

Sun City Computer Club

Securing a Home Network

September 6, 2018



Is your credit card number in a hacker's database?

You can easily find out now! All you need to do is enter its information here and we will scan thousands of hacker databases to see if any they have match yours.

Credit Card Number:

Expiration Date:

Your Zip Code:



SCAN DATABASE

- Safer not Safe
- E-postcard not e-mail
- ADMINISTRATOR
- Passphrases not passwords
- Radio not wireless

Vocabulary

- Chicken Little
- Tortoise and hare
- Each of us safer, all of us safer
- Age does NOT diminish cognitive ability
- Life, Liberty, Pursuit of Happiness
 - Cyber Security SIG
 - Cyber Security Blog
 - Internet

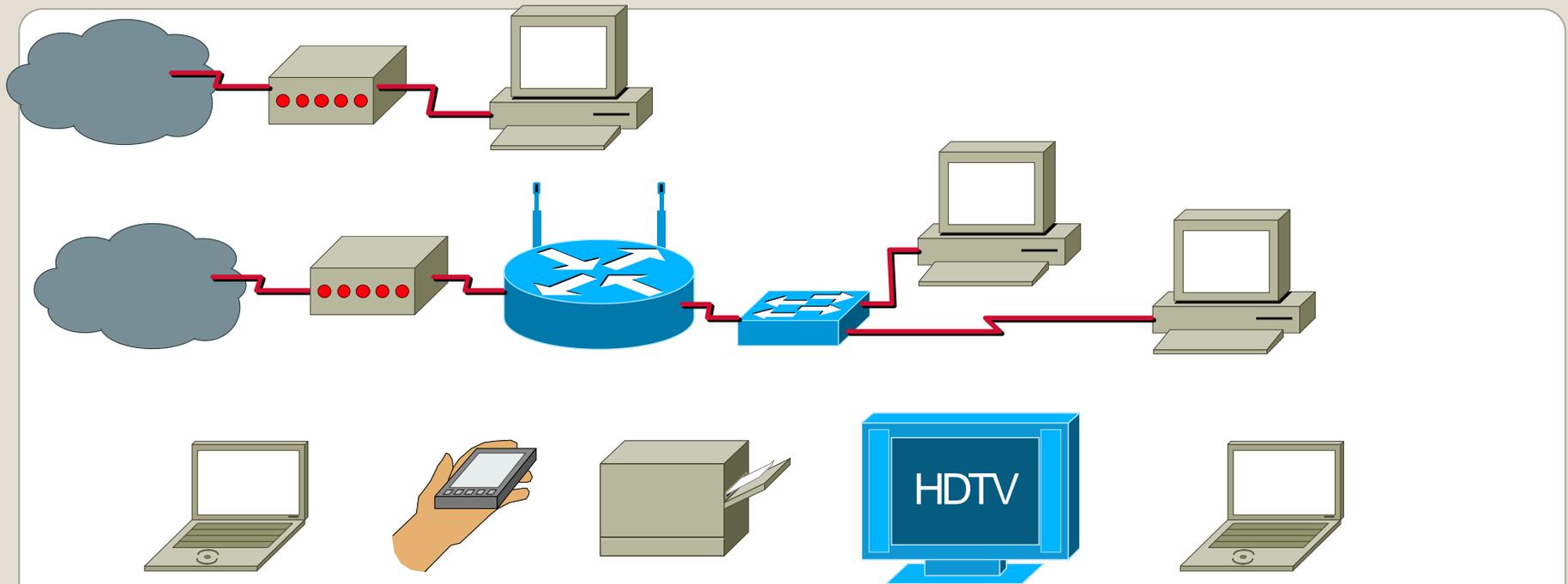
- Do nothing no problem
 <most of us>
- Do everything - catastrophic

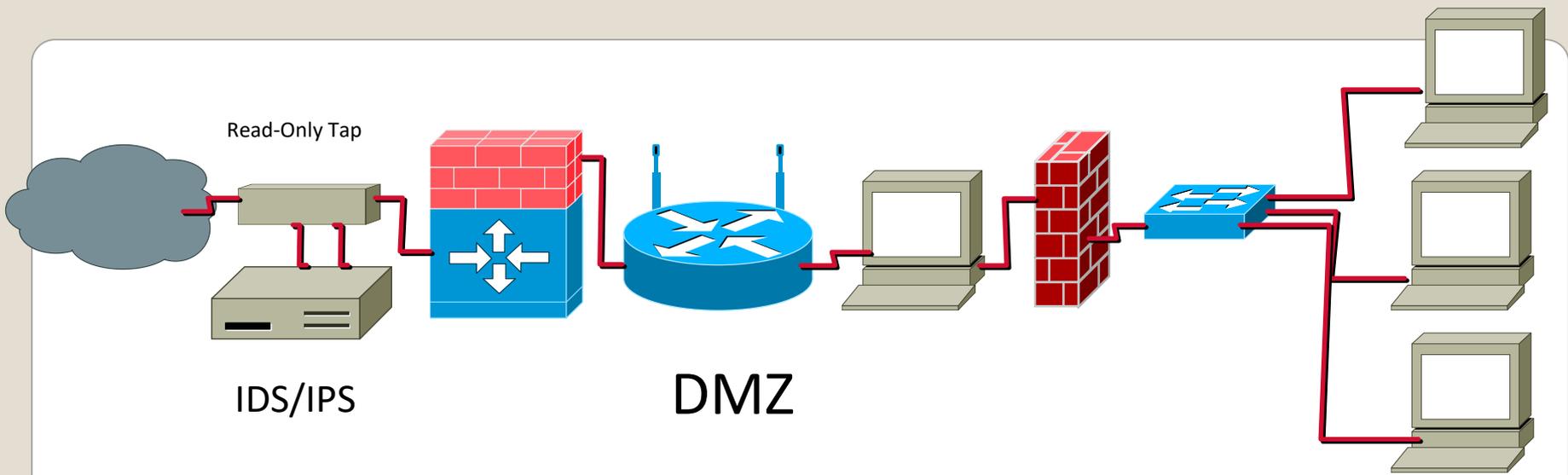
- Use cellular
Wi-Fi & Bluetooth off unless required
- Use Linux
bootable CD/DVD write protected USB
Virtual machine
tethered to Cellular hotspot
- Old devices
smart phone for IoT command & control
old laptop/desktop for Linux
- Hard wire ethernet connection
Unplugged when not in use

The chase

- Design
 - Configure
 - Instrument
 - Monitor
- Maintain and Enhance

Steps





Read-Only Tap

IDS/IPS

DMZ

Protected Zone



Wireless



- Hardware and software firewalls
 - Filter BOTH ways
 - Default Deny
- Operating system options
 - Linux, BSD, Tails
- Segmentation is key

Configure

- Logging to maximum
- Central logging server in protected zone
- Host based IDS tripwire, regmon
- Defense in depth
- SNMP off or secured

Instrument

- Filter logs discard benign
- Check Configurations often
- Inventory and Update

- ShieldsUp!

www.grc.com

GRC's UPnP Exposure Test

- [Shodan](#)

Monitor

- Network Tap
Privacy, IDS, IPS, network flow
- DMZ server
Filtering WEB proxy, split DNS, honeypot
- Evidence

Prevention - good

Detection - vital

- Part of PKI
- Binding of public key to entity
- Verified and signed by certificate authority
- Chain of trust Built in
- Self signed abuse
- CA abuse
- WEB proxies

Digital Certificates

- Vlan
Virtual Local Area Network
- VPN
Virtual Private Network
- Virtual Machine
- SDN
Software Defined Network

Virtual

- Got old?
Inventory Network Map
- Got old?
Use device (NonCellular) as IoT controller
- Hard wired
- Segmentation
- Tape on appropriate cameras
- Turn down gain on microphones
use sound muffling material on mic covers
- Home assistants, computer audio, ultra frequency communications



USB

- Use charging HUB for guest, not a computer
- USB condom
- Rubber Duckie
- Flame thrower
- Disable autorun
- SCAN with security suites on virtual machine - sandbox Linux Live CD

USB

- Cable delivers all channels
- Streaming services, require selection at service and credit card or financial info
- Opt-in may include ad delivery to nearby devices

Cutting the cord

- Smart TV
- Smart utility meters
- Smart homes
- Smart abuse

ALL the protections will NOT prevent the ONE lure

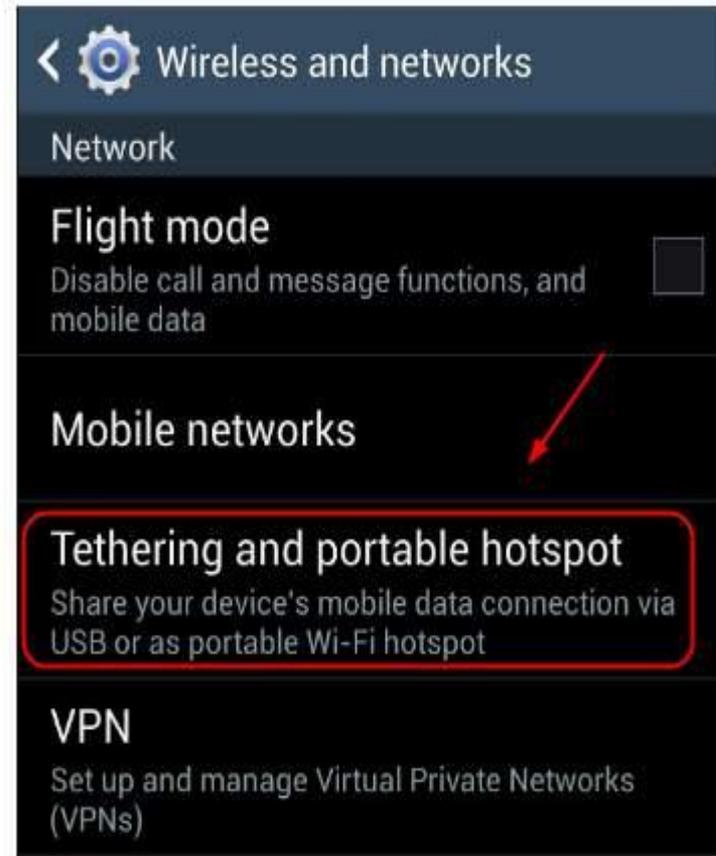
Smart getting smarter

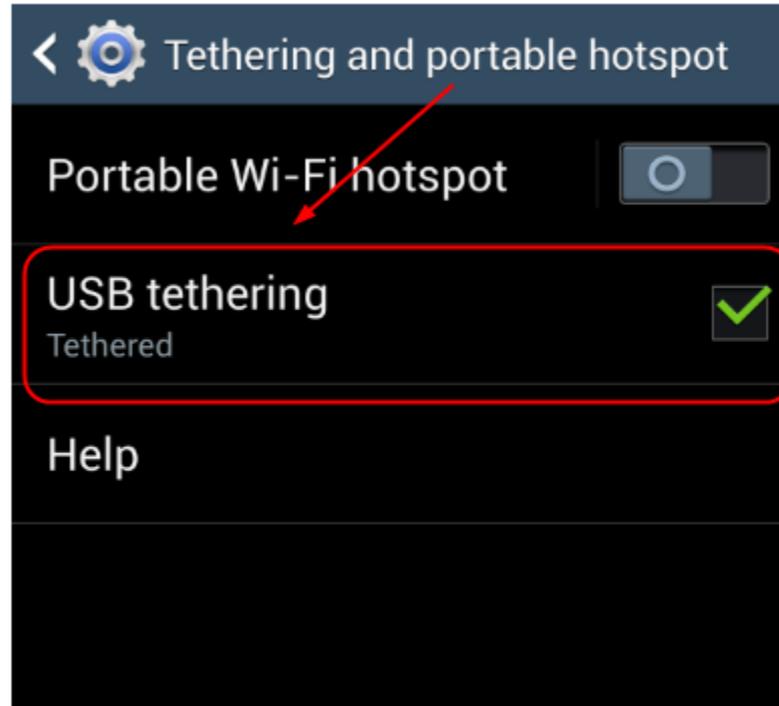
- For smartphone
 - Wi-Fi and Bluetooth OFF
 - Hotspot on
- Tether to secure computer via USB cable
 - check for updates OS, browser & addons
 - One TAB
 - One session
- Turn off Hotspot
- Turn off secure computer

Cellular HotSpot

- Security safer
- Internet down or slow
- No Wi-Fi coverage

Cellular





AT&T LTE 12:24 PM 100%

Settings

-  Airplane Mode
-  Wi-Fi Off >
-  Bluetooth Off >
-  Cellular >
-  Personal Hotspot >
-  VPN



Control Panel > Network and Internet > Network Connections

Search Network Connections

Organize

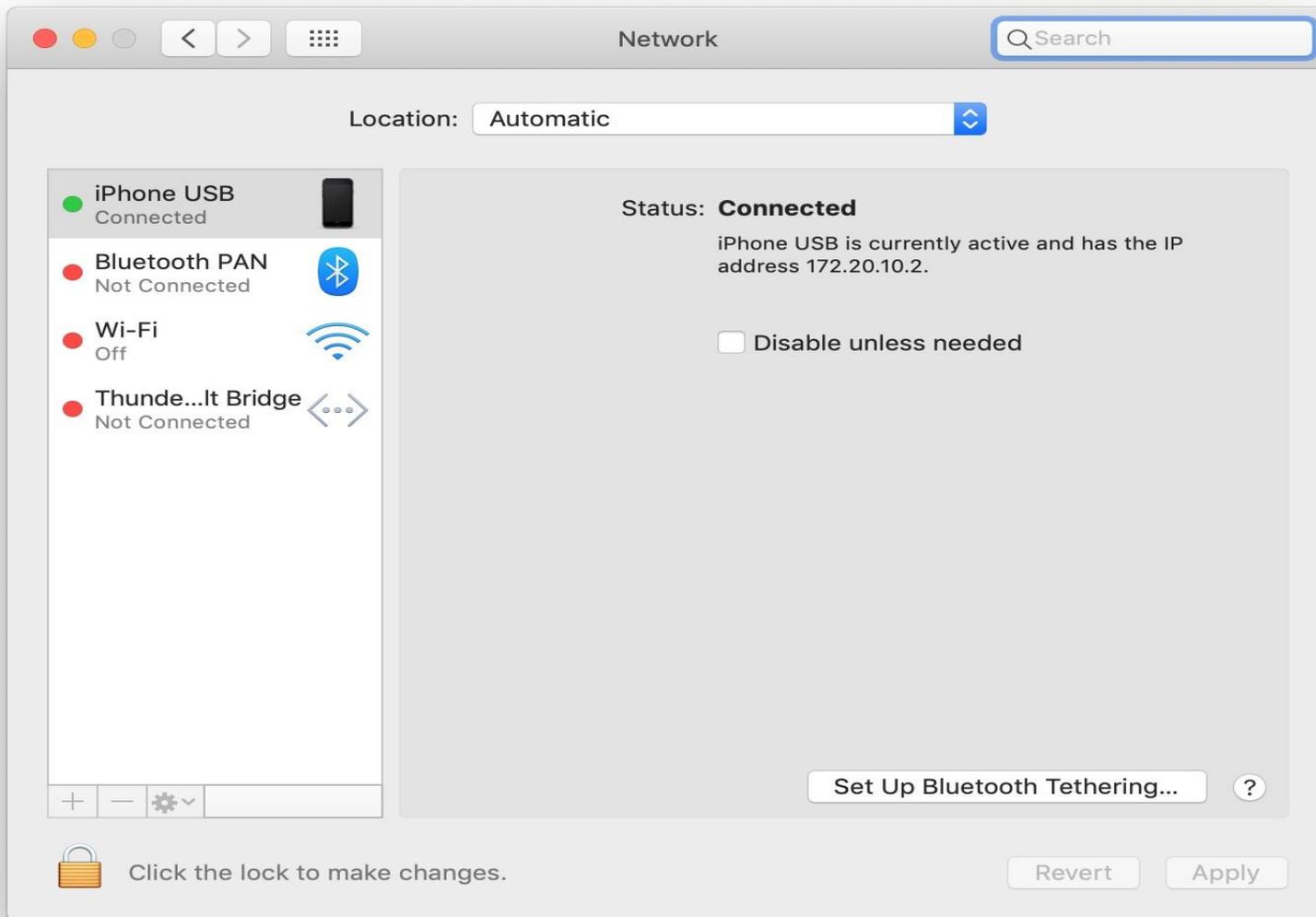
 **Ethernet**
Network cable unplugged
 Qualcomm Atheros AR8152 PCI-E...

 **Local Area Connection 2**
Disabled

 **Local Area Connection 4**
Enabled
Remote NDIS based Internet Shari...

 **Wi-Fi**
Not connected
 Qualcomm Atheros AR5B125 Wir...

```
ifconfig usb0 up  
dhcpcd usb0
```



- Tortoise and Hare
- Chicken Little

Computer Club, Help Center, SIGs,
Presentations

Cyber Security SIG meetings, NEWSBLOG
Internet

- Questions, suggestions, comments?

SCCCCyber@gmail.com