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Lab 7: Cloud Security

Protections

2/12/23

A. TCP/IP networking Utilities

1. To begin, you must first click on the windows start menu and open the command prompt. After opening the command prompt, you enter IPconfig/all command which then displayed all the computer network parameters and configurations information for TCP/IP network information. This also allows the MAC address to be displayed. ARP command is then used to display the internet to adapter address. ARP command is responsible for getting the IP address into the MAC address. NETSTAT command is then used to display the network connections and port activity. Additionally, the NBT^STAT command will show the list of remote machine names. The NET VIEW command allows to access the list of nodes on the LAN. This is to view the devices that is connected to the network. TRACERT command is then used to view trace routes that each data packets are taking to get to its final destination. PING command is then used to test network issues.
2. Answer the questions:
    i. Which command-line utility program is used to find the primary DNS suffix, IPv4 and IPv6 addresses for your computer? **Ipconfig**
    ii. The **Ping** command causes a data packet to be sent to a specific IP address and then returns to the initiating machine.
    iii. Which command detects whether routers along a communication path are functioning? **Tracert**
    iv. Which utility program is used to examine current network connections? **Netstat**
    v. The **ARP** utility is used to map IP address to MAC addresses?

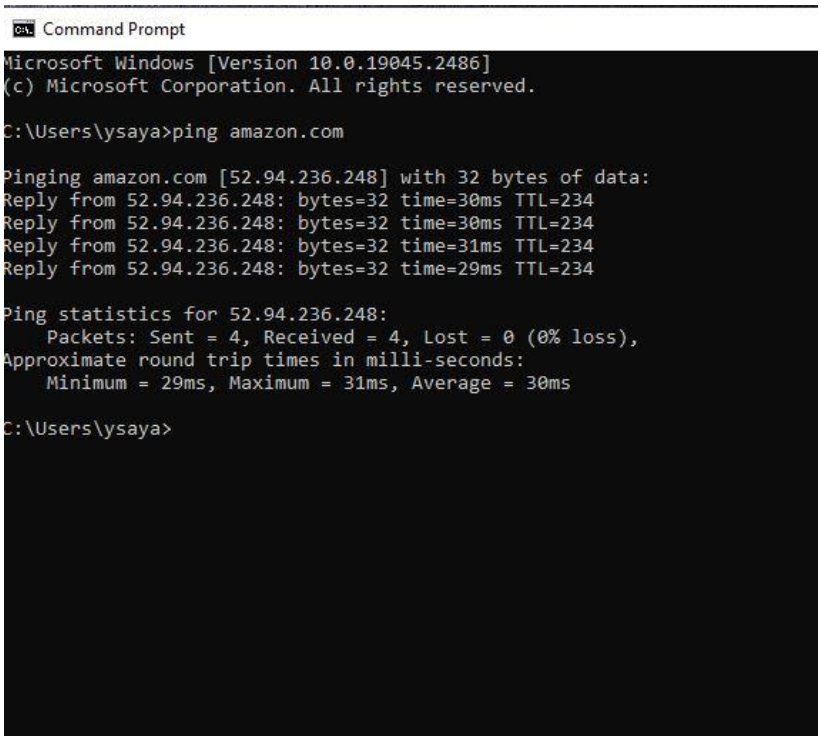
vi. Which utility command is used to examine a list of all the shared devices on a LAN? **Net View**

vii. The **ARP** utility is used to map IP addresses to MAC addresses?

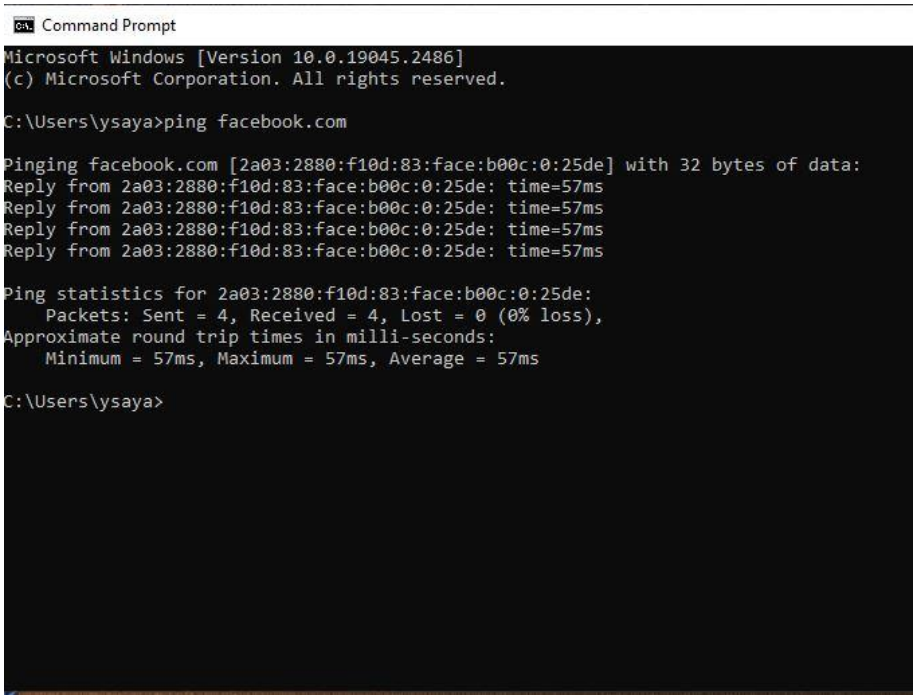
viii. Which utility command is used to examine a list of all the shared devices on a LAN? **Netstat**

B. Red Team Intelligence Gathering

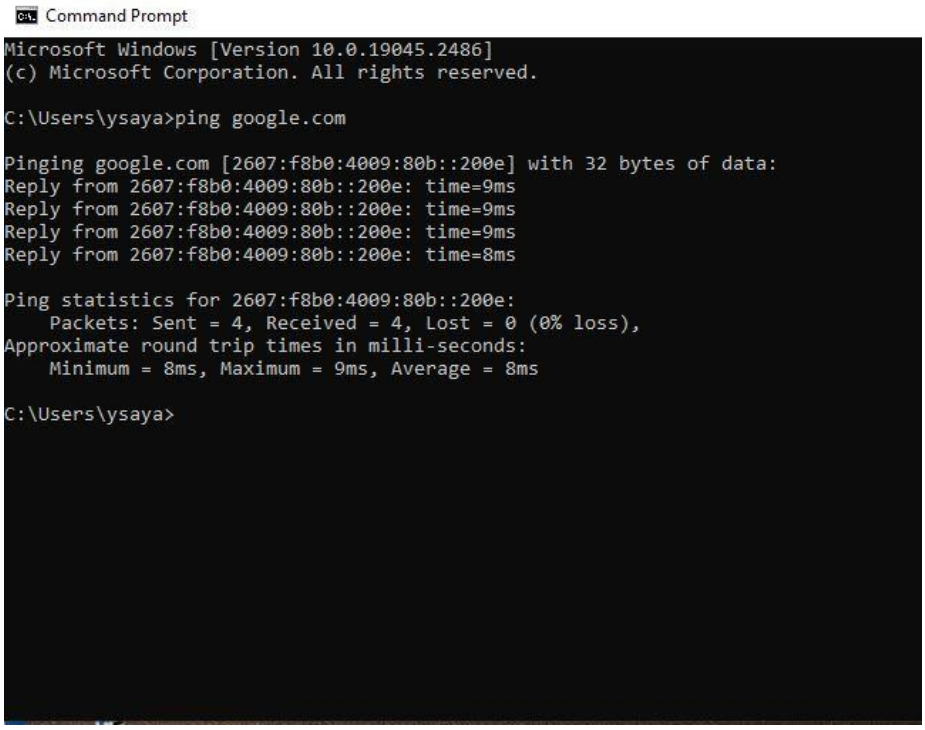
1. Step 1: Using the PING command from the above section, gather the IP address of Amazon.com, Microsoft.com, Google.com and/or your favorite web page.

i. 

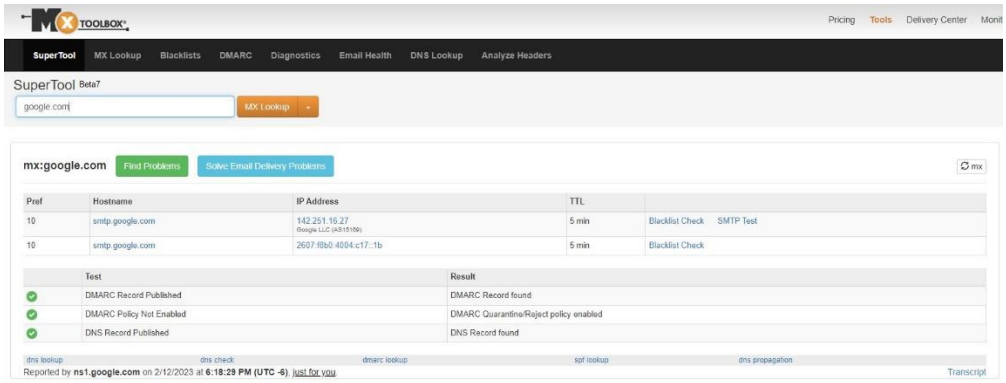
ii.

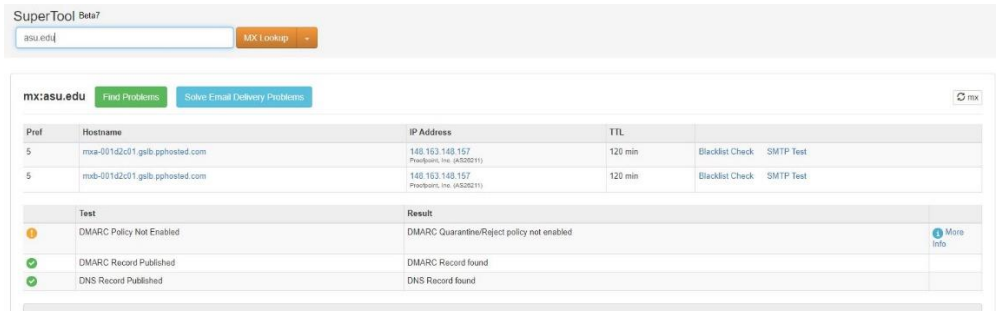


iii.



2. Step 2: Using the MX Toolbox.com Super Tool, lookup and provide the following for (A) one of the large companies mentioned above, as well as (B) one Not mentioned above.:

i. 

ii. 

C. Terminology

Answer the questions:

1. What is DMARC and why might it be needed? **DMARC adds an important function for reporting. It prevents hackers from hacking into your domain.**
2. What is typosquatting? **Typosquatting is a domain that imitates the URL address of a browser in hopes that a user misspell an address to lead them to a vulnerable site.**
3. What is N+1 from an IT context and what is its value in ensuring availability? **N+1 is an operational component that allows for the network to run as required.**
4. What security benefits does the cloud provide? **The cloud can provide many benefits to a company that chooses to utilize cloud computing.**
5. What security disadvantages are inherent to the cloud? **The most obvious would be the risk of storing important information not onsite.**

D. Cloud infrastructure

1. Find a map of an AWS or Azure cloud infrastructure.

i. Explain how or where this infrastructure might be insecure or more secure compared to a similar on-premises solution. **The map of the AWS diagram shows areas of insecurity at all levels. These areas can be from anytime there are connections to the servers.**

ii. What could be done to improve the security of design, if not already listed on the diagram? **To ensure security breach, there should be authorization at each level and a two-factor authentication.**

E. Emphasis on HTTPS

1. Describe why you believe that Google decided to reduce its page ranks for sites that are not HTTPS-enabled. **The reason what to set a standard for secure web pages to follow the model of security certificate sites that uses HTTPS.**

Citations:

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