TEAM – ALPHA CSA S.O.C ANALYST GROWTH INTERNSHIP PROJECT02 REPORT

Project Title:

Network Vulnerability Assessment for A More Secured Environment

Project Objective:

conduct a comprehensive vulnerability assessment of a simulated version of O-Enterprises' network environment using **Nmap** and **Nessus** to identify open ports, misconfigurations and known vulnerabilities. Provide actionable insights to improve the network's security posture.

Project Scope:

The task requires leveraging network scanning and vulnerability assessment tools and simulated real-world environment to help the client organization O-Enterprises identify and address security gaps effectively

Executive Summary:

- **Vulnerability Assessment ID:** CSA-SOC-MAY-2025-17
- **Assessment Risk Categories**: Critical/High/Medium/Low Risks

O – Enterprises noticed several discrepancies in its network environment possibly arising from misconfigurations and unpatched vulnerabilities from softwares and services in use. This gave rise to the need for a comprehensive vulnerability assessment using Nmap and Nessus to identify and mitigate these potential risks, improve overall network's security resilience and posture.

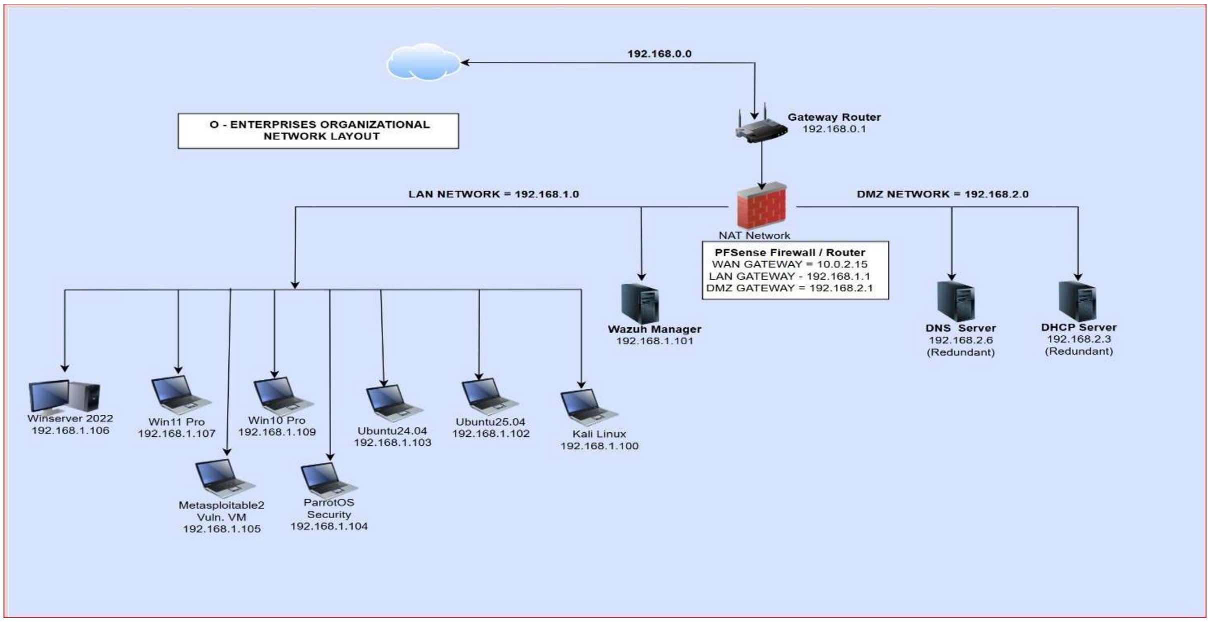
After setting studying the network environment, a thorough network scanning with Nmap was done. Several network ports were found to be open such Ports 21-FTP, 22-SSH, 80-HTTP, 443-HTTPS, 139/445-SMB and several others. Some of these ports are needed for day-to-day operations while some are not needed, left their current state due either misconfigurations or negligence.

Tenable-Nessus was also used to scan these hosts and the opened ports to determine the associated vulnerabilities and potential risk exposures. The identified risk categories ranged from critical to low and commensurate recommendations have been made to mitigate them before they are exploited by threat actors.

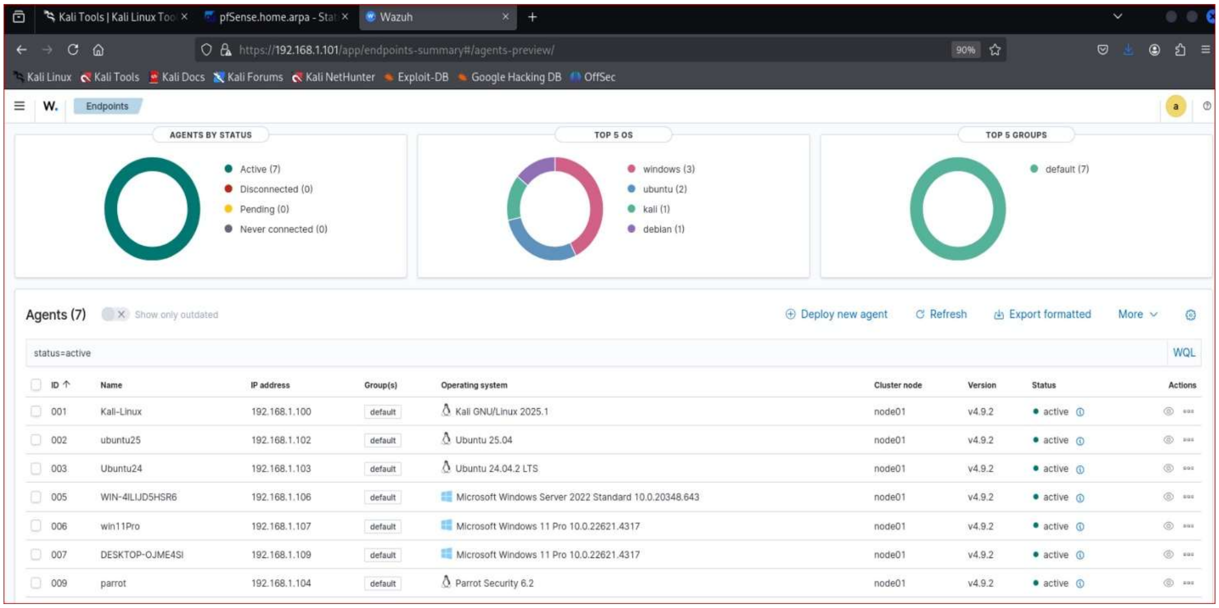
Set up of O-Enterprise network environment

The network landscape of O-Enterprise was setup in a virtual environment. Nmap and Nessus tools were installed and setup for the vulnerability assessment, tested and confirmed working in good condition. We had mix of Virtual Machine (VMs) running through the PFsense firewall and monitored on Wazuh dashboard and all were tested.

O-Enterprise Organizational network layout



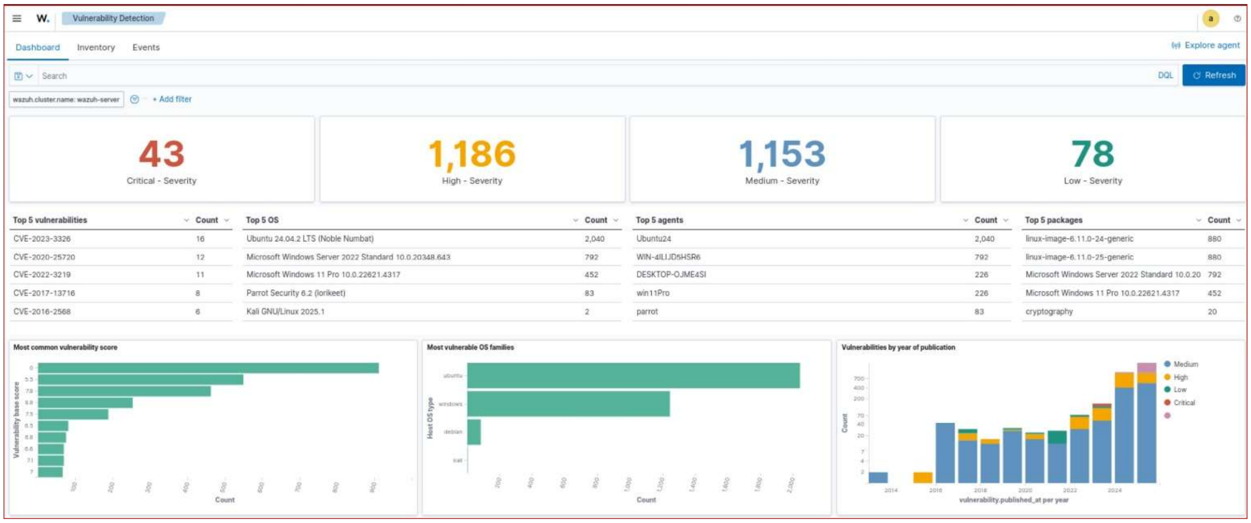
Wazuh server dashboard showing all the VMs in service



status=active

ID ↑	Name	IP address	Group(s)	Operating system	Cluster node	Version	Status	Actions
001	Kali-Linux	192.168.1.100	default	Kali GNU/Linux 2025.1	node01	v4.9.2	● active	
002	ubuntu25	192.168.1.102	default	Ubuntu 25.04	node01	v4.9.2	● active	
003	Ubuntu24	192.168.1.103	default	Ubuntu 24.04.2 LTS	node01	v4.9.2	● active	
005	WIN-4ILIJD5HSR6	192.168.1.106	default	Microsoft Windows Server 2022 Standard 10.0.20348.643	node01	v4.9.2	● active	
006	win11Pro	192.168.1.107	default	Microsoft Windows 11 Pro 10.0.22621.4317	node01	v4.9.2	● active	
007	DESKTOP-OJME4SI	192.168.1.109	default	Microsoft Windows 11 Pro 10.0.22621.4317	node01	v4.9.2	● active	
009	parrot	192.168.1.104	default	Parrot Security 6.2	node01	v4.9.2	● active	

Wazuh Server vulnerability detection on the dashboard



43
Critical - Severity

1,186
High - Severity

1,153
Medium - Severity

78
Low - Severity

Top 5 vulnerabilities	Count
CVE-2023-3326	16
CVE-2020-25720	12
CVE-2022-3219	11
CVE-2017-13716	8
CVE-2016-2568	6

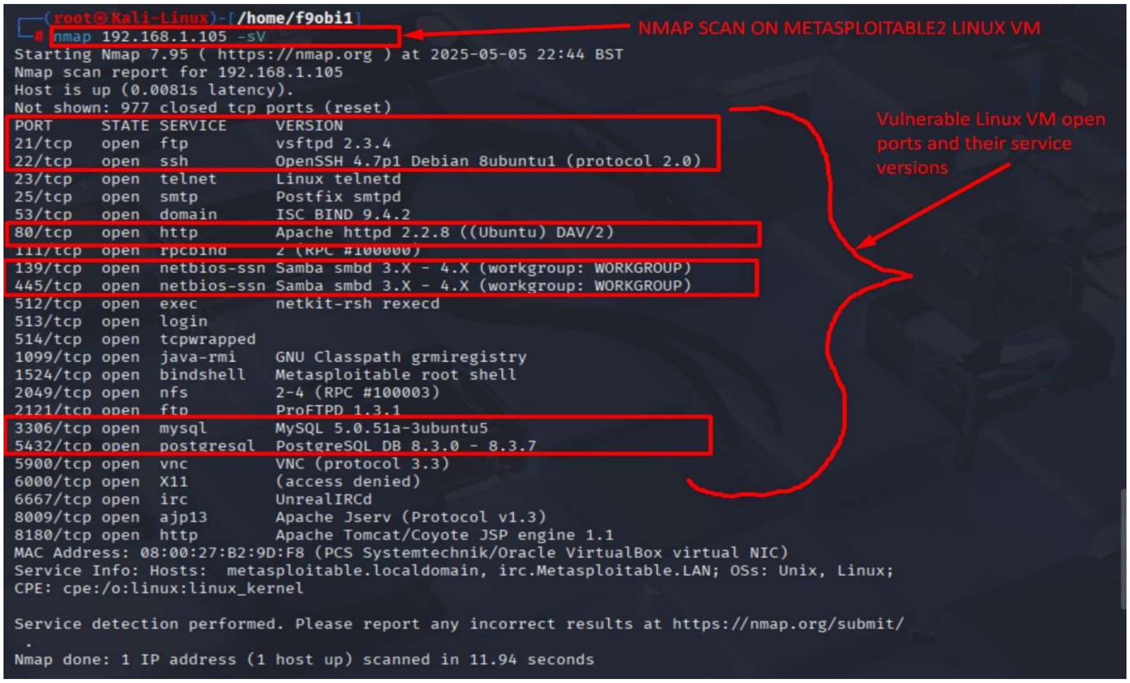
Top 5 OS	Count
Ubuntu 24.04.2 LTS (Noble Numbat)	2,040
Microsoft Windows Server 2022 Standard 10.0.20348.643	792
Microsoft Windows 11 Pro 10.0.22621.4317	452
Parrot Security 6.2 (lorikeet)	83
Kali GNU/Linux 2025.1	2

Top 5 agents	Count
Ubuntu24	2,040
WIN-4ILIJD5HSR6	792
DESKTOP-OJME4SI	226
win11Pro	226
parrot	83

Top 5 packages	Count
linux-image-6.11.0-24-generic	880
linux-image-6.11.0-25-generic	880
Microsoft Windows Server 2022 Standard 10.0.20	792
Microsoft Windows 11 Pro 10.0.22621.4317	452
cryptography	20

Comprehensive VMs / network scanning Using Nmap

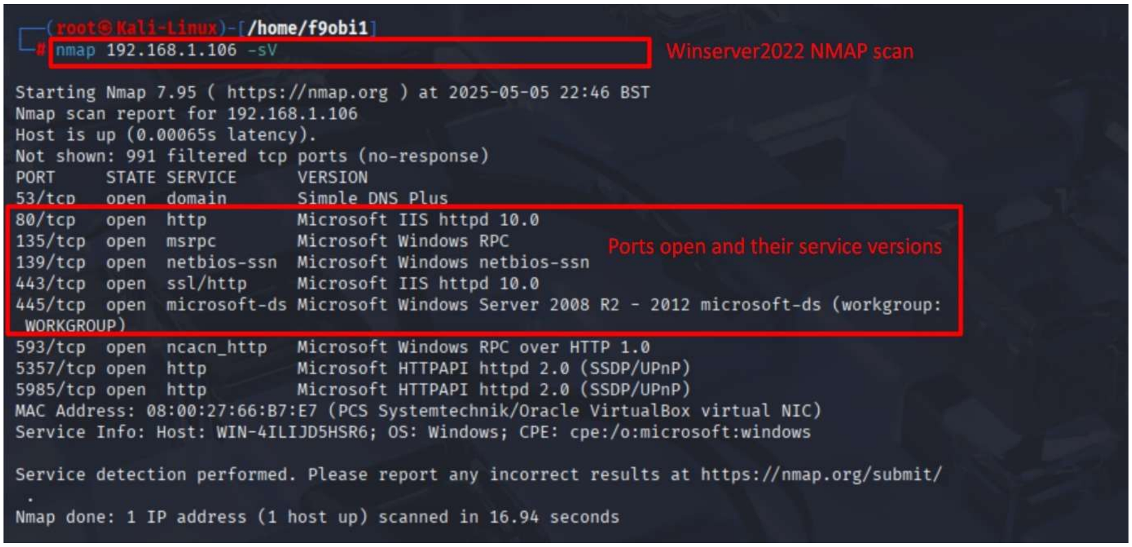
A comprehensive Nmap scan was done on the virtual machines to identify their open ports and corresponding network services. Kali-Linux machine was used for all scanning activities on the targeted machines. The VMs scanned were a vulnerable Linux (Metasploit2), Windows server 2022, Ubuntu Linux, windows 11 Pro and ParrotOS security including the Kali itself. Below are snapshots of some of the findings



NMAP SCAN ON METASPLOITABLE2 LINUX VM

Vulnerable Linux VM open ports and their service versions

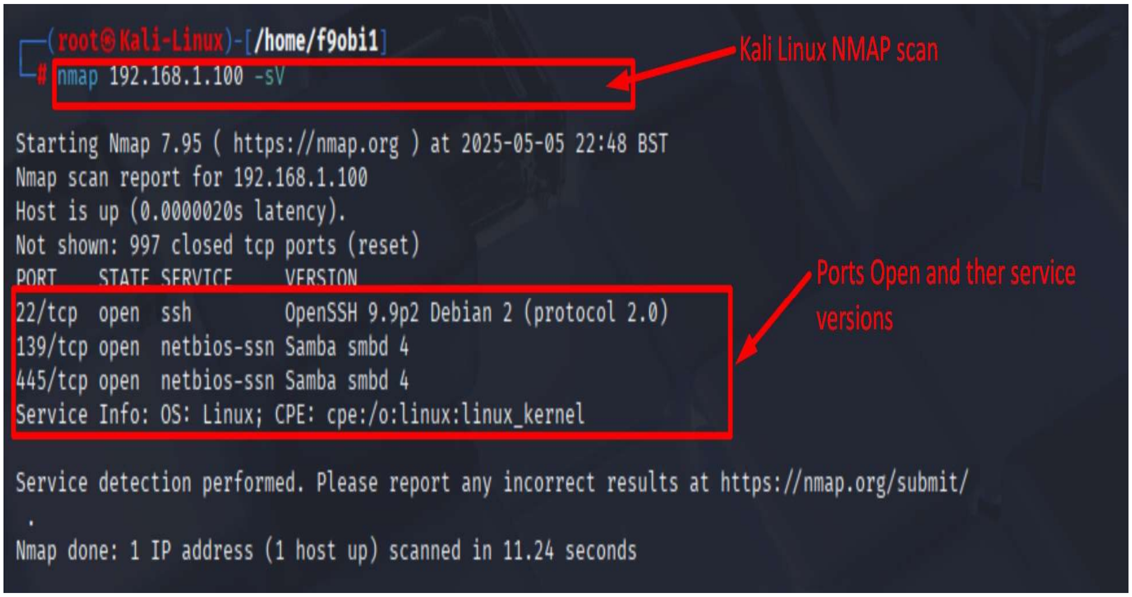
```
┌──(root㉿Kali-Linux)-[/home/f9obi1]
└─# nmap 192.168.1.105 -sV
Starting Nmap 7.95 ( https://nmap.org ) at 2025-05-05 22:44 BST
Nmap scan report for 192.168.1.105
Host is up (0.0081s latency).
Not shown: 977 closed tcp ports (reset)
PORT      STATE SERVICE     VERSION
21/tcp    open  ftp         vsftpd 2.3.4
22/tcp    open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
23/tcp    open  telnet      Linux telnetd
25/tcp    open  smtp        Postfix smtpd
53/tcp    open  domain      ISC BIND 9.4.2
80/tcp    open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
111/tcp   open  rpcbind     2 (RPC #100000)
139/tcp   open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp   open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
512/tcp   open  exec        netkit-rsh rexecd
513/tcp   open  login
514/tcp   open  tcpwrapped
1099/tcp open  java-rmi    GNU Classpath grmiregistry
1524/tcp open  bindshell   Metasploitable root shell
2049/tcp open  nfs         2-4 (RPC #100003)
2121/tcp open  ftp         ProFTPD 1.3.1
3306/tcp open  mysql       MySQL 5.0.51a-3ubuntu5
5432/tcp open  postgresql  PostgreSQL DB 8.3.0 - 8.3.7
5900/tcp open  vnc         VNC (protocol 3.3)
6000/tcp open  X11         (access denied)
6667/tcp open  irc         UnrealIRCd
8009/tcp open  ajp13       Apache Jserv (Protocol v1.3)
8180/tcp open  http        Apache Tomcat/Coyote JSP engine 1.1
MAC Address: 08:00:27:B2:9D:F8 (PCS Systemtechnik/Oracle VirtualBox virtual NIC)
Service Info: Hosts:  metasploitable.localdomain, irc.Metasploitable.LAN; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/
.
Nmap done: 1 IP address (1 host up) scanned in 11.94 seconds
```



```
┌──(root㉿Kali-Linux)-[/home/f9obi1]
└─# nmap 192.168.1.106 -sV

Starting Nmap 7.95 ( https://nmap.org ) at 2025-05-05 22:46 BST
Nmap scan report for 192.168.1.106
Host is up (0.00065s latency).
Not shown: 991 filtered tcp ports (no-response)
PORT     STATE SERVICE      VERSION
53/tcp   open  domain       Simple DNS Plus
80/tcp   open  http         Microsoft IIS httpd 10.0
135/tcp  open  msrpc        Microsoft Windows RPC
139/tcp  open  netbios-ssn  Microsoft Windows netbios-ssn
443/tcp  open  ssl/http     Microsoft IIS httpd 10.0
445/tcp  open  microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup:
 WORKGROUP)
593/tcp  open  ncacn_http   Microsoft Windows RPC over HTTP 1.0
5357/tcp open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
5985/tcp open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
MAC Address: 08:00:27:66:B7:E7 (PCS Systemtechnik/Oracle VirtualBox virtual NIC)
Service Info: Host: WIN-4ILIJD5HSR6; OS: Windows; CPE: cpe:/o:microsoft:windows

Service detection performed. Please report any incorrect results at https://nmap.org/submit/
 .
Nmap done: 1 IP address (1 host up) scanned in 16.94 seconds
```

Winserver2022 NMAP scan

Ports open and their service versions



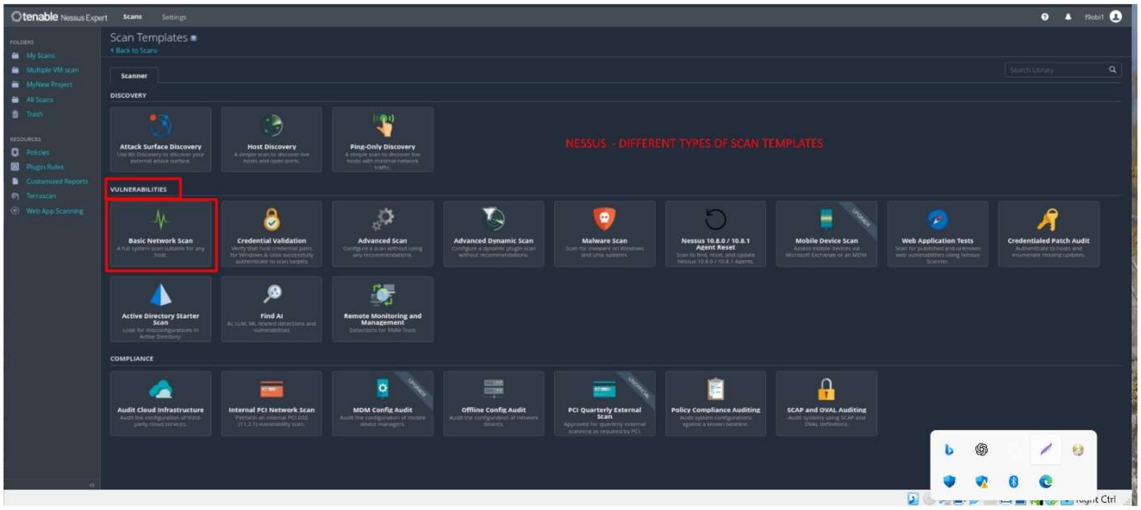
```
┌──(root㉿Kali-Linux)-[/home/f9obi1]
└─# nmap 192.168.1.100 -sV

Starting Nmap 7.95 ( https://nmap.org ) at 2025-05-05 22:48 BST
Nmap scan report for 192.168.1.100
Host is up (0.0000020s latency).
Not shown: 997 closed tcp ports (reset)
PORT    STATE SERVICE     VERSION
22/tcp  open  ssh         OpenSSH 9.9p2 Debian 2 (protocol 2.0)
139/tcp open  netbios-ssn Samba smbd 4
445/tcp open  netbios-ssn Samba smbd 4
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/
 .
Nmap done: 1 IP address (1 host up) scanned in 11.24 seconds
```

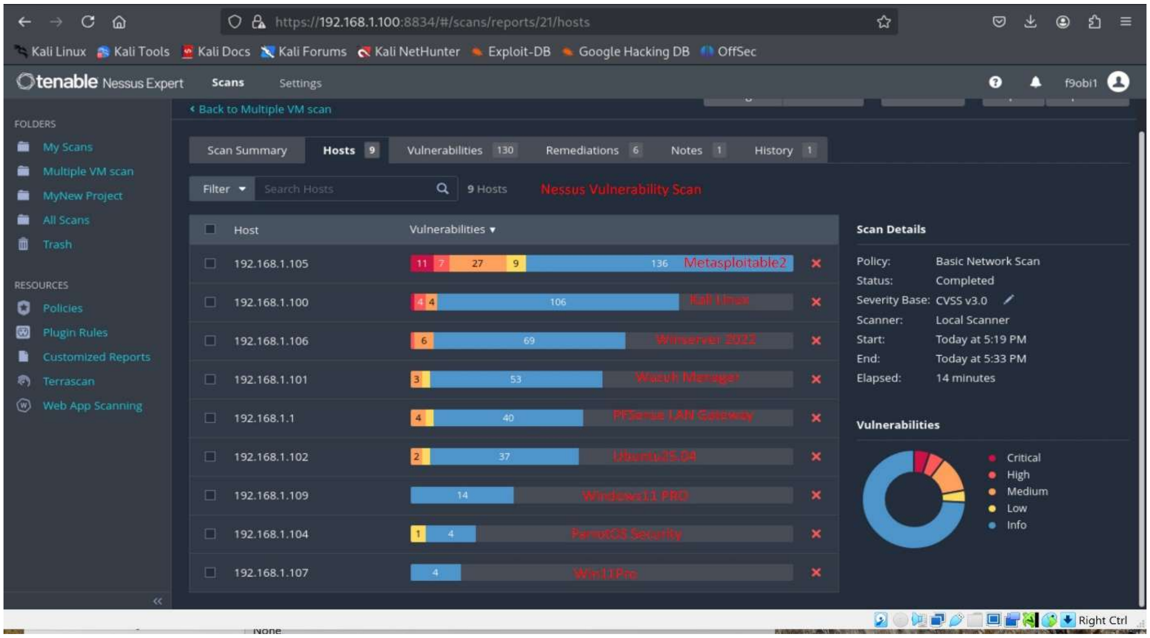
Kali Linux NMAP scan

Ports Open and ther service versions

Comprehensive vulnerability scans using Nessus

A comprehensive vulnerability scan was done on the targeted VMs and opened ports using the simple network scan template of the Nessus. Several results were obtained showing their vulnerabilities, issue descriptions, possible remediations, corresponding CVE & CVSS numbers. See some excerpts below;





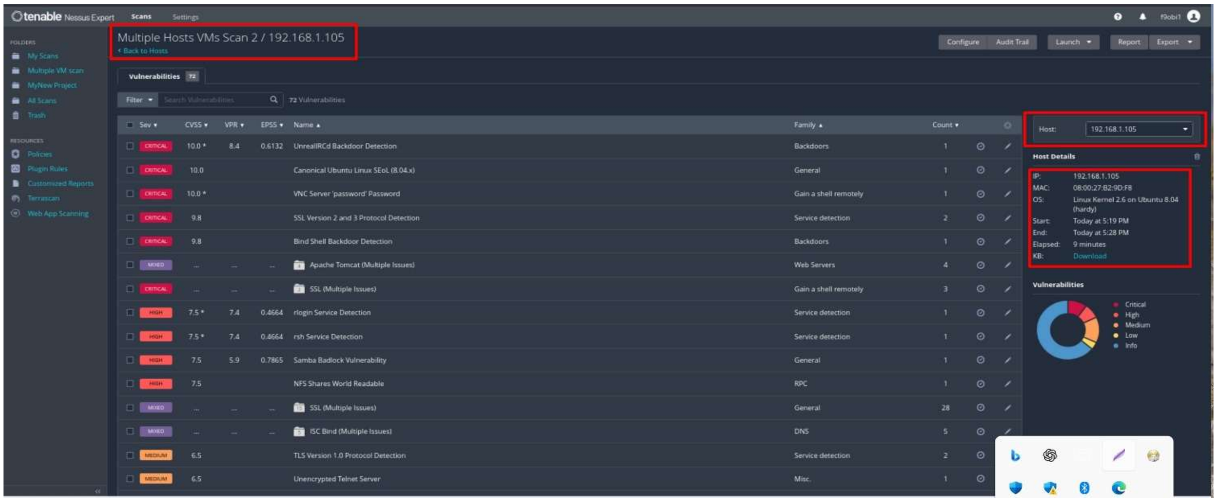
Host	Vulnerabilities	
192.168.1.105	11 7 27 9 136	Metasploitable2
192.168.1.100	4 4 106	Kali Linux
192.168.1.106	6 69	Winserver 2022
192.168.1.101	3 53	Wazuh Manager
192.168.1.1	4 40	PFSense LAN Gateway
192.168.1.102	2 37	Ubuntu25.04
192.168.1.109	14	Windows11 PRO
192.168.1.104	1 4	ParrotOS Security
192.168.1.107	4	Win11Pro

Scan Details

Policy: Basic Network Scan
Status: Completed
Severity Base: CVSS v3.0
Scanner: Local Scanner
Start: Today at 5:19 PM
End: Today at 5:33 PM
Elapsed: 14 minutes

Vulnerabilities

The ab



Multiple Hosts VMs Scan 2 / 192.168.1.105
‹ Back to Hosts

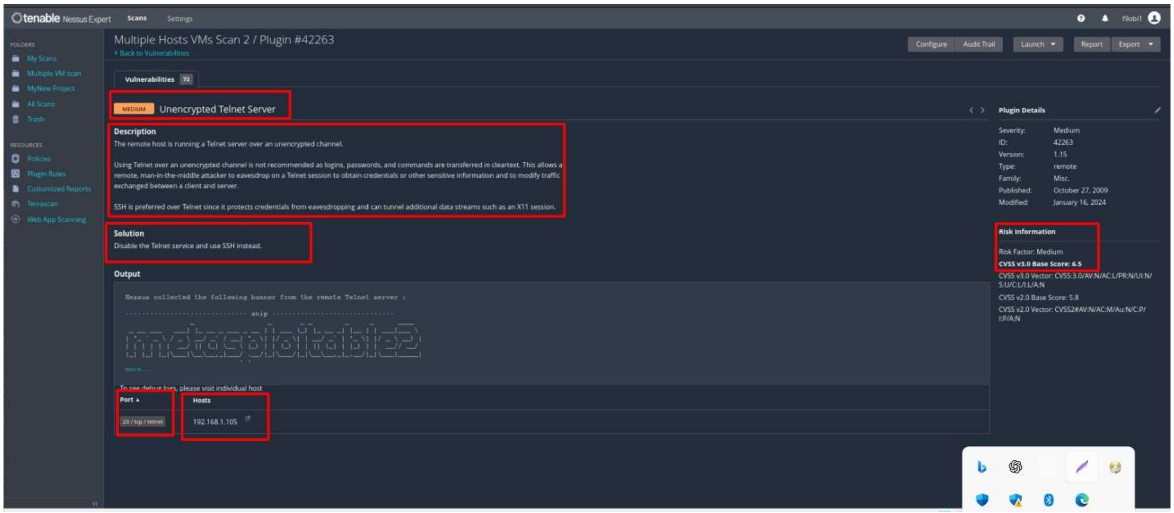
Sev	CVSS	VPR	EPSS	Name	Family	Count
CRITICAL	10.0 *	8.4	0.6132	UnrealIRCd Backdoor Detection	Backdoors	1
CRITICAL	10.0			Canonical Ubuntu Linux SEoL (8.04.x)	General	1
CRITICAL	10.0 *			VNC Server 'password' Password	Gain a shell remotely	1
CRITICAL	9.8			SSL Version 2 and 3 Protocol Detection	Service detection	2
CRITICAL	9.8			Bind Shell Backdoor Detection	Backdoors	1
MIXED	...	...	...	Apache Tomcat (Multiple Issues)	Web Servers	4
CRITICAL	...	...	...	SSL (Multiple Issues)	Gain a shell remotely	3
HIGH	7.5 *	7.4	0.4664	rlogin Service Detection	Service detection	1
HIGH	7.5 *	7.4	0.4664	rsh Service Detection	Service detection	1
HIGH	7.5	5.9	0.7865	Samba Badlock Vulnerability	General	1
HIGH	7.5			NFS Shares World Readable	RPC	1
MIXED	...	...	...	SSL (Multiple Issues)	General	28
MIXED	...	...	...	ISC Bind (Multiple Issues)	DNS	5
MEDIUM	6.5			TLS Version 1.0 Protocol Detection	Service detection	2
MEDIUM	6.5			Unencrypted Telnet Server	Misc.	1

Host: 192.168.1.105

Host Details

IP: 192.168.1.105
MAC: 08:00:27:B2:9D:F8
OS: Linux Kernel 2.6 on Ubuntu 8.04 (hardy)
Start: Today at 5:19 PM
End: Today at 5:28 PM
Elapsed: 9 minutes
KB: Download

Vulnerabilities



Multiple Hosts VMs Scan 2 / Plugin #42263

‹ Back to Vulnerabilities

Unencrypted Telnet Server

Description

The remote host is running a Telnet server over an unencrypted channel.

Using Telnet over an unencrypted channel is not recommended as logins, passwords, and commands are transferred in cleartext. This allows a remote, man-in-the-middle attacker to eavesdrop on a Telnet session to obtain credentials or other sensitive information and to modify traffic exchanged between a client and server.

SSH is preferred over Telnet since it protects credentials from eavesdropping and can tunnel additional data streams such as an X11 session.

Solution

Disable the Telnet service and use SSH instead.

Output

```
Nessus collected the following banner from the remote Telnet server :

------------------------------ snip ------------------------------

more...
```

To see debug logs, please visit individual host

Port ▲	Hosts
23 / tcp / telnet	192.168.1.105

Plugin Details

Severity:	Medium
ID:	42263
Version:	1.15
Type:	remote
Family:	Misc.
Published:	October 27, 2009
Modified:	January 16, 2024

Risk Information

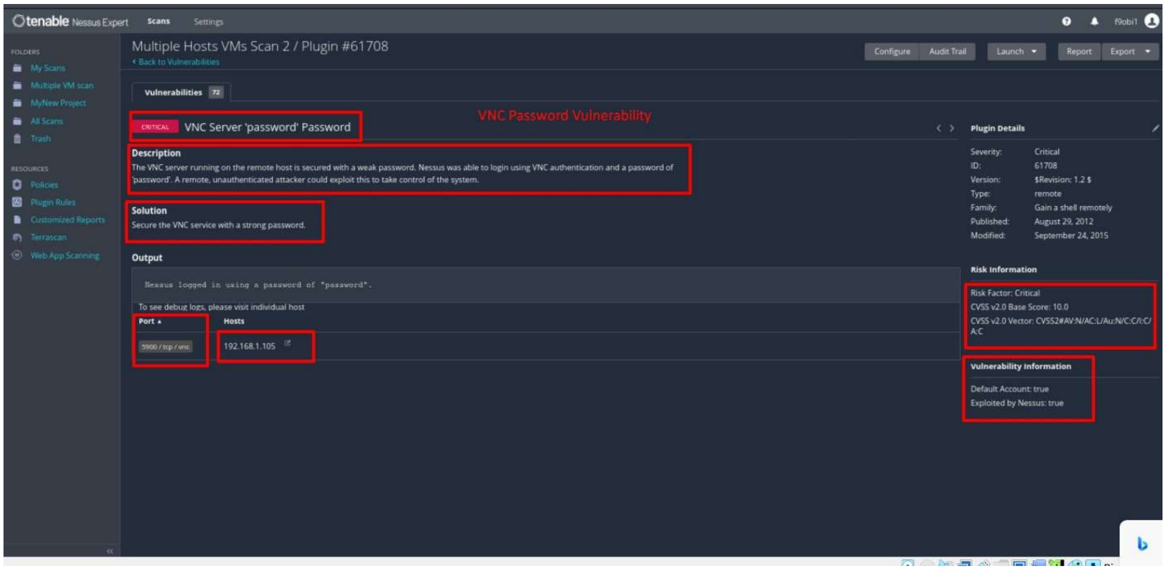
Risk Factor: Medium

CVSS v3.0 Base Score: 6.5

CVSS v3.0 Vector: CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:N

CVSS v2.0 Base Score: 5.8

CVSS v2.0 Vector: CVSS2#AV:N/AC:M/Au:N/C:P/I:P/A:N



Multiple Hosts VMs Scan 2 / Plugin #61708

‹ Back to Vulnerabilities

VNC Server 'password' Password

VNC Password Vulnerability

Description

The VNC server running on the remote host is secured with a weak password. Nessus was able to login using VNC authentication and a password of 'password'. A remote, unauthenticated attacker could exploit this to take control of the system.

Solution

Secure the VNC service with a strong password.

Output

```
Nessus logged in using a password of "password".
```

To see debug logs, please visit individual host

Port ▲	Hosts
5900 / tcp / vnc	192.168.1.105

Plugin Details

Severity:	Critical
ID:	61708
Version:	$Revision: 1.2 $
Type:	remote
Family:	Gain a shell remotely
Published:	August 29, 2012
Modified:	September 24, 2015

Risk Information

Risk Factor: Critical

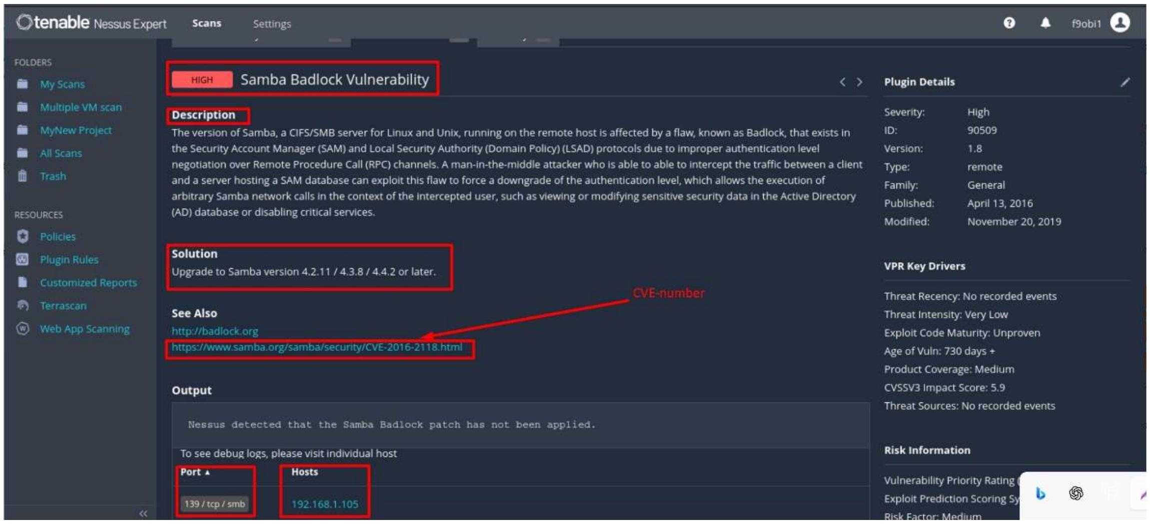
CVSS v2.0 Base Score: 10.0

CVSS v2.0 Vector: CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C

Vulnerability Information

Default Account: true

Exploited by Nessus: true



Samba Badlock Vulnerability

Description

The version of Samba, a CIFS/SMB server for Linux and Unix, running on the remote host is affected by a flaw, known as Badlock, that exists in the Security Account Manager (SAM) and Local Security Authority (Domain Policy) (LSAD) protocols due to improper authentication level negotiation over Remote Procedure Call (RPC) channels. A man-in-the-middle attacker who is able to able to intercept the traffic between a client and a server hosting a SAM database can exploit this flaw to force a downgrade of the authentication level, which allows the execution of arbitrary Samba network calls in the context of the intercepted user, such as viewing or modifying sensitive security data in the Active Directory (AD) database or disabling critical services.

Solution

Upgrade to Samba version 4.2.11 / 4.3.8 / 4.4.2 or later.

CVE-number

See Also

http://badlock.org

https://www.samba.org/samba/security/CVE-2016-2118.html

Output

```
Nessus detected that the Samba Badlock patch has not been applied.
```

To see debug logs, please visit individual host

Port ▲	Hosts
139 / tcp / smb	192.168.1.105

Plugin Details

Severity:	High
ID:	90509
Version:	1.8
Type:	remote
Family:	General
Published:	April 13, 2016
Modified:	November 20, 2019

VPR Key Drivers

Threat Recency: No recorded events

Threat Intensity: Very Low

Exploit Code Maturity: Unproven

Age of Vuln: 730 days +

Product Coverage: Medium

CVSSV3 Impact Score: 5.9

Threat Sources: No recorded events

Risk Information

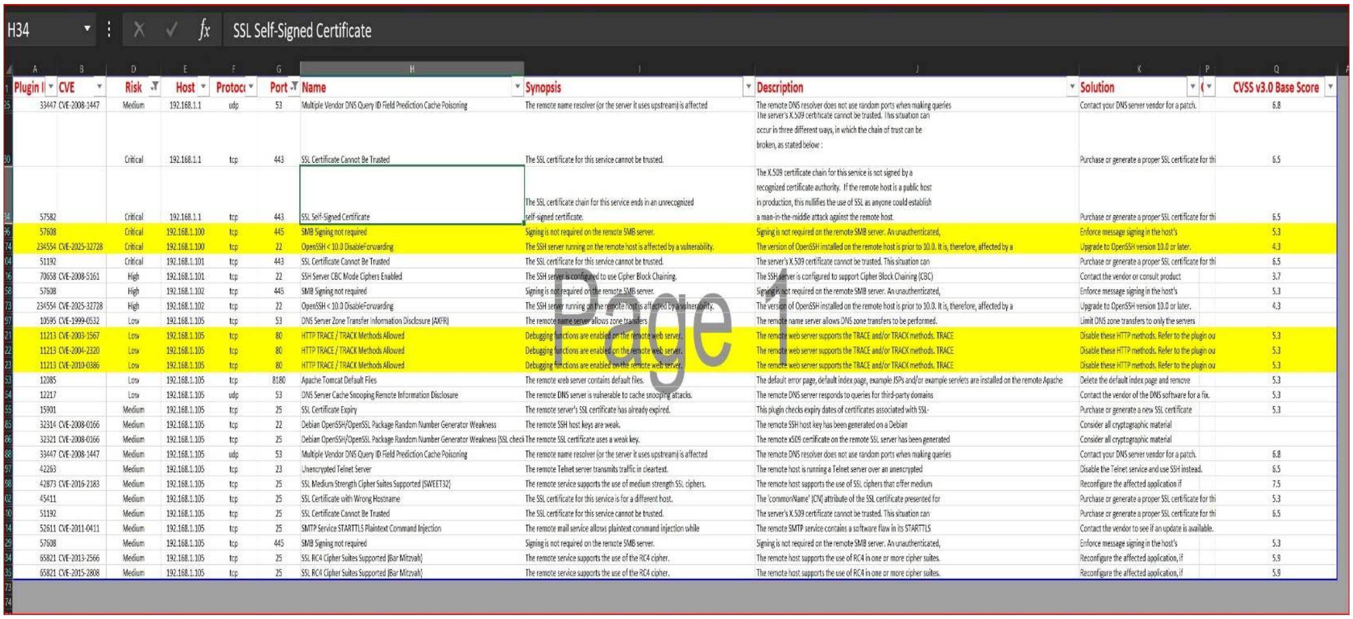
Vulnerability Priority Rating

Exploit Prediction Scoring Sy

Risk Factor: Medium

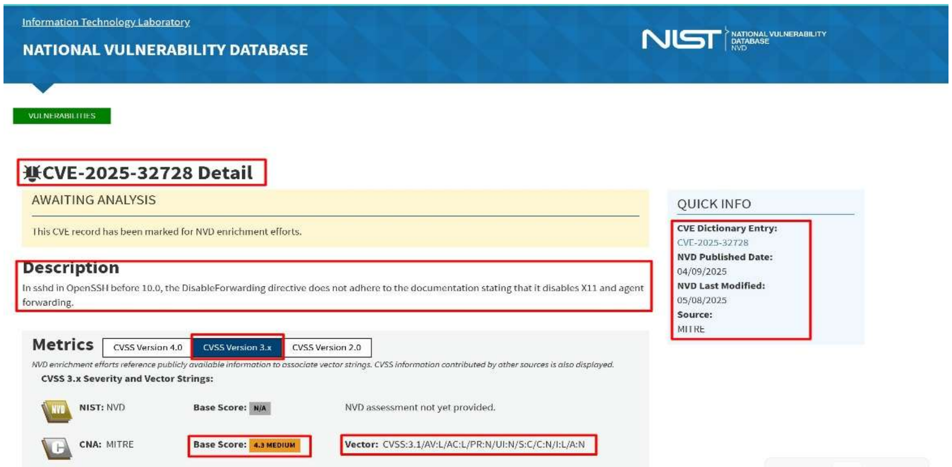
Validation of findings and correlation of results

The target hosts/open service ports rom Nmap scan are matched with scan results form the Nessus vulnerability scan. The correlations matched as shown in the MS Excel table below. Nessus was also able to generate the CVE/CVSS numbers, synopsis, descriptions and solutions -



H34 | SSL Self-Signed Certificate

Plugin I	CVE	Risk	Host	Protoc	Port	Name	Synopsis	Description	Solution	(	CVSS v3.0 Base Score
33447	CVE-2008-1447	Medium	192.168.1.1	udp	53	Multiple Vendor DNS Query ID Field Prediction Cache Poisoning	The remote name resolver (or the server it uses upstream) is affected	The remote DNS resolver does not use random ports when making queries	Contact your DNS server vendor for a patch.		6.8
		Critical	192.168.1.1	tcp	443	SSL Certificate Cannot Be Trusted	The SSL certificate for this service cannot be trusted.	The server's X.509 certificate cannot be trusted. This situation can occur in three different ways, in which the chain of trust can be broken, as stated below :	Purchase or generate a proper SSL certificate for thi		6.5
57582		Critical	192.168.1.1	tcp	443	SSL Self-Signed Certificate	The SSL certificate chain for this service ends in an unrecognized self-signed certificate.	The X.509 certificate chain for this service is not signed by a recognized certificate authority. If the remote host is a public host in production, this nullifies the use of SSL as anyone could establish a man-in-the-middle attack against the remote host.	Purchase or generate a proper SSL certificate for thi		6.5
57608		Critical	192.168.1.100	tcp	445	SMB Signing not required	Signing is not required on the remote SMB server.	Signing is not required on the remote SMB server. An unauthenticated,	Enforce message signing in the host's		5.3
234554	CVE-2025-32728	Critical	192.168.1.100	tcp	22	OpenSSH < 10.0 DisableForwarding	The SSH server running on the remote host is affected by a vulnerability.	The version of OpenSSH installed on the remote host is prior to 10.0. It is, therefore, affected by a	Upgrade to OpenSSH version 10.0 or later.		4.3
51192		Critical	192.168.1.101	tcp	443	SSL Certificate Cannot Be Trusted	The SSL certificate for this service cannot be trusted.	The server's X.509 certificate cannot be trusted. This situation can	Purchase or generate a proper SSL certificate for thi		6.5
70658	CVE-2008-5161	High	192.168.1.101	tcp	22	SSH Server CBC Mode Ciphers Enabled	The SSH server is configured to use Cipher Block Chaining.	The SSH server is configured to support Cipher Block Chaining (CBC)	Contact the vendor or consult product		3.7
57608		High	192.168.1.102	tcp	445	SMB Signing not required	Signing is not required on the remote SMB server.	Signing is not required on the remote SMB server. An unauthenticated,	Enforce message signing in the host's		5.3
234554	CVE-2025-32728	High	192.168.1.102	tcp	22	OpenSSH < 10.0 DisableForwarding	The SSH server running on the remote host is affected by a vulnerability.	The version of OpenSSH installed on the remote host is prior to 10.0. It is, therefore, affected by a	Upgrade to OpenSSH version 10.0 or later.		4.3
10595	CVE-1999-0532	Low	192.168.1.105	tcp	53	DNS Server Zone Transfer Information Disclosure (AXFR)	The remote name server allows zone transfers	The remote name server allows DNS zone transfers to be performed.	Limit DNS zone transfers to only the servers		
11213	CVE-2003-1567	Low	192.168.1.105	tcp	80	HTTP TRACE / TRACK Methods Allowed	Debugging functions are enabled on the remote web server.	The remote web server supports the TRACE and/or TRACK methods. TRACE	Disable these HTTP methods. Refer to the plugin ou		5.3
11213	CVE-2004-2320	Low	192.168.1.105	tcp	80	HTTP TRACE / TRACK Methods Allowed	Debugging functions are enabled on the remote web server.	The remote web server supports the TRACE and/or TRACK methods. TRACE	Disable these HTTP methods. Refer to the plugin ou		5.3
11213	CVE-2010-0386	Low	192.168.1.105	tcp	80	HTTP TRACE / TRACK Methods Allowed	Debugging functions are enabled on the remote web server.	The remote web server supports the TRACE and/or TRACK methods. TRACE	Disable these HTTP methods. Refer to the plugin ou		5.3
12085		Low	192.168.1.105	tcp	8180	Apache Tomcat Default Files	The remote web server contains default files.	The default error page, default index page, example JSPs and/or example servlets are installed on the remote Apache	Delete the default index page and remove		5.3
12217		Low	192.168.1.105	udp	53	DNS Server Cache Snooping Remote Information Disclosure	The remote DNS server is vulnerable to cache snooping attacks.	The remote DNS server responds to queries for third-party domains	Contact the vendor of the DNS software for a fix.		5.3
15901		Medium	192.168.1.105	tcp	25	SSL Certificate Expiry	The remote server's SSL certificate has already expired.	This plugin checks expiry dates of certificates associated with SSL-	Purchase or generate a new SSL certificate		5.3
32314	CVE-2008-0166	Medium	192.168.1.105	tcp	22	Debian OpenSSH/OpenSSL Package Random Number Generator Weakness	The remote SSH host keys are weak.	The remote SSH host key has been generated on a Debian	Consider all cryptographic material		
32321	CVE-2008-0166	Medium	192.168.1.105	tcp	25	Debian OpenSSH/OpenSSL Package Random Number Generator Weakness (SSL check	The remote SSL certificate uses a weak key.	The remote x509 certificate on the remote SSL server has been generated	Consider all cryptographic material		
33447	CVE-2008-1447	Medium	192.168.1.105	udp	53	Multiple Vendor DNS Query ID Field Prediction Cache Poisoning	The remote name resolver (or the server it uses upstream) is affected	The remote DNS resolver does not use random ports when making queries	Contact your DNS server vendor for a patch.		6.8
42263		Medium	192.168.1.105	tcp	23	Unencrypted Telnet Server	The remote Telnet server transmits traffic in cleartext.	The remote host is running a Telnet server over an unencrypted	Disable the Telnet service and use SSH instead.		6.5
42873	CVE-2016-2183	Medium	192.168.1.105	tcp	25	SSL Medium Strength Cipher Suites Supported (SWEET32)	The remote service supports the use of medium strength SSL ciphers.	The remote host supports the use of SSL ciphers that offer medium	Reconfigure the affected application if		7.5
45411		Medium	192.168.1.105	tcp	25	SSL Certificate with Wrong Hostname	The SSL certificate for this service is for a different host.	The 'commonName' (CN) attribute of the SSL certificate presented for	Purchase or generate a proper SSL certificate for thi		5.3
51192		Medium	192.168.1.105	tcp	25	SSL Certificate Cannot Be Trusted	The SSL certificate for this service cannot be trusted.	The server's X.509 certificate cannot be trusted. This situation can	Purchase or generate a proper SSL certificate for thi		6.5
52611	CVE-2011-0411	Medium	192.168.1.105	tcp	25	SMTP Service STARTTLS Plaintext Command Injection	The remote mail service allows plaintext command injection while	The remote SMTP service contains a software flaw in its STARTTLS	Contact the vendor to see if an update is available.		
57608		Medium	192.168.1.105	tcp	445	SMB Signing not required	Signing is not required on the remote SMB server.	Signing is not required on the remote SMB server. An unauthenticated,	Enforce message signing in the host's		5.3
65821	CVE-2013-2566	Medium	192.168.1.105	tcp	25	SSL RC4 Cipher Suites Supported (Bar Mitzvah)	The remote service supports the use of the RC4 cipher.	The remote host supports the use of RC4 in one or more cipher suites.	Reconfigure the affected application, if		5.9
65821	CVE-2015-2808	Medium	192.168.1.105	tcp	25	SSL RC4 Cipher Suites Supported (Bar Mitzvah)	The remote service supports the use of the RC4 cipher.	The remote host supports the use of RC4 in one or more cipher suites.	Reconfigure the affected application, if		5.9



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CVE-2025-32728 Detail

AWAITING ANALYSIS

This CVE record has been marked for NVD enrichment efforts.

Description

In sshd in OpenSSH before 10.0, the DisableForwarding directive does not adhere to the documentation stating that it disables X11 and agent forwarding.

Metrics

NVD enrichment efforts reference publicly available information to associate vector strings. CVSS information contributed by other sources is also displayed.

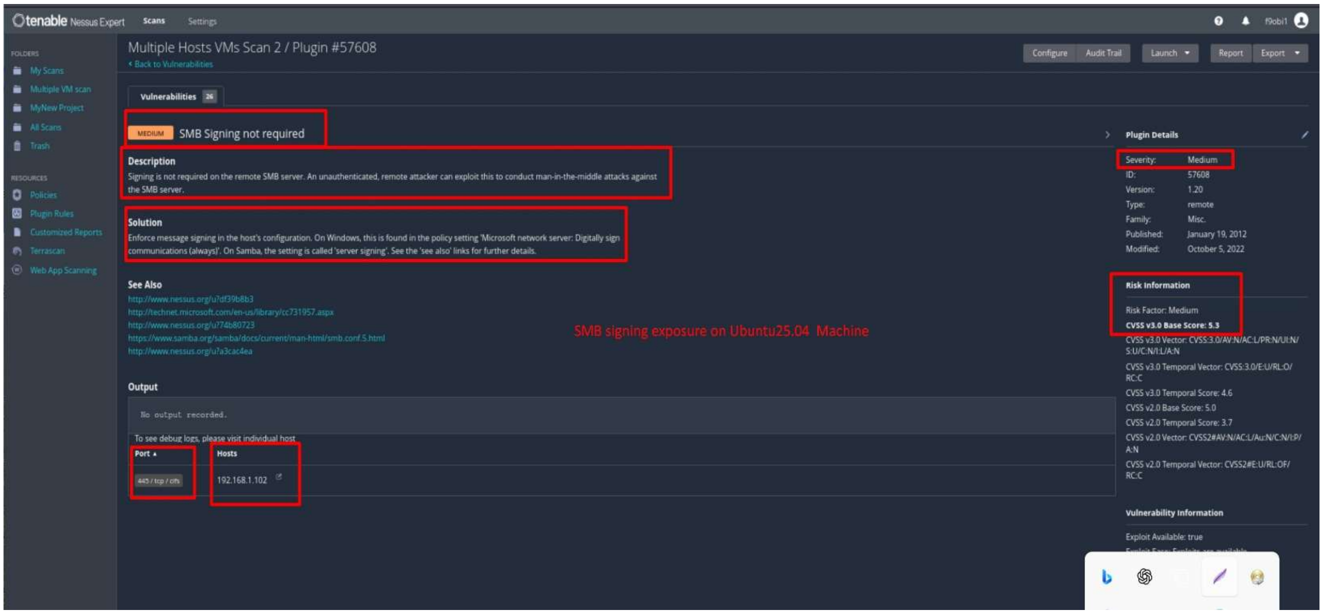
CVSS 3.x Severity and Vector Strings:

NIST: NVD — Base Score: N/A — NVD assessment not yet provided.

CNA: MITRE — Base Score: 4.3 MEDIUM — Vector: CVSS:3.1/AV:L/AC:L/PR:N/UI:N/S:C/C:N/I:L/A:N

QUICK INFO

CVE Dictionary Entry: CVE-2025-32728
NVD Published Date: 04/09/2025
NVD Last Modified: 05/08/2025
Source: MITRE



Multiple Hosts VMs Scan 2 / Plugin #57608

MEDIUM SMB Signing not required

Description

Signing is not required on the remote SMB server. An unauthenticated, remote attacker can exploit this to conduct man-in-the-middle attacks against the SMB server.

Solution

Enforce message signing in the host's configuration. On Windows, this is found in the policy setting 'Microsoft network server: Digitally sign communications (always)'. On Samba, the setting is called 'server signing'. See the 'see also' links for further details.

See Also

http://www.nessus.org/u?df39b8b3
http://technet.microsoft.com/en-us/library/cc731957.aspx
http://www.nessus.org/u?74b80723
https://www.samba.org/samba/docs/current/man-html/smb.conf.5.html
http://www.nessus.org/u?a3cac4ea

SMB signing exposure on Ubuntu25.04 Machine

Output

```
No output recorded.
```

To see debug logs, please visit individual host

Port ▲	Hosts
445 / tcp / cifs	192.168.1.102

Plugin Details

Severity: Medium
ID: 57608
Version: 1.20
Type: remote
Family: Misc.
Published: January 19, 2012
Modified: October 5, 2022

Risk Information

Risk Factor: Medium
CVSS v3.0 Base Score: 5.3
CVSS v3.0 Vector: CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:L/A:N
CVSS v3.0 Temporal Vector: CVSS:3.0/E:U/RL:O/RC:C
CVSS v3.0 Temporal Score: 4.6
CVSS v2.0 Base Score: 5.0
CVSS v2.0 Temporal Score: 3.7
CVSS v2.0 Vector: CVSS2#AV:N/AC:L/Au:N/C:N/I:P/A:N
CVSS v2.0 Temporal Vector: CVSS2#E:U/RL:OF/RC:C

Vulnerability Information

Exploit Available: true

Remediations / Recommendations

The following are some of the recommendations mitigate / remediate identified vulnerabilities

- Implementation of all recommendations must be prioritized according to risk levels starting with critical, high, medium and low
- Host-IP 192.168.1.1:443 (PFsense firewall) SSL certificate cannot be trusted **– Critical risk.** The solution is to Purchase or generate a proper SSL certificate for this service.
- Host-IP 192.168.1.102:445 (Ubuntu25) **high risk.** Signing is not required on the remote SMB server. An unauthenticated, remote attacker can exploit this to conduct man-in-the-middle attacks against the SMB server. Enforce message signing in the host's configuration. On Windows, this is found in the policy setting 'Microsoft network server. On Samba, the setting is called 'server signing'.
- CVE-2025-32728 on host-IP 192.168.1.100:22 **(Kali – medium risk)** is <version 10.0, disable forwarding. The version of OpenSSH installed on the remote host is prior to 10.0. It is, therefore, affected by a vulnerability. In sshd in OpenSSH the Disable Forwarding directive does not adhere to the documentation. Solution is to upgrade to OpenSSH version 10.0 or later.
- CVE-2010-0386 **Low risk** on host 192.168.1.105:80 (Metasploit Vulnerable Linux). The remote web server supports the TRACE and/or TRACK methods. TRACE and TRACK are HTTP methods that are used to debug web server connections. Disable these HTTP methods. Refer to the plugin output for more information.
- All identified vulnerabilities that borders on misconfigurations should be corrected immediately to prevent attackers from discovering and exploiting them anytime.
- All open network port services that are not in use/never used should be closed effective immediately
- The identified outdated services/unpatched applications (e.g. SSHD<10.0 & SSL cert.) should urgently be patched and updated to improve service resilience/ overall security posture
- All open action items /recommendations from past and present vulnerability assessment to tracked to closure to ensure effectiveness of risk management process and eliminate existing/potential exposures