

Living with Technology – Keeping your Home Secure

By Dave Quartarolo

Who am I?



- Information Systems Security Engineer
- 2019 Sans Institute's Cyber Fast Track Finalist
- Wilmington University Graduate
- Member of Epsilon Pi Tau (Delta Lambda Chapter)
- US Navy Submarine Veteran
- Guy that spends too much time at home
- Husband and Father

SECTIGO[®]



Disclaimer

This presentation was prepared by David Quartarolo in his personal capacity. The opinions expressed within it are the speaker's own and do not necessarily reflect the perspectives of his employer Sectigo. The speaker is here on his own accord.

Topic

What This Is

- **An Overview of the current threat landscape**
- **Common sense changes you can make in your home**

What This Isn't

- **Unnecessary Doom and Gloom**
- **Unrealistic Claims that your home network will ever be safe**
- **Tons of work that you don't have time for**



Security vs Privacy

Security

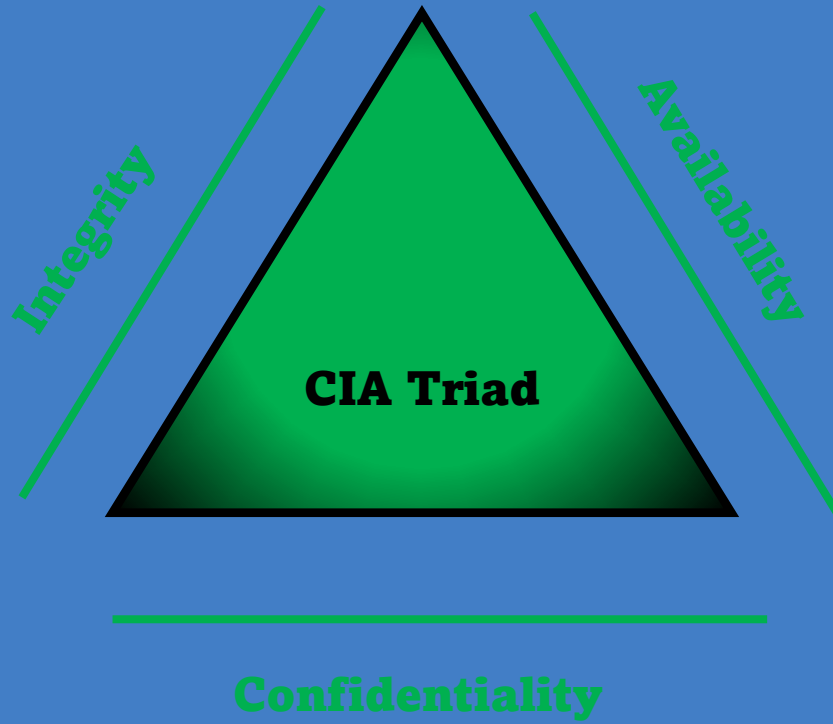
- **Keeping our data safe**
- **Ensuring that all our devices are working**
- **Guarantee that the digital workforce on the home front can accomplish work**



Privacy

- **Prevent details about people in the house from being captured**
- **Prevent meta data (data about data) from being captured**

What has changed??



**Ransomware is
EVERYWHERE**

**Home
Networks are
not longer
optional**

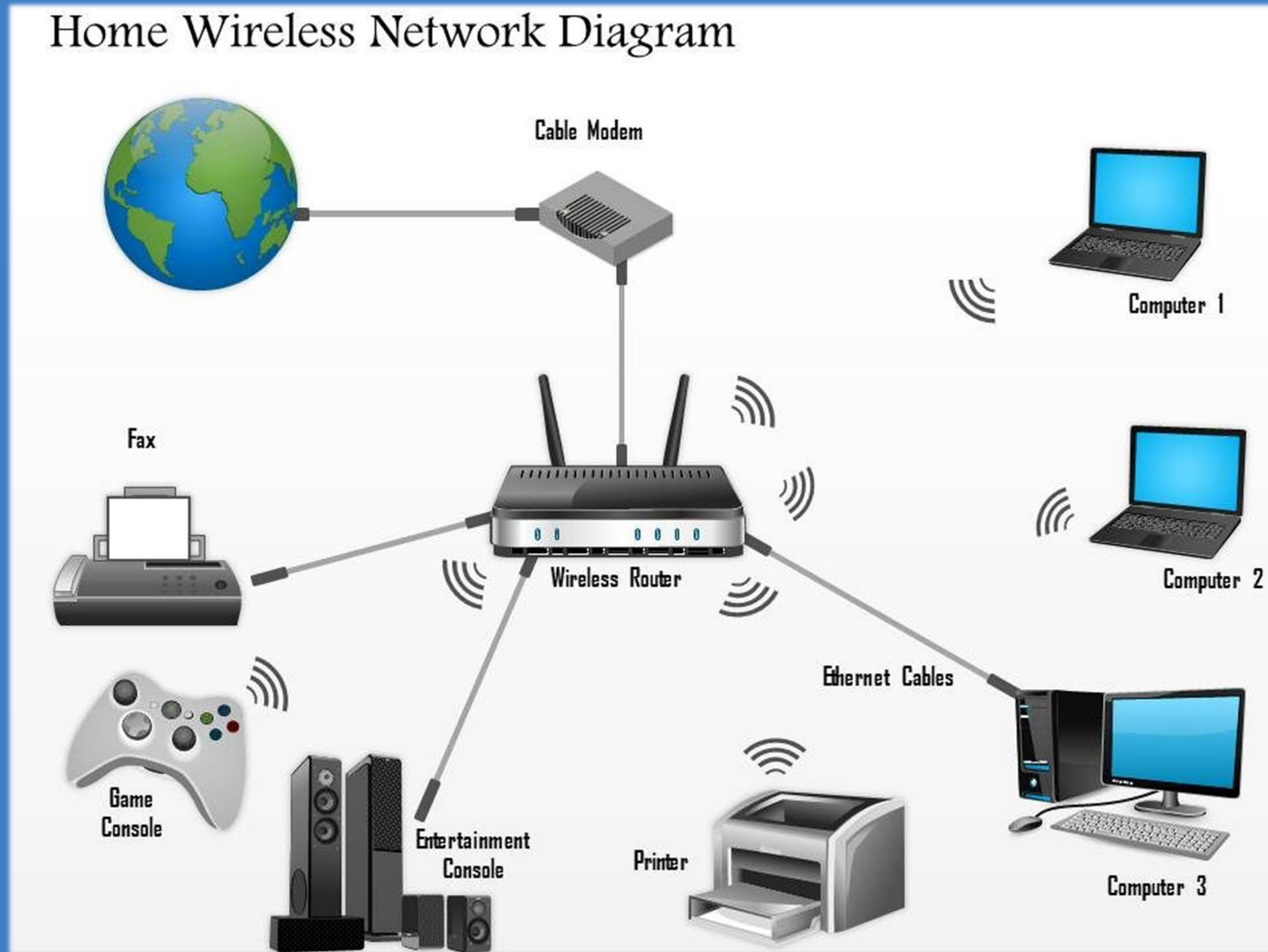
The Stakes

- **Home Photos / Movies**
- **Your Documents and Projects**
- **Family and Financial Records**
- **The Use of Your Devices**
- **Your Time**
- **Your Identity**
- **Legal Issues**



Home Networks

Home Wireless Network Diagram



Home Router Config

- 1) Disable UPnP
- 2) Disable File Sharing
- 3) Change Admin Passwords
- 4) Check for open ports
- 5) Disable Unnecessary Features



```
PS C:\Users\davidq> nmap sans.edu
Starting Nmap 7.91 ( https://nmap.org ) at 2021-09-16 23:16 Eastern Daylight Time
Nmap scan report for sans.edu (45.60.31.34)
Host is up (0.043s latency).
Other addresses for sans.edu (not scanned): 45.60.103.34
Not shown: 716 filtered ports
PORT      STATE SERVICE
25/tcp    open  smtp
53/tcp    open  domain
80/tcp    open  http
81/tcp    open  hosts2-ns
82/tcp    open  xfer
83/tcp    open  mit-ml-dev
84/tcp    open  ctf
85/tcp    open  mit-ml-dev
88/tcp    open  kerberos-sec
89/tcp    open  su-mit-tg
90/tcp    open  dnsix
99/tcp    open  metagram
100/tcp   open  newacct
389/tcp   open  ldap
443/tcp   open  https
444/tcp   open  snpp
445/tcp   open  microsoft-ds
500/tcp   open  isakmp
554/tcp   open  rtsp
555/tcp   open  dsf
587/tcp   open  submission
631/tcp   open  ipp
636/tcp   open  ldapssl
777/tcp   open  multiling-http
800/tcp   open  mdbs_daemon
801/tcp   open  device
843/tcp   open  unknown
880/tcp   open  unknown
888/tcp   open  accessbuilder
990/tcp   open  ftos
```

Home WiFi Configuration



DO

- 1) **Change SSIDs and Passwords**
- 2) **Turn Off WPS**
- 3) **WPA2 or WPA3**
- 4) **Use a Guest Network**

DO NOT

- 1) **Stop Broadcasting or “hide” your SSID**
- 2) **Use a Wireless Repeater**

PCs



1) Install Updates

2) Remove unused Applications

3) Power Down at the End of the Day

4) Stay on Reputable sites

5) Lock your screen

6) Enable Window's Defender

Back Up Everything



The Problem with IoT



'End of Sales' vs 'End of Support'

End of Sales

The last day the manufacturer will sell the product.

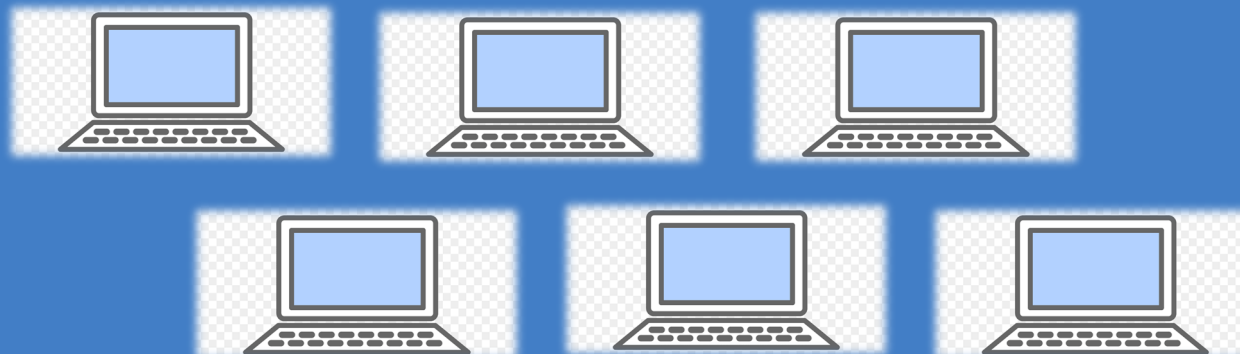


End of Support

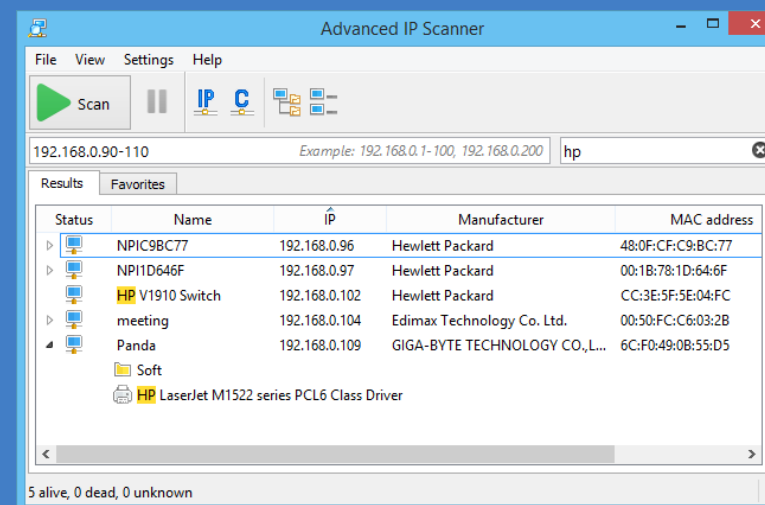
The date when the manufacturer will release security updates.



What is on your network?



NMAP



Advanced IP Scanner

File View Settings Help

Scan [Pause] [IP] [C] [Network Icon]

192.168.0.90-110 Example: 192.168.0.1-100, 192.168.0.200 hp

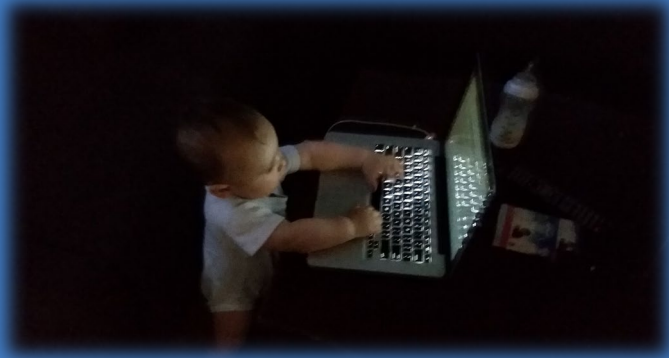
Results Favorites

Status	Name	IP	Manufacturer	MAC address
▶	NPIC9BC77	192.168.0.96	Hewlett Packard	48:0F:CF:C9:BC:77
▶	NP11D646F	192.168.0.97	Hewlett Packard	00:1B:78:1D:64:6F
▶	HP V1910 Switch	192.168.0.102	Hewlett Packard	CC:3E:5F:5E:04:FC
▶	meeting	192.168.0.104	Edimax Technology Co. Ltd.	00:50:FC:C6:03:2B
▶	Panda	192.168.0.109	GIGA-BYTE TECHNOLOGY CO., L...	6C:F0:49:0B:55:D5
	Soft			
	HP LaserJet M1522 series PCL6 Class Driver			

5 alive, 0 dead, 0 unknown



Kids are the WORST (at security)



Home Network Tuneup

- 1) **Install Updates**
- 2) **Update Passwords**
- 3) **Spot-check Inventory**
- 4) **Talk to your Family**

Every 2 Months



CALL TO ACTION

- Spread the word.
- Help people in your life make better home network choices.



Thanks so much for attending!

Questions ?



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