

28-AUGUST

# LETSUPGRADE ASSESSMENT- DAY4

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**Q 1. FIND OUT THE MAIL SERVERS OF THE FOLLOWING DOMAIN:**

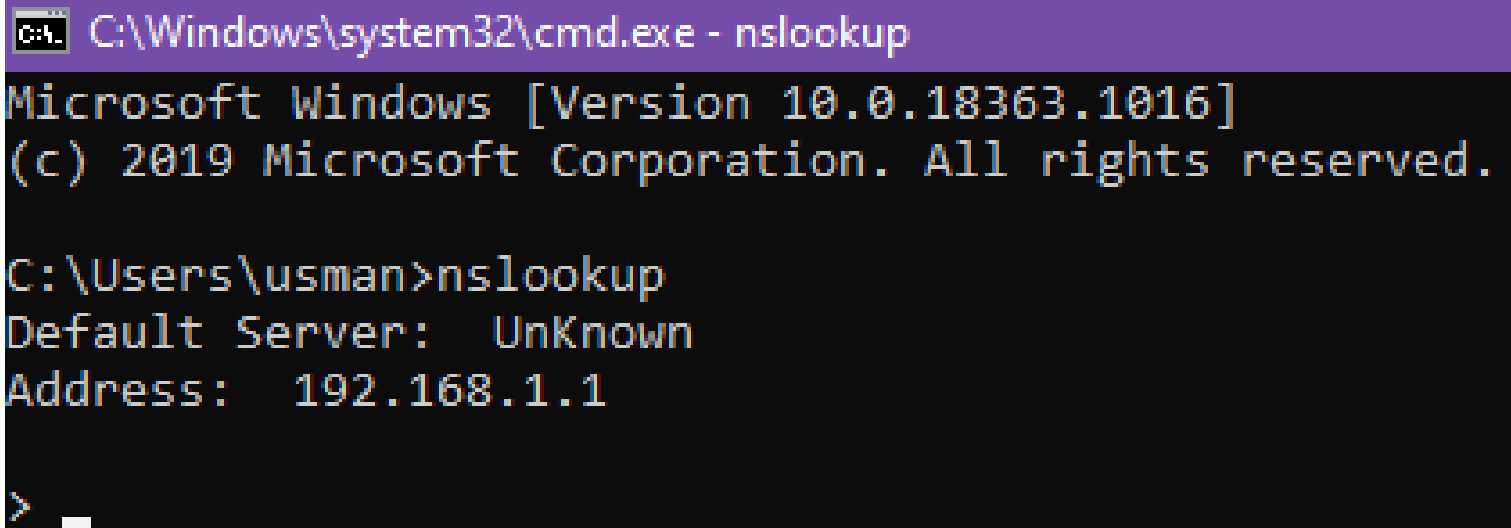
**A) IBM.COM**

**B) WIPRO.COM**

**ANSWER: I AM USING THE WINDOWS COMMAND PROMPT IN PENTESTER-WIN-2016 VIRTUAL MACHINE FOR SOLVING THIS QUESTION**

**A) IBM.COM**

**STEP 1: OPEN CMD AND TYPE NSLOOKUP AND PRESS ENTER**

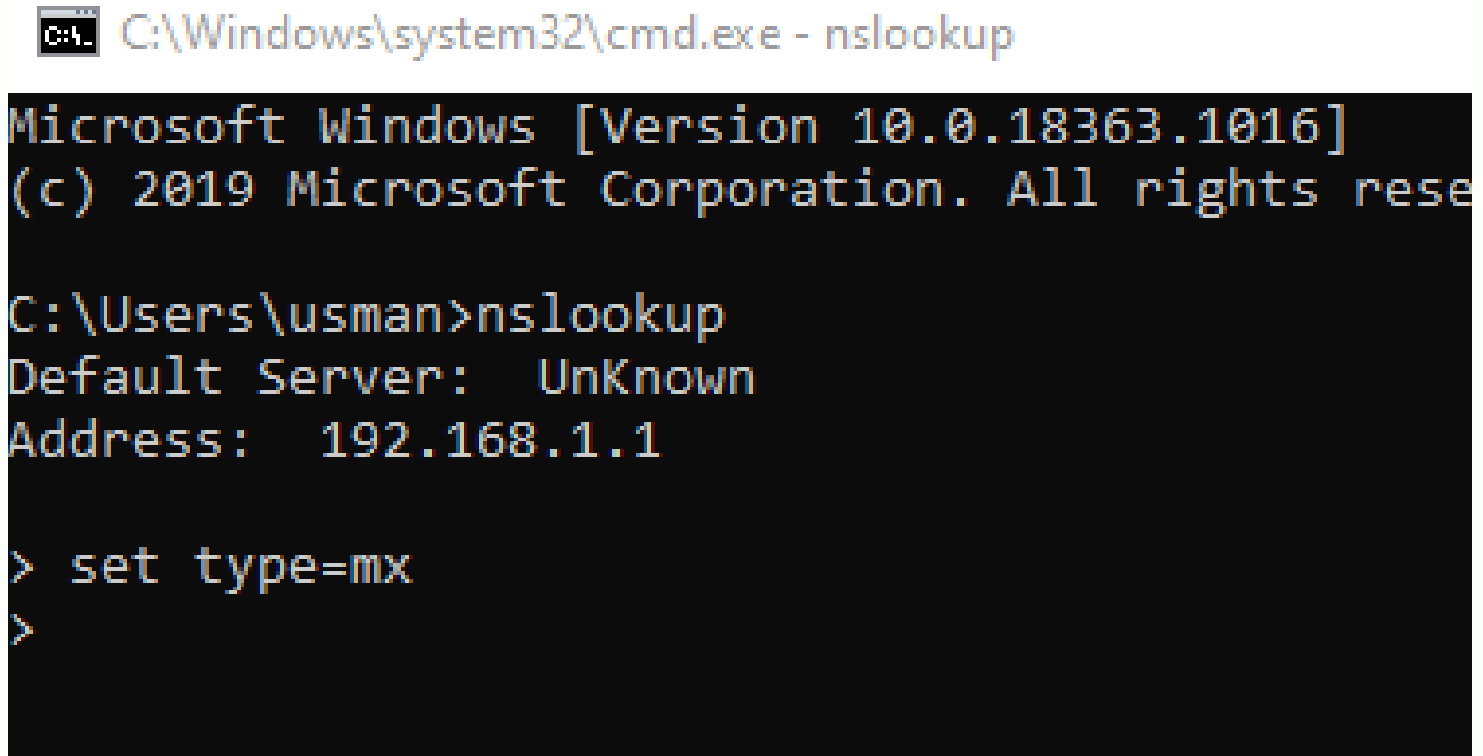


```
C:\Windows\system32\cmd.exe - nslookup
Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> _
```

**Step 2: Now type **set type=mx** and press enter**



```
C:\Windows\system32\cmd.exe - nslookup

Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> set type=mx
>
```

**Step 3: Now type the web address whose mail server we want (in this case it is **www.ibm.com**)**

```
C:\Windows\system32\cmd.exe - nslookup
Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\usman>nslookup
Default Server: UnKnown
Address: 192.168.1.1

> set type=mx
> www.ibm.com
Server: UnKnown
Address: 192.168.1.1

Non-authoritative answer:
www.ibm.com canonical name = www.ibm.com.cs186.net
www.ibm.com.cs186.net canonical name = outer-ccdn-dual.ibmcom.edgekey.net
outer-ccdn-dual.ibmcom.edgekey.net canonical name = outer-ccdn-dual.ibmcom.edgekey.net.globalredir.akadns.net
outer-ccdn-dual.ibmcom.edgekey.net.globalredir.akadns.net canonical name = e2874.dscx.akamaiedge.net
dscx.akamaiedge.net
primary name server = n0dscx.akamaiedge.net
responsible mail addr = hostmaster.akamai.com
serial = 1598643691
refresh = 1000 (16 mins 40 secs)
retry = 1000 (16 mins 40 secs)
expire = 1000 (16 mins 40 secs)
default TTL = 1800 (30 mins)

> -
```

**By this process we get the  
required mail server.**

**In this case the mail server is  
**hostmaster.akamai.com****

**b) wipro.com**

**Step 1: Open cmd and type  
nslookup and press enter**

C:\Windows\system32\cmd.exe - nslookup

```
C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

>
```

**Step 2: Now type set type=mx  
and press enter**

C:\Windows\system32\cmd.exe - nslookup

```
Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> set type=mx
>
```

**Step 3: Now type the web address whose mail server we want. (In this case it is [www.wipro.com](http://www.wipro.com))**

```
C:\Windows\system32\cmd.exe - nslookup

C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> set type=mx
> www.wipro.com
Server:  UnKnown
Address:  192.168.1.1

Non-authoritative answer:
www.wipro.com    canonical name = d361nqn33s63ex.cloudfront.net
d361nqn33s63ex.cloudfront.net
        primary name server = ns-1658.awsdns-15.co.uk
        responsible mail addr = awsdns-hostmaster.amazon.com
        serial      = 1
        refresh    = 7200 (2 hours)
        retry      = 900 (15 mins)
        expire     = 1209600 (14 days)
        default TTL = 86400 (1 day)
>
```

**Q 2. Find the locations, where these email servers are hosted**

**Answer: continuation of Q1.**

**a) [ibm.com](https://www.ibm.com)**

**Step 1: Open CMD >type and enter nslookup> set type=mx> ibm.com**

```
C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> set type=mx
> www.ibm.com
Server:  UnKnown
Address:  192.168.1.1

Non-authoritative answer:
www.ibm.com      canonical name = www.ibm.com.cs186.net
www.ibm.com.cs186.net  canonical name = outer-ccdn-dual.ibmcom.edgekey.net
outer-ccdn-dual.ibmcom.edgekey.net  canonical name = outer-ccdn-dual.ibmcom.edgekey.net.globalredir.akadns.net
outer-ccdn-dual.ibmcom.edgekey.net.globalredir.akadns.net  canonical name = e2874.dscx.akamaiedge.net
dscx.akamaiedge.net
      primary name server = n0dscx.akamaiedge.net
      responsible mail addr = hostmaster.akamai.com
      serial      = 1598643691
      refresh     = 1000 (16 mins 40 secs)
      retry       = 1000 (16 mins 40 secs)
      expire      = 1000 (16 mins 40 secs)
      default TTL = 1800 (30 mins)

> _
```

**Step 2: Open a browser and go to**  
**[https://tools.keycdn.com/geo?](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**  
**[host=mx0a-](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**  
**[001b2d01.pphosted.com](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**  
**or any other IP location finder.**  
**Enter the IP address/hostname to**  
**get the results.**

**Address 1: mx0b-**  
**001b2d01.pphosted.com**

#### LOCATION

Country	United States (US)
Continent	North America (NA)
Coordinates	37.751 (lat) / -97.822 (long)
Time	2020-08-28 14:47:06 (America/Chicago)

#### NETWORK

IP address	148.163.158.5
Hostname	mx0b-001b2d01.pphosted.com
Provider	PROOFPOINT-ASN-US-EAST
ASN	22843



Address 2: mx0a-  
001b2d01.pphosted.com

LOCATION

Country	United States (US)
Continent	North America (NA)
Coordinates	37.751 (lat) / -97.822 (long)
Time	2020-08-28 14:45:24 (America/Chicago)

NETWORK

IP address	148.163.156.1
Hostname	mx0a-001b2d01.pphosted.com

**b) *wipro.com***

***Step 1: Open CMD >type and enter  
nslookup> set type=mx> wipro.com***

```
C:\Users\usman>nslookup
Default Server:  UnKnown
Address:  192.168.1.1

> set type=mx
> www.wipro.com
Server:  UnKnown
Address:  192.168.1.1

Non-authoritative answer:
www.wipro.com    canonical name = d361nqn33s63ex.cloudfront.net

d361nqn33s63ex.cloudfront.net
    primary name server = ns-1658.awsdns-15.co.uk
    responsible mail addr = awsdns-hostmaster.amazon.com
    serial      = 1
    refresh    = 7200 (2 hours)
    retry      = 900 (15 mins)
    expire     = 1209600 (14 days)
    default TTL = 86400 (1 day)

>
```

**Step 2: Open a browser and go to**

**[https://tools.keycdn.com/geo?](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**

**[host=mx0a-](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**

**[001b2d01.pphosted.com](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**

**or any other IP location finder.**

**Enter the IP address/hostname to  
get the results.**

**[Address: wipro-](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**

**[com.mail.protection.outlook.com](https://tools.keycdn.com/geo?host=mx0a-001b2d01.pphosted.com)**

LOCATION	
City	Singapore
Postal code	18
Country	Singapore (SG)
Continent	Asia (AS)
Coordinates	1.2929 (lat) / 103.8547 (long)
Time	2020-08-27 20:12:49 (Asia/Singapore)
NETWORK	
IP address	104.47.125.36
Hostname	mail-sg2apc010036.inbound.protection.outlook.com
Provider	MICROSOFT-CORP-MSN-AS-BLOCK
ASN	8075

**Q 3. Scan and find out port numbers open 203.163.246.23**

**Answer: I will be using Kali Linux 2020.3 in VMware.**

**Step 1: Open the terminal and go to administrator mode**

**Command: sudo su -**

**(enter password and hit enter to enter administrator mode).**

**Step 2: In order to detect the open ports type nmap 203.163.246.23 and hit enter.**

```
root@kali:~# nmap 203.163.246.23
Starting Nmap 7.80 ( https://nmap.org ) at 2020-08-27 12:12 EDT
Nmap scan report for 203.163.246.23
Host is up (0.061s latency).
Not shown: 999 filtered ports
PORT      STATE SERVICE
110/tcp   open  pop3
Nmap done: 1 IP address (1 host up) scanned in 55.26 seconds
```

**Therefore, one port is open as shown in the screenshot.**

# (Performing more scans) **nmap -v -A** **203.163.246.23**

```
File Actions Edit View Help
Completed Ping Scan at 12:14, 0.00s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 12:14
Completed Parallel DNS resolution of 1 host. at 12:14, 0.07s elapsed
Initiating SYN Stealth Scan at 12:14
Scanning 203.163.246.23 [1000 ports]
Discovered open port 110/tcp on 203.163.246.23
Increasing send delay for 203.163.246.23 from 0 to 5 due to 11 out of 13 dropped probes since last increase.
Increasing send delay for 203.163.246.23 from 5 to 10 due to 11 out of 11 dropped probes since last increase.
Completed SYN Stealth Scan at 12:15, 52.22s elapsed (1000 total ports)
Initiating Service scan at 12:15
Scanning 1 service on 203.163.246.23
Stats: 0:02:54 elapsed; 0 hosts completed (1 up), 1 undergoing Service Scan
Service scan Timing: About 0.00% done
Completed Service scan at 12:18, 156.36s elapsed (1 service on 1 host)
Initiating OS detection (try #1) against 203.163.246.23
Initiating Traceroute at 12:18
Completed Traceroute at 12:18, 0.03s elapsed
Initiating Parallel DNS resolution of 2 hosts. at 12:18
Completed Parallel DNS resolution of 2 hosts. at 12:18, 2.02s elapsed
NSE: Script scanning 203.163.246.23.
Initiating NSE at 12:18
Completed NSE at 12:18, 21.22s elapsed
Initiating NSE at 12:18
Completed NSE at 12:19, 21.05s elapsed
Initiating NSE at 12:19
Completed NSE at 12:19, 0.00s elapsed
Nmap scan report for 203.163.246.23
Host is up (0.0024s latency).
Not shown: 999 filtered ports
PORT      STATE SERVICE VERSION
```

```
File Actions Edit View Help
Not shown: 999 filtered ports
PORT      STATE SERVICE VERSION
110/tcp open  pop3?
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: WAP|general purpose
Running: Actiontec embedded, Linux 2.4.X|3.X, Microsoft Windows XP|7|2012
OS CPE: cpe:/h:actiontec:mi424wr-gen3i cpe:/o:linux:linux_kernel cpe:/o:linux:linux_kernel:2.4.37 cpe:/o:linux:linux_kernel:3.2 cpe:/o:microsoft:windows_xp::sp3 cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows_server_2012
OS details: Actiontec MI424WR-GEN3I WAP, DD-WRT v24-sp2 (Linux 2.4.37), Linux 3.2, Microsoft Windows XP SP3, Microsoft Windows XP SP3 or Windows 7 or Windows Server 2012
Network Distance: 2 hops
TCP Sequence Prediction: Difficulty=256 (Good luck!)
IP ID Sequence Generation: Incremental

TRACEROUTE (using port 80/tcp)
HOP RTT      ADDRESS
1   0.14 ms 192.168.111.2
2   0.05 ms 203.163.246.23

NSE: Script Post-scanning.
Initiating NSE at 12:19
Completed NSE at 12:19, 0.00s elapsed
Initiating NSE at 12:19
Completed NSE at 12:19, 0.00s elapsed
Initiating NSE at 12:19
Completed NSE at 12:19, 0.00s elapsed
Read data files from: /usr/bin/../share/nmap
OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 255.26 seconds
Raw packets sent: 2086 (93.988KB) | Rcvd: 499 (20.024KB)
root@kali:~#
```

File Actions Edit View Help

110/tcp open pop3

Nmap done: 1 IP address (1 host up) scanned in 55.26 seconds

root@kali:~# nmap -v -A 203.163.246.23

Starting Nmap 7.80 ( <https://nmap.org> ) at 2020-08-27 12:14 EDT

NSE: Loaded 151 scripts for scanning.

NSE: Script Pre-scanning.

Initiating NSE at 12:14

Completed NSE at 12:14, 0.00s elapsed

Initiating NSE at 12:14

Completed NSE at 12:14, 0.00s elapsed

Initiating NSE at 12:14

Completed NSE at 12:14, 0.00s elapsed

Initiating Ping Scan at 12:14

Scanning 203.163.246.23 [4 ports]

Completed Ping Scan at 12:14, 0.00s elapsed (1 total hosts)

Initiating Parallel DNS resolution of 1 host. at 12:14

Completed Parallel DNS resolution of 1 host. at 12:14, 0.07s elapsed

Initiating SYN Stealth Scan at 12:14

Scanning 203.163.246.23 [1000 ports]

Discovered open port 110/tcp on 203.163.246.23

Increasing send delay for 203.163.246.23 from 0 to 5 due to 11 out of 13 dropped probes since last increase.

# Command: Nmap -Pn -sS 203.163.246.23

File Actions Edit View Help

kali@kali:~\$ sudo su -

[sudo] password for kali:

root@kali:~# nmap -Pn -sS 203.163.246.23

Starting Nmap 7.80 ( <https://nmap.org> ) at 2020-08-27 11:44 EDT

Stats: 0:01:35 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 69.70% done; ETC: 11:46 (0:00:41 remaining)

Stats: 0:02:57 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 81.30% done; ETC: 11:48 (0:00:41 remaining)

Stats: 0:03:02 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 81.65% done; ETC: 11:48 (0:00:41 remaining)

Stats: 0:03:50 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 85.00% done; ETC: 11:49 (0:00:41 remaining)

Stats: 0:04:47 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 87.55% done; ETC: 11:50 (0:00:41 remaining)

Stats: 0:07:57 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan

SYN Stealth Scan Timing: About 96.10% done; ETC: 11:52 (0:00:19 remaining)

Nmap scan report for 203.163.246.23

Host is up (0.0046s latency).

Not shown: 998 filtered ports

PORT	STATE	SERVICE
------	-------	---------

25/tcp	closed	smtp
--------	--------	------

110/tcp	open	pop3
---------	------	------

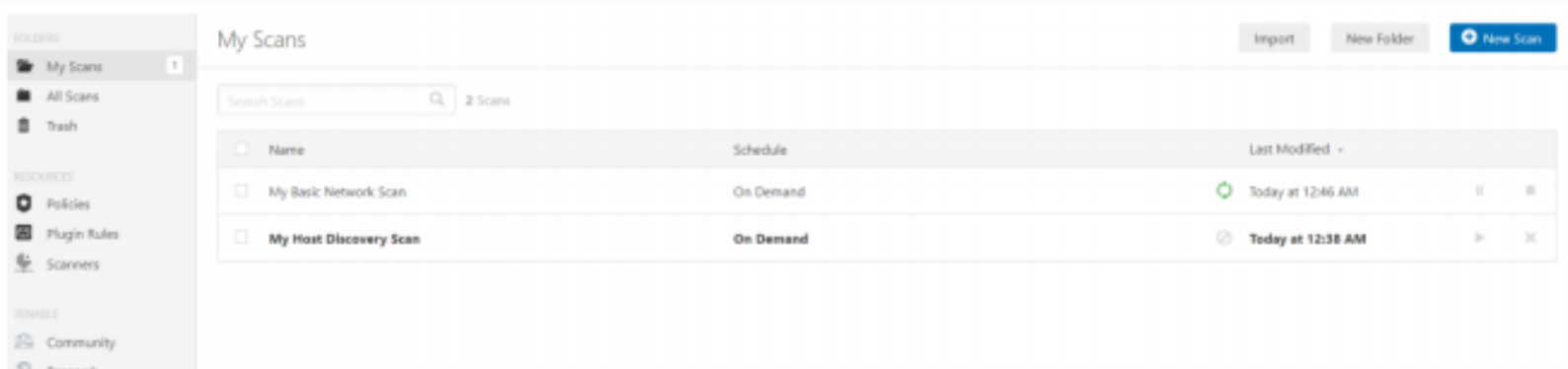
# Q 4. Install Nessus in a VM and scan your laptop/desktop for CVE

## Answer:

**Step 1: Open Pentester-Win 2016 VM and install Nessus in it and open it in a suitable browser.**

**Step 2: Enter the **Ipv4** address of your machine in the popup box and start Scanning.**

**Step 3: The scan is now running. Wait for few seconds until the scan is over.**



**Step 4: Once the Scan is over, we can see the reports. (Click the Vulnerabilities tab to view the reports)**

