019/09/04/rcsd-begins-free-internet--chromebook-roll-out-for-high-school-students>

RCSD Begins Distribution of Chromebooks, Allows Eligible 9th - 12th Grade Students Free Home Internet Access [https://www.rcsdk12.org/site/default.aspx?](https://www.rcsdk12.org/site/default.aspx?PageType=3&DomainID=1&ModuleInstanceID=63347&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=68706&PageID=1)

[PageType=3&DomainID=1&ModuleInstanceID=63347&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=68706&PageID=1](https://www.rcsdk12.org/site/default.aspx?PageType=3&DomainID=1&ModuleInstanceID=63347&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=68706&PageID=1)

Middle School One to One Chromebook Initiative

https://www.racschool.com/apps/pages/index.jsp?uREC_ID=1331601&type=d&pREC_ID=1561369

Rochester City School District teaches students lifelong technology skills using Google for Education tools

<https://static.googleusercontent.com/media/edu.google.com/en//pdfs/case-studies/rochester-city-school-case-study.pdf>

Greece Schools CHROMEBOOK SIGN OUT PROCEDURES

<https://www.greececsd.org/Domain/2184>

Canandaigua City School District FAQ

<https://www.canandaiguaschools.org/students>

Crane Elementary School - Welcome to Miss Barker's Chromebook page

<https://www.rhnet.org/Page/2384>

Our Lady of Mercy School for Young Women - Chromebook given to every middle schooler

<https://www.mercyhs.com/academics/middle-school/>

Our Meeting Place

St John's Meadows at

Johnsarbor Drive, is on the left, past Clinton Avenue, when going West on Elmwood Avenue. The opening in the white fence is Johnsarbor Drive. At the 'T', turn right. The meeting is in the first building on the left – **Briarwood.**

Our meeting place can change. Please check our website before each meeting. **www.rcsi.org**