

COMPUTER & INTERNET SECURITY

PPUCG General Meeting

Fairfield Glade, TN

April 18, 2016

Protect Your Computer

Malicious Cyber Activity is Rampant

Putting Malicious Cyber Activity in Context			
CRIMINAL ACTION	ESTIMATED COST	PERCENT OF GDP	SOURCE
GLOBAL			
Piracy	\$1 billion to \$16 billion	0.008% to 0.02%	IMB
Drug Trafficking	\$600 billion	5%	UNODC
Global cyber activity	\$300 billion to \$1 trillion	0.4% to 1.4%	Various
US ONLY			
Car Crashes	\$99 billion to \$168 billion	0.7% to 1.2%	CDC, AAA
Pilferage	\$70 billion to \$280 billion	0.5% to 2%	NRF
US- cyber activity	\$24 billion to \$120 billion	0.2% to 0.8%	Various

We hear about the Major Government and Corporate Breaches, but Personal Computer are at risk too.

Protect Your Computer

What is Malware?

- Malware is an umbrella term used to describe hostile or intrusive software, including:
 - ✓ Trojans, Virus, Worms, Backdoors, Botnets
 - ✓ Identity and account information theft
 - ❑ Bank account withdrawal, credit card usage, loan falsification
 - ✓ RansomWare (*You pay to unlock your files*)
 - ✓ Keyloggers (*copies and transmits your key strokes*)

Protect Your Computer

- Personal Computers are hacked and subject to viruses and malware just like the government and major corporations.
- There are a number of things you can do to protect your personal computer.

- Computers and your other mobile devices should use passwords.
- If you have a Wireless Network in your home it should be encrypted and require a password to connect. This prevents unauthorized access to your network and is easy to do on your router.



Protect Your Computer

How to Protect your Wireless Network

- Open your Router Setup page
 - ✓ Usually by typing “192.168.1.1” into your web browser, then enter user name and password. Often “admin” for both
 - ✓ Change the default password
- Change the Network’s SSID Name
- Enable Network Encryption
 - ✓ Enter a passphrase to access your network
- For added security you can enable “Filter MAC Addresses”
 - ✓ This limits access to your network to specific devices

Protect Your Computer

Typical Router Setup Screen

Linksys router Setup screen

The screenshot displays the Linksys router's web-based setup interface. At the top, the Linksys logo and 'A Division of Cisco Systems, Inc.' are visible on the left, and the firmware version 'v0.53.3' is on the right. The main title is 'Wireless-N Broadband Router WRT300N'. Below this, there are navigation tabs for 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', 'Administration', and 'Status'. Under the 'Setup' tab, there are sub-tabs for 'Basic Setup', 'DNS', 'MAC Address Clone', and 'Advanced Routing'. The left sidebar contains a 'Setup' menu with sections for 'Internet Setup', 'Network Setup', and 'Time Settings'. The main content area is titled 'Automatic Configuration - DHCP' and includes fields for 'Host Name', 'Domain Name', 'MTU' (set to Auto, Size 1500), 'IP Address' (192.168.1.1), 'Subnet Mask' (255.255.255.0), 'DHCP Server' (Enabled), 'Start IP Address' (192.168.1.100), 'Maximum Number of Users' (50), 'IP Address Range' (192.168.1.100 ~ 149), 'Client Lease Time' (0 minutes), 'Static DNS 1, 2, 3' (all 0.0.0.0), and 'WINS' (all 0.0.0.0). A time zone dropdown is set to '(GMT-08:00) Pacific Time (USA & Canada)' with a checkbox for 'Automatically adjust clock for daylight saving changes'. At the bottom, there are 'Save Settings' and 'Cancel Changes' buttons, and the Cisco Systems logo is in the bottom right corner.

LINKSYS[®]
A Division of Cisco Systems, Inc.

Firmware Version: v0.53.3

Wireless-N Broadband Router WRT300N

Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Basic Setup | DNS | MAC Address Clone | Advanced Routing

Internet Setup

Internet Connection Type

Optional Settings
(required by some Internet Service Providers)

Network Setup

Router IP

DHCP Server Setting

Time Settings

Time Zone

Automatic Configuration - DHCP

Host Name:

Domain Name:

MTU: Auto Size: 1500

IP Address: 192 . 168 . 1 . 1

Subnet Mask: 255.255.255.0

DHCP Server: Enabled Disabled

Start IP Address: 192 . 168 . 1 . 100

Maximum Number of Users: 50

IP Address Range: 192.168.1.100 ~ 149

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

WINS: 0 . 0 . 0 . 0

(GMT-08:00) Pacific Time (USA & Canada)

Automatically adjust clock for daylight saving changes.

Save Settings Cancel Changes

CISCO SYSTEMS

Protect Your Computer

Connecting to a Secure Wireless Network

- Secure Networks require a Passphrase or Key
- Most modern Routers have a button on the Router to connect a wireless device without typing the Passphrase



This is the **Wi-Fi Protected Setup™** button.

Protect Your Computer

Anti-virus and Malware Protection

- Computers should have both **Virus** and **Malware Protection Software**.
 - ✓ Only one **Anti-virus** program can be active on your computer.
 - ✓ There can be multiple **Malware** protection programs running together on your computer.
- Most computers have **Anti-virus** protection but **Malware** protection is newer and not as commonly used.

Protect Your Computer

Methods of Infection

- Email attachments
- Email web links
- Infected web sites
- Infected Flash drives
- Adding an infected system to a network
(*i.e. Windows XP Computers*)

Protect Your Computer

Why “Windows XP” is not Secure

- Microsoft and other software companies are constantly providing updates to keep their product secure.
- Microsoft’s Windows products have a lifecycle with dates when support ends. Specific dates are as follows:

- ✓ Windows XP – **April 8, 2014**
- ✓ Windows Vista – April 11, 2017
- ✓ Windows 7 – January 14, 2020
- ✓ Windows 8.1 – January 10, 2023
- ✓ Windows 10 – October 14, 2025

Protect Your Computer

How to Protect your Computer

- Install and keep Antivirus software current and regularly scan your files
- Install Malware software like “MalwareBytes”
- Run “Windows Update” regularly to keep your operating system current. Periodically run it manually, even if you have it set to update automatically.
 - ✓ Not all updates install automatically, some must be installed manually.

Popular Anti-Malware Software

MalwareBytes

- The free version works well but must be run manually to detect and remove suspicious files
- The “Pro” version is now a annual subscription for \$29.99 for 3 PCs that actively runs all of the time.



Popular Anti-Malware Software

SUPERAntiSpyware Professional

- The free version must also be run manually to detect and remove suspicious files.
- The “Pro” version has an annual subscription of \$25.99 for 1 PC.
- Additional PCs are \$9.95 each.



Popular Anti-Malware Software

Difficult to Remove Viruses & Malware

- Use the Bleeping Computer website for these free downloads. Most popular program include:
 - ✓ **AdwCleaner**
 - ✓ **Junkware Removal Tool**
 - ✓ Other Tutorials and Programs are also available on Bleeping Computer



Protect Your Computer

Installing or Updating Software

- Read the fine print when installing or updating software on your computer before automatically clicking OK .
Sometimes you may be authorizing the installation of additional programs or setting changes that you may not want.



Protect Your Computer

Standard verses Admin Accounts

- Create and use Standard Accounts rather than Admin Accounts, it will prevent the installation of new programs on your computer without authorization.

Standard Accounts can do almost everything, but may require a password for tasks like installing new software. Unwanted software won't be install without your authorization.



Protect Your Computer

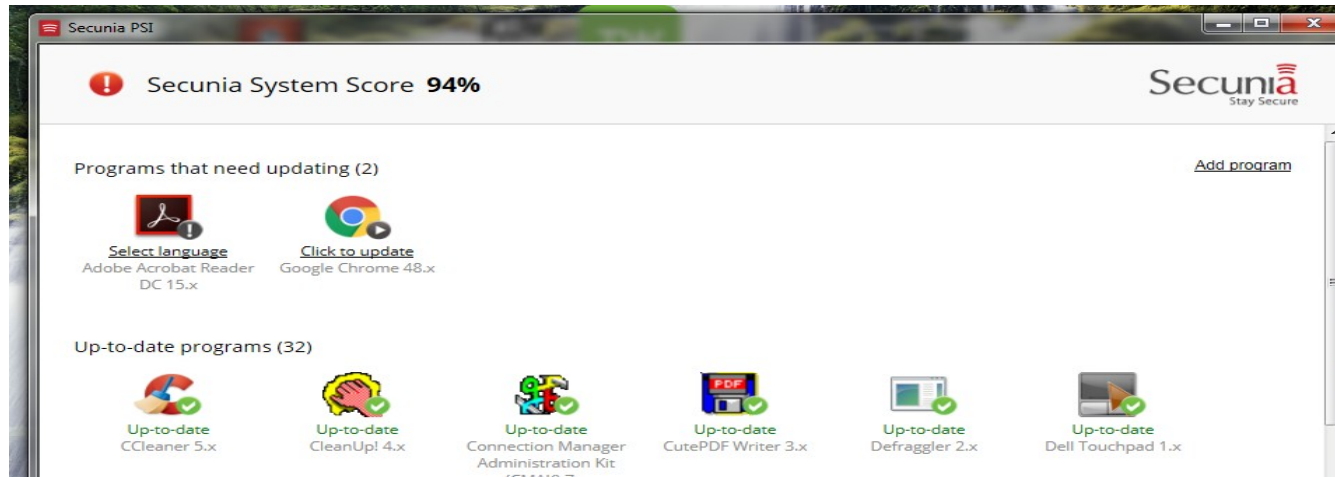
Keep All your Programs Current

- Personal Software Inspector (PSI) is a free program that advises you when newer versions are available for the software programs installed on your computer.
- It also provides links to download newer versions as needed.



Personal Software Inspector (PSI)

➤ PSI Scan Report



➤ Detailed view with version numbers

The screenshot shows the detailed view of the Secunia PSI interface. It displays a table with the following columns: Program name, #, Installed version, Secure version, Criticality, and Status. The table lists the following programs:

Program name	#	Installed version	Secure version	Criticality	Status
Adobe Acrobat Reader DC 15.x	1	15.10.20056.36345 (Continuous)	15.010.20060 (Continuous)		Select language
Google Chrome 48.x	1	48.0.2564.109	49.x	End of life	Click to update
CCleaner 5.x	1	5.1.0.5075			Up-to-date
CleanUp! 4.x	1	4.5.2.0			Up-to-date

Protect Your Computer

Security Sensitive Programs

- Oracle's Java is very vulnerable, if you do not need it, remove it for your computer.
- Adobe Reader and Adobe Flash Player are vulnerable too, keep them up-to-date with the most current versions



Protect Your Computer

Don't Open Suspicious Websites

- **Smart Screen Filter** is now included in Internet Explorer to warn you of suspicious websites. Turn it on from the Safety tab in Internet Explorer.
- **Google** has a Safe Browsing app that works on your smartphone. It was originally available for Chrome, but can now be used for both Firefox and Safari.



Protect Your Computer

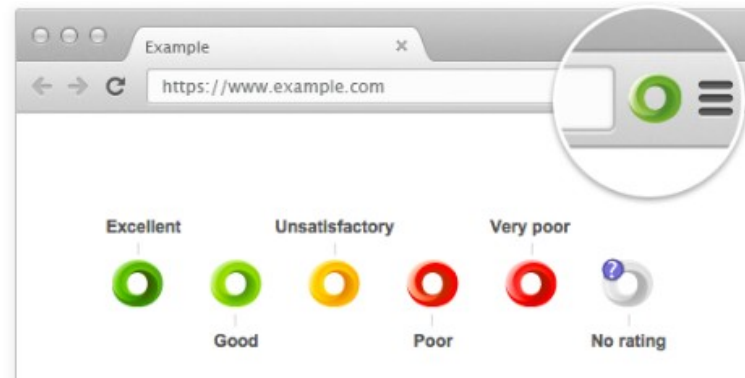
Don't Open Suspicious Websites

- WOT (Web of Trust) is a free add-on for your browser that warns you of untrustworthy websites and rouge web stores.
- It uses a red or green traffic light symbol when searching on the Internet to identify safe and questionable sites



Protect Your Computer

➤ WOT Ratings




➤ Search Results with WOT Ratings

[How to Block Certain Websites on Your iPhone & iPad](#) 

www.igeeksblog.com/how-to-block-websites-on-iphone-and-ipad/ ▼

But you can still block certain websites from being accessed on your iPhone/iPad. Here's how: ... Configure Wifi DNS so it blocks bad websites automatically 2.

[Bad Dog Theatre Company - Toronto Comedy: Live ...](#) 

baddogtheatre.com/ ▼ Bad Dog Theatre Company ▼

For over 30 years, the award-winning Bad Dog Theatre Company has specialized in the art of unscripted comedy and improvised performance and has provided ...

[How to recognize and avoid bad websites? - PC Utilities Pro](#) 

www.pcutilitiespro.com/blog/how-to/avoid-bad-websites/ ▼

Oct 13, 2014 - Here you'll find out the best tips on how to stay away from bad websites and why this is so important.



Protecting Your Identity

Using your Computer away from Home

- **Free WiFi** is a nice convenience, but WiFi that does not require a password is not secure.
- **Free WiFi** at many hotels, Starbucks or MacDonalDs should not be use for banking or credit card transactions.
- Your personal information is at risk.



Protecting Your Identity

Using your Computer away from Home

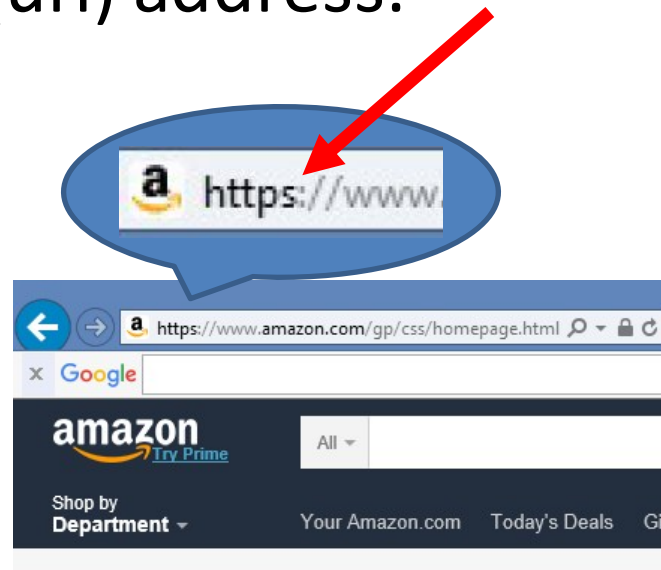
- Rather than using the **Free WiFi**, use your Smartphone as a **Secure HotSpot** for tasks that you want private.
- Some SmartPhone plans include the Hotspot feature at no additional change.
- This will protect you when banking and using your credit card online.



Protecting Your Identity

How to Identify Secure Websites

- Look for the “s” after the “http” in the Website’s (url) address.



- This identifies that you are connected to a secure website.



Protecting Your Identity

Using Credit Cards on the Internet

- Credit Cards are safe on secure websites with reputable companies.
- Limit the number of cards you use online to more easily monitor their use.
- Some cards will provide email or text Alerts when....
 - ✓ Card Used in Another Country
 - ✓ Charges Exceed a Specific Amount that can be as low as \$5 or \$10.



Protecting Your Identity

Credit Cards with EMV Chips

- The new **EMV “Smart” Cards** can thwart the most common ways thieves clone credit cards.
- The chip encodes the information provided the merchant differently each time it is used.
- The chip does not provide this protection when used online.
- But some cards will provide email or text Alerts when....
 - ✓ Card Not Presented – Like Online Use



Protecting Your Computer & Identity

Using the Suggestions and Tools we have recommended will go a long way to keep your computer and your personal information safe from all those “Bad Guys” we regularly hear about.



Protecting Your Computer & Identity

Questions?

Thank You



