

# THE NetworkGuy

MAY 2021 \ VOLUME 2 \ ISSUE 5

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## Productivity App: Productivity Challenge Timer

If you could use a bit of help with time management, struggle with procrastination, need focus, or would like to record your hours, the **Productivity Challenge Timer App** can help. It's available on Android and iOS and segments your work into short intervals. It is especially helpful for those who work from home and face distractions from the Internet lurking just one unopened tab away, as it guides you in being more productive and waste less time. Since it tracks productivity over time, you'll know how long you worked on what and during which days and hours you were more productive. To try it, just visit the app store for your operating system and search for it by name.



## The Network Guy Quiz Challenge

PenTeleData is giving one lucky winner a \$150 Amazon Gift Card. Just visit [www.ptd.net/quiz-challenge](http://www.ptd.net/quiz-challenge) by **May 31, 2021** to answer the question below. We will select a winner at random from all correct entries. **Good Luck!**

**What is the newest security protocol version to consider when purchasing a new wireless router?**



## Learn from The Network Guy

**When I visit a website, it mentions something about cookies? What do cookies have to do with the Internet?**

### The Network Guy:

HTTP cookies, not just the sweet baked treats many of us enjoy, come with some pros and cons. HTTP cookies are essential to the Internet experience. These cookies, sometimes called tokens, are small text files stored to your browser directory or data file, allowing pages to give you a more personal, convenient website visit.

Secure websites use cookies to validate a user's identity as they browse from page to page; without cookies, login credentials would have to be entered before every product is added to cart or wish list. Session cookies stay on a browser and retain your information until it closes. When a new browser window is opened, the same user is treated as a new visitor and must input their login credentials.

Persistent cookies have a designated lifespan and remain in a browser until the period elapses, or the cookie is manually deleted. Websites that use persistent cookies will remember users even after they close a browser. Persistent cookies enable features such as shopping carts, which retain products added to cart between sessions. Some websites also use cookies to customize the website experience. A new user may see one version of the landing page, while a longtime user may see an entirely different layout.

Typically, since you trust a website enough to browse it, it may not be a privacy problem to use the first-party cookies on that site. The concern is that some websites will embed advertising code, analytics code, or social media extensions from other companies. Those third-party cookies are used to track your activity and build a digital profile of you. That's why you may wish to disable these functions when presented with the privacy policy and tracking options on a site.



## Understanding Encryption and Why It Matters

Encryption is the process of scrambling online information and making it unintelligible to anyone without a “key” to decipher and read it. Essentially, an algorithm encrypts the data, and the encryption key enables the receiving party to decrypt it. Prior to encryption, the data is referred to as plaintext, while the scrambled information is referred to as ciphertext.

In January, Elon Musk Tweeted two simple words, “Use Signal.” That brief statement sent shares of Signal Advance up 1,500% in one day. He wasn’t referring to Signal Advance, he was referring to Signal, a private messaging application. Downloads of it increased 4,200% after WhatsApp announced changes to its privacy policy that were misinterpreted to mean that more than personal data would be shared with Facebook, its parent company. While the changes affected only business users, the outrage pushed millions of users to Signal and Telegram, another privacy-focused app. WhatsApp messages remain protected by end-to-end encryption, meaning that only the sender and recipient can decrypt the messages, the metadata remains unencrypted and is shared with Facebook, their parent company. Metadata includes information such as timestamps, sender and recipient names, contact images, and other information apart from the content. Signal, on the other hand, collects no information about its users and relies on donations for funding as opposed to advertisements or data mining. Telegram is similarly backed by grants and donations and uses end-to-end encryption. MeWe bills itself as the social network of the future, promising “no ads and no targeting.” Recently, these platforms have all become more popular and widely discussed. Should law enforcement and government have the “encryption key” to access the communications being shared? Is that an invasion of freedom of speech? Regardless of political views, encryption can bring up a delicate balance between personal privacy, the power of large tech companies, circumventing censorship, and public and personal safety. These factors make encryption a topic that will likely remain at the forefront of discussion for some time to come.

*“A hero can be anyone, even someone doing something as simple and reassuring as putting a coat around a little boy’s shoulders to let him know the world hasn’t ended.”*

– Batman, The Dark Knight Rises

## Choosing a Wireless Router

As our smart homes become smarter and smarter, the Wi-Fi Router is more important than ever. Here are a few things to consider before buying a new router:

**Security** - The wireless security protocols WEP, WPA, WPA2, and WPA3 prevent unwanted connections from joining your Wi-Fi network and encrypt data that is transmitted via wireless networks. All of these protocols are a little different. Security protocols for routers improve over time, which means the old ones get outdated. Among other things, the latest standard, known as WPA3, encrypts your Wi-Fi connection, making it harder for cyber criminals to guess your Wi-Fi password. WEP (Wired Equivalent Privacy) is the oldest and weakest wireless security protocol. You don’t want to rely on it because it has known vulnerabilities. WPA (Wi-Fi Protected Access) is also outdated but often used with WPA2. WPA2 (Wi-Fi Protected Access version 2) uses Advanced Encryption Standard (AES), which is also used for government information security. WPA3 (Wi-Fi Protected Access version 3) is the latest wireless security standard, and it is not yet as widely used. However, choosing a router with WPA3 will keep you protected in the long run.

**Speed** - Choose a router that can support up to Gigabit speeds. Be aware that it is not possible to gain the full benefit from the router having the latest standard unless your devices also use it, but at least having the latest provides the best future-proofing.

**Distance** - Since you’ll want the router to deliver Wi-Fi to all corners of your home, a mesh system can offer multiple access points to make sure your service is fast enough no matter where you need it to reach.

**App based management and automatic updates** - Some routers have difficult-to-access user interfaces, while others can be managed easily via smartphone

apps. Most new routers have apps, so it’s difficult to recommend going with one that doesn’t. This is especially important since easy security and management controls make it much more likely that you’ll stay on top of keeping your router’s firmware up to date. It also helps make other functions easier, including setting up guest networks, changing network passwords, and monitoring parental controls.

**Guest networks** - Guest networks are perfect for visitors. You don’t have to hand over the password to your main Wi-Fi network and can control the number of devices and amount of bandwidth the guest network can support.

**Ports** - When selecting a router to buy, ensure it meets the connectivity requirements in terms of broadband and Ethernet only, with USB or whatever combination is needed. Routers with USB ports are now more commonly used for inexpensive storage. It is possible to plug a hard disk drive or flash storage drive into the back of the router and share that data with any device on the network.

**Last, but certainly not least, check that any router you consider is compatible with one of our Partner broadband cable service providers.**

## What are Smart Light Bulbs?

By now, you have probably heard of the Internet of Things (IoT). IoT is basically the connecting any device with an on and off switch to the Internet and/or to each other. It is a giant network of connected things and people. This includes everything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else imaginable, like sprinklers, lights, motion sensors, thermostats, electronic locks, and appliances can be controlled remotely.

One of the easiest and most affordable ways to dive into smart home technology with a voice activated device such as Amazon Alexa, Apple Siri, or Google Home is to add smart light bulbs. There are several manufacturers, but properly pairing the right bulb with your existing device can add the convenience of using customer voice commands to turn the light on and off, select from various dim levels, set a timer for lights to come on or shut off, and more, without the need to call an electrician! (Remember the commercial that advertised clapping to control your lights? Well, now it’s as simple as a voice command!)