

COSC130 Fundamentals of Cybersecurity and Privacy

Tutorial Week 8

1. Listen to the OpenLearn interview with Vinton Cerf who designed the TCP/IP protocol suite and is commonly considered to be the father of the Internet.
<https://www.open.edu/openlearn/mod/oucontent/view.php?id=48321§ion=1>
2. Use a 'whois' service available from <https://whois.domaintools.com/> to find out IP addresses and other information for different domain names, for example, "une.edu.au".
3. For each of the following three attacks on networks, specify the security service breached by the attack.
 - a. Packet sniffing
 - b. Man-in-the-middle
 - c. Denial of Service
4. Click on the network connection symbol on your computer to find the wireless networks that are within range. Is your home wireless local area network using WPA2 or WPA3? If it is not using either of these two, find out how to set this up to use one of them. (Hint: Look for the user manual for your wireless router or your internet service provider's website.)
5. Do some research to find out more information about the infamous zombie malware Mirai that made use of home routers and IP cameras.
6. Checking/setting up your personal firewall.
 - i. Probe your computer to see if it is protected by a firewall – go the <https://www.grc.com/shieldsup> and read the instructions/explanations; perform the following tests: instant UPnP Exposure Test, File Sharing, Common Ports, All Service Ports, and Browser Headers. Your computer is protected by a firewall if you get "Stealth" for all ports (green colour).
 - ii. Verify that your operating system firewall is configured correctly and operational.
 - a. On Windows, follow instructions on <https://support.microsoft.com/en-us/windows/turn-microsoft-defender-firewall-on-or-off-ec0844f7-aebd-0583-67fe-601ecf5d774f>

- b. On Mac, follow instructions on <https://support.apple.com/en-au/guide/security/seca0e83763f/1/web/1>
 - iii. If the firewall is off, or incorrectly configured, turn it on and configure it correctly (you will only be able to do this if that is your personal computer and you are the system administrator).
 - iv. Repeat Step i.
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- 7. Read the article “The best VPN service 2024” available from <https://www.techradar.com/vpn/best-vpn> to learn more about currently available VPNs.
 - 8. Learn more about Open Source VPN from <https://community.openvpn.net/openvpn/wiki/OverviewOfOpenvpn#OpenVPNOS>