S5L3 Nessus

Introduzione:

Nessus è uno **scanner di vulnerabilità**, ampiamente usato nel campo della cybersecurity, per la sua efficienza e funzionalità. Tutto ciò che fa è analizzare una rete per scovarne le vulnerabilità, successivamente tramite degli **exploit** va a testare le stesse per dargli un grado di importanza in base a quanto potrebbero essere vulnerabili da un attacco (**High**, **Mixed**, **Info** etc...)

Una volta effettuato lo scan e testato gli exploit, compilerà un report, che potrà essere o **riassuntivo** (10-20 pagine), o **dettagliato** (anche 200 pagine).

Nel mondo CS troviamo anche **OpenVas** che è **simile** a Nessus, appartenente alla stessa famiglia ed offre gli stessi servizi, OpenVas però è molto **più lento** rispetto a Nessus, e la sua interfaccia non è **userfriendly** come per OpenVas.

Studio della scansione:

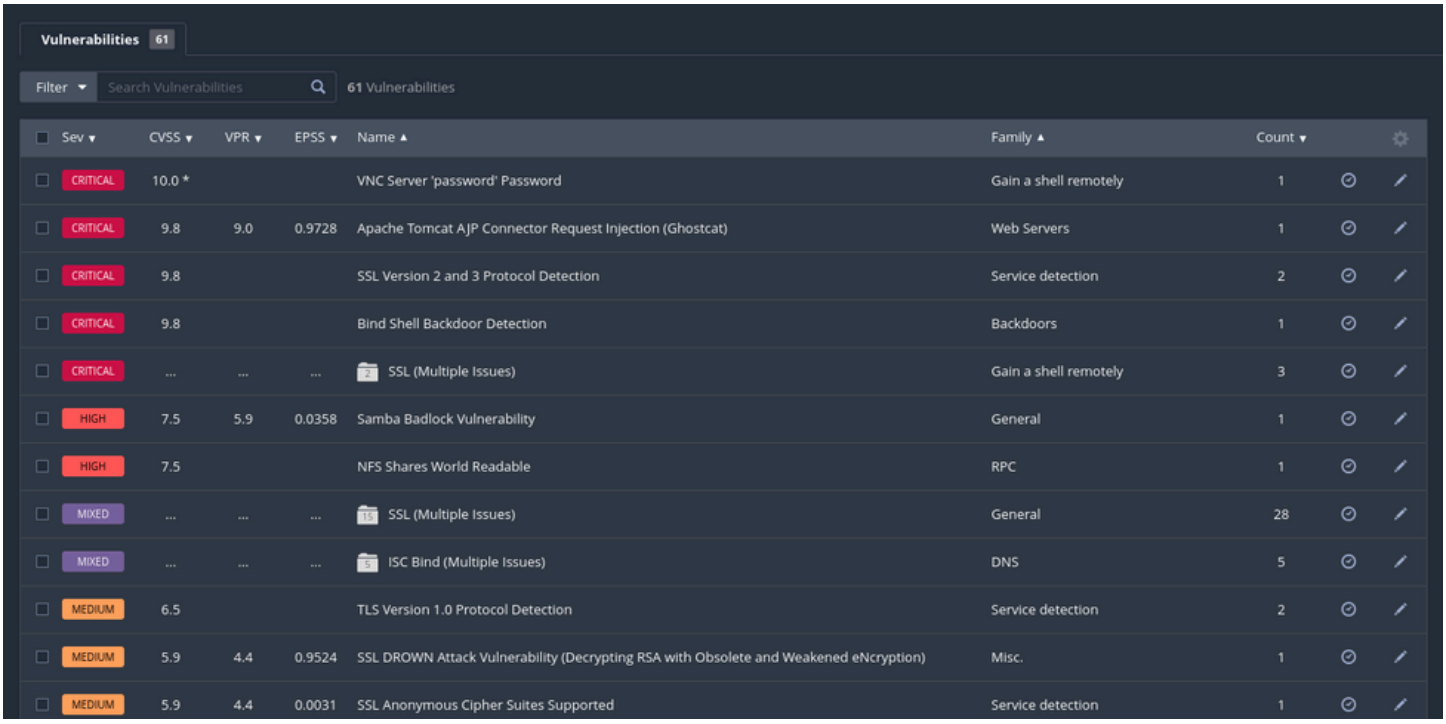
La scansione è stata fatta sulla macchina vittima **metasploitable2**, di cui l'IP è **192.168.0.102**,

```
http://help.ubuntu.com/
No mail.
msfadmin@metasploitable:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:e1:ed:f1
          inet addr:192.168.0.102  Bcast:192.168.0.255  Mask:255.255.255.0
          inet6 addr: fdd7:21:9d01:8782:a00:27ff:fee1:edf1/64 Scope:Global
          inet6 addr: 2a0e:419:3357:0:a00:27ff:fee1:edf1/64 Scope:Global
          inet6 addr: fe80::a00:27ff:fee1:edf1/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:9 errors:0 dropped:0 overruns:0 frame:0
          TX packets:48 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:736 (736.0 B)  TX bytes:4585 (4.4 KB)
          Base address:0xd020 Memory:f0200000-f0220000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:92 errors:0 dropped:0 overruns:0 frame:0
          TX packets:92 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:19393 (18.9 KB)  TX bytes:19393 (18.9 KB)

msfadmin@metasploitable:~$ _
```

La scansione ci riporta tutte le **vulnerabilità trovate**, categorizzandole in base alla loro importanza nel venire **mitigare** o **risolte**. Ad esempio le vulnerabilità categorizzate come **Critical** (sono quelle che hanno la precedenza su tutte le altre), scendendo poi da **High**, **Mixed**, **Medium**, **Low** ed **Info**.

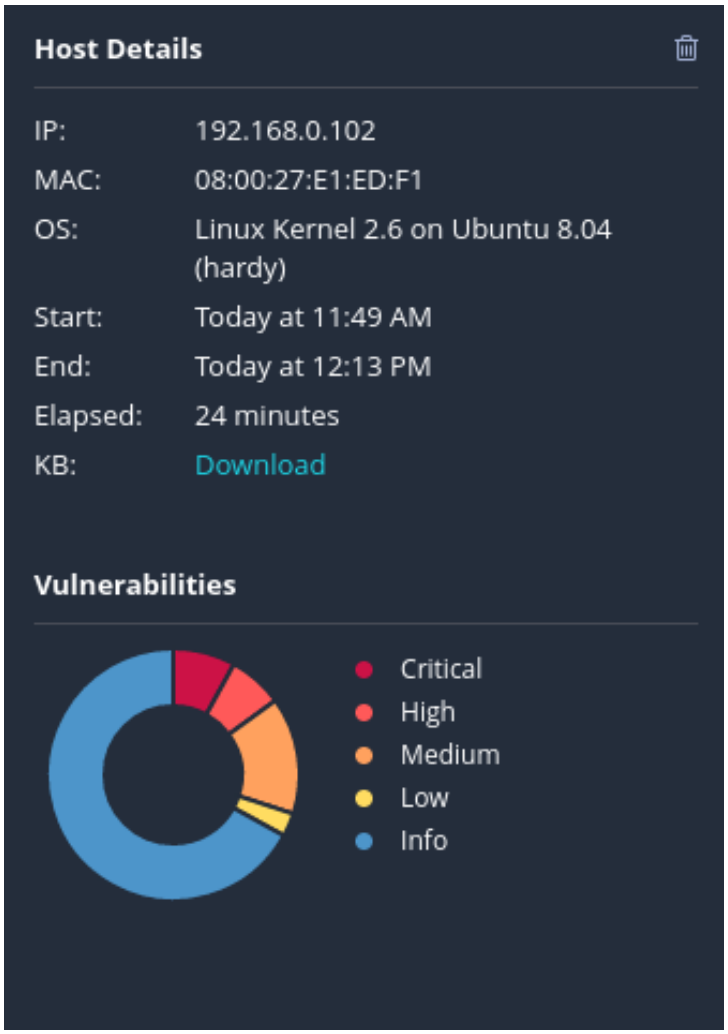


Vulnerabilities 61

Filter | Search Vulnerabilities | 61 Vulnerabilities

Sev	CVSS	VPR	EPSS	Name	Family	Count
CRITICAL	10.0 *			VNC Server 'password' Password	Gain a shell remotely	1
CRITICAL	9.8	9.0	0.9728	Apache Tomcat AJP Connector Request Injection (Ghostcat)	Web Servers	1
CRITICAL	9.8			SSL Version 2 and 3 Protocol Detection	Service detection	2
CRITICAL	9.8			Bind Shell Backdoor Detection	Backdoors	1
CRITICAL	...	...	...	SSL (Multiple Issues)	Gain a shell remotely	3
HIGH	7.5	5.9	0.0358	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	5.9	4.4	0.9524	SSL DROWN Attack Vulnerability (Decrypting RSA with Obsolete and Weakened eNcryption)	Misc.	1
MEDIUM	5.9	4.4	0.0031	SSL Anonymous Cipher Suites Supported	Service detection	1

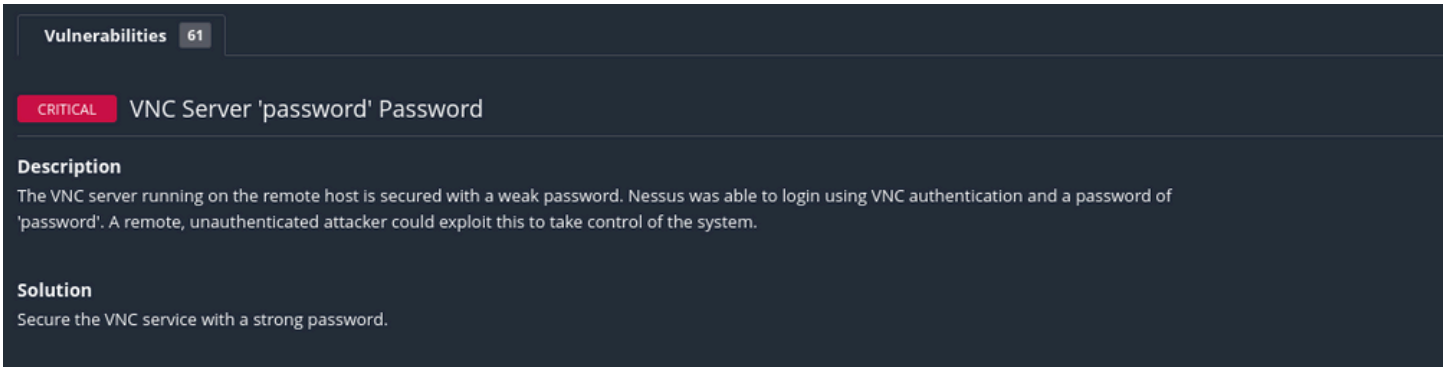
Abbiamo anche un **grafico a torta** che ci fa capire quanto la mia rete sia **sicura** o **vulnerabile**. In questo caso abbiamo **8 vulnerabilità Critical** (8%), **High** (7%), **Medium** (15%), **Low** (3%), **Info** (67%).



Mitigazione e soluzione vulnerabilità:

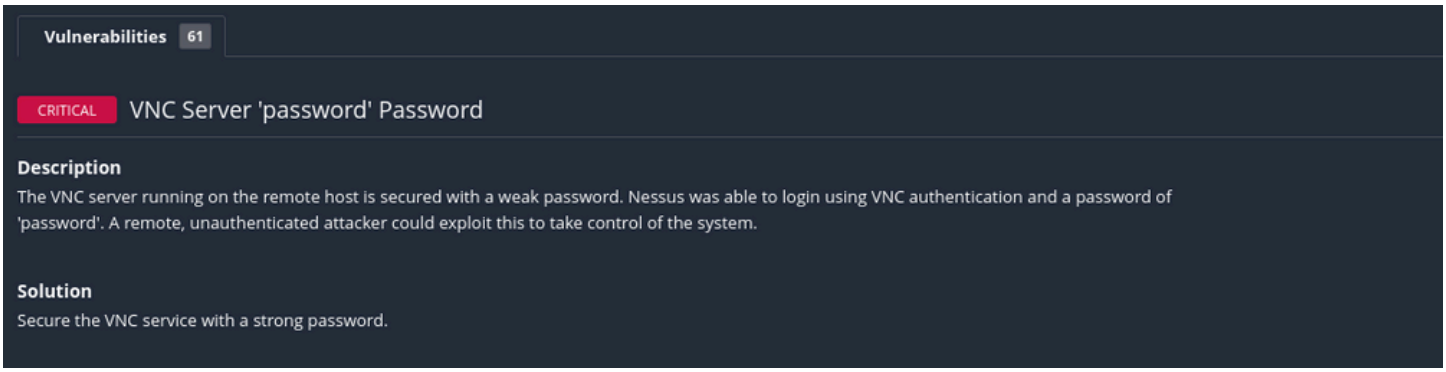
Critical 1)

La prima criticità è quella che metasploitable utilizza una **password debole**, infatti Nessus è stato in grado di accedervi tranquillamente, la **soluzione** è quella di impostare una **password complessa**, magari usando caratteri speciali, ed usando lettere e numeri insieme;

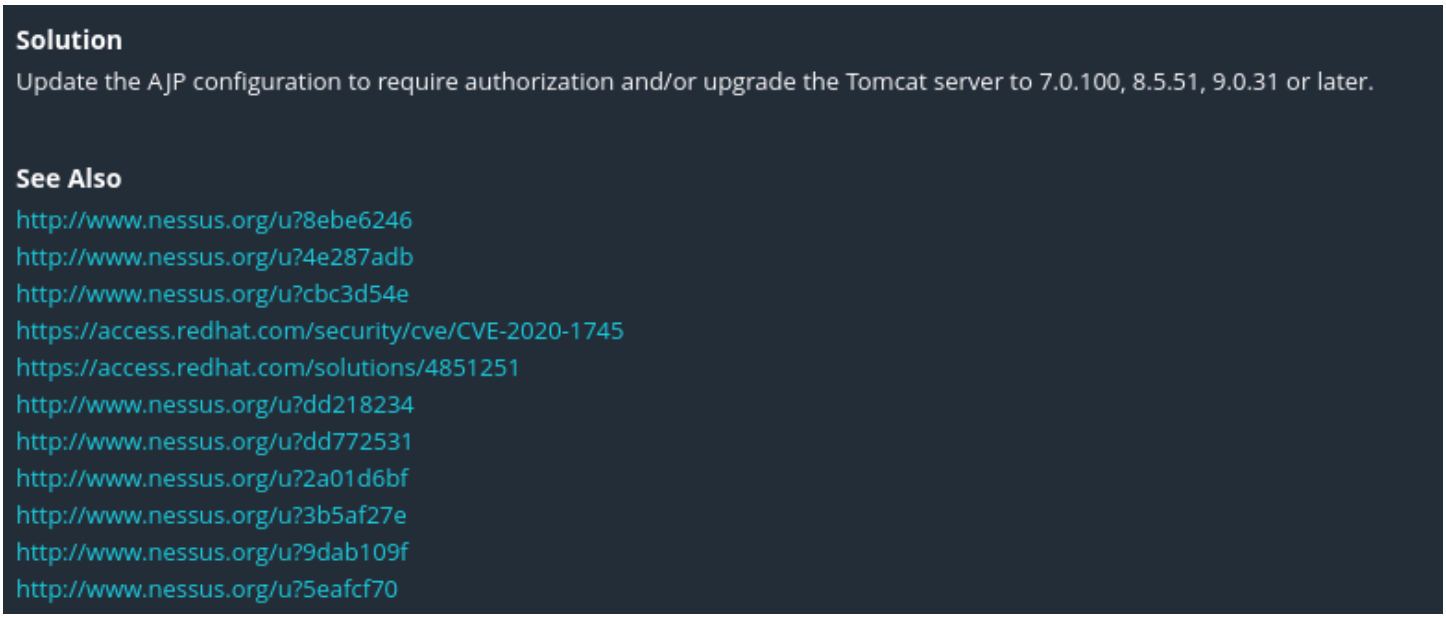


Critical 2)

La seconda criticità ci informa che un attaccante tramite il **Connettore AJP**, potrebbe leggere le richieste web fatte dalla macchina attaccata;

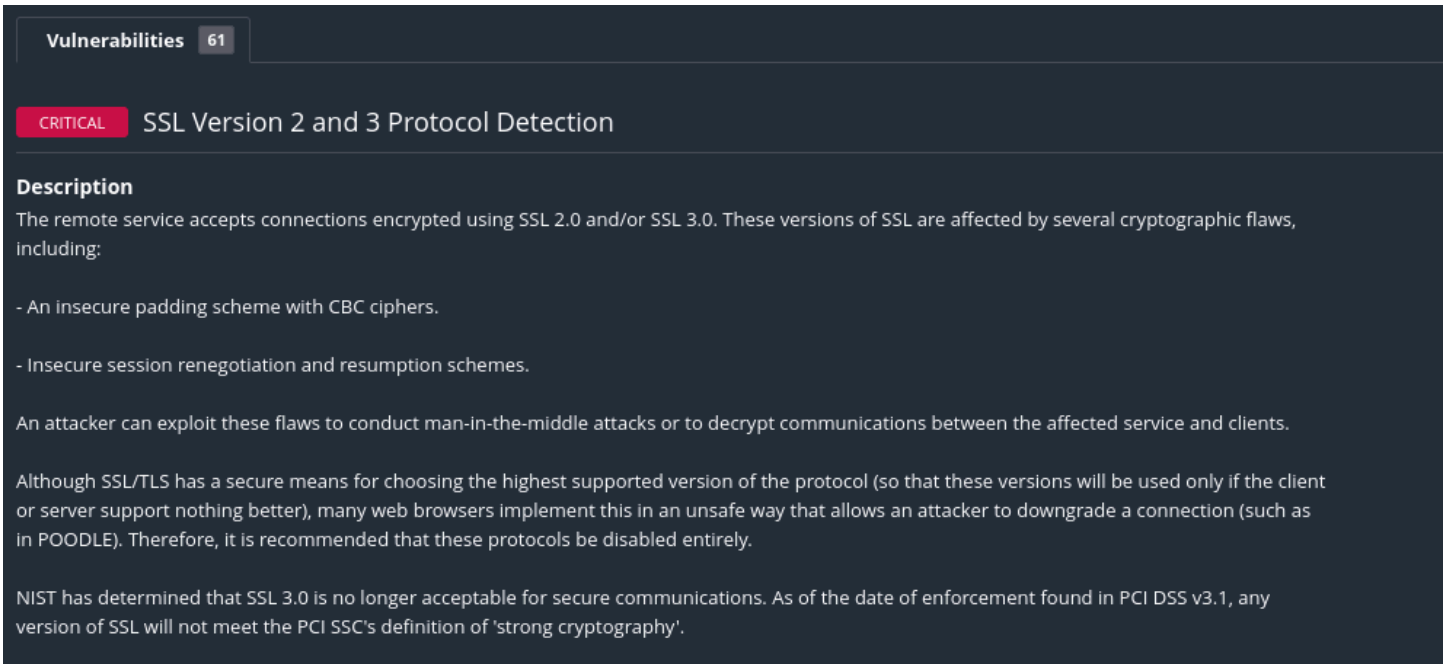


E qui abbiamo la soluzione, possiamo o aggiornare la configurazione dell'AJP, o anche consultare i vari forum;

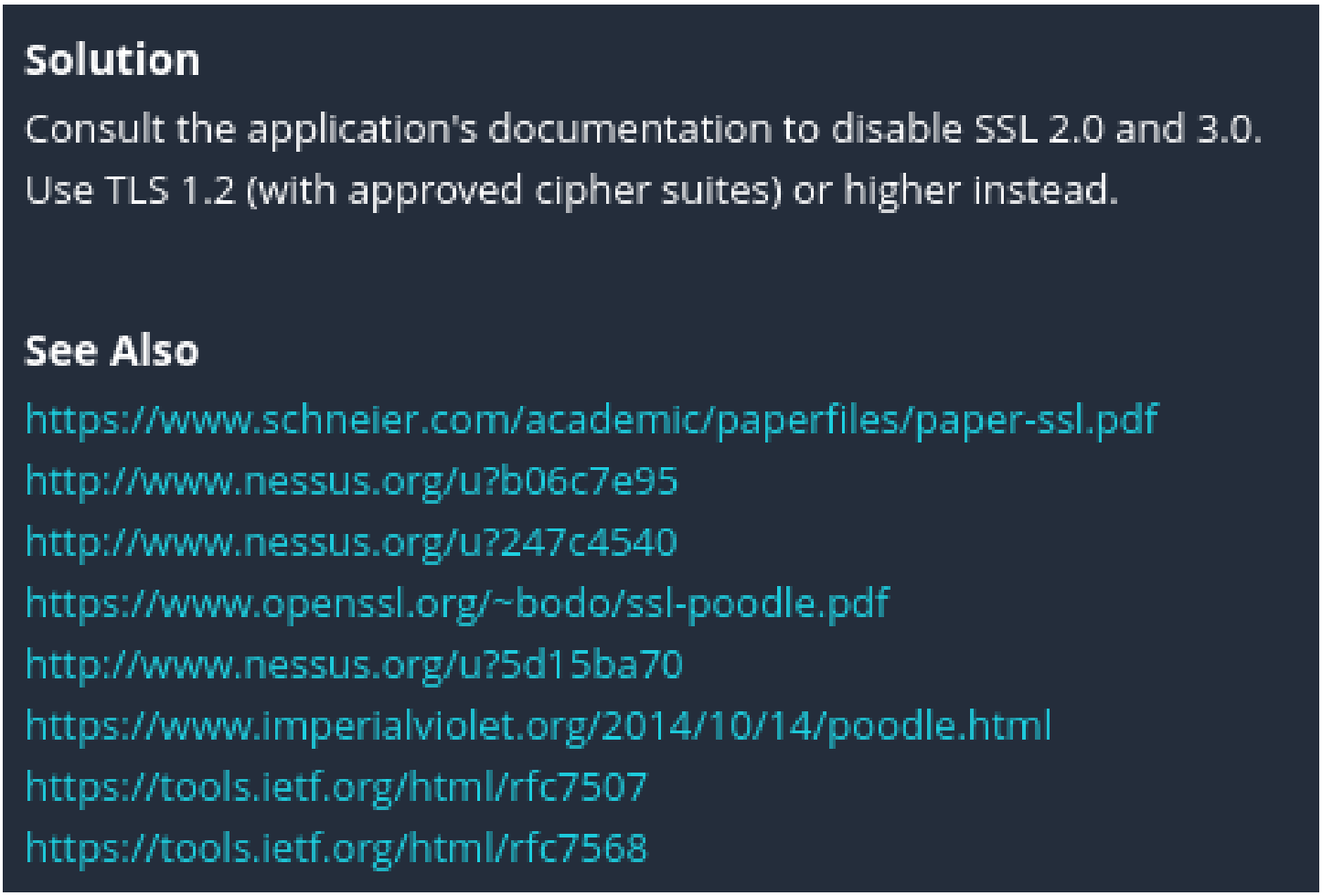


Critical 3)

Il messaggio descrive una vulnerabilità di sicurezza legata all'uso dei protocolli SSL 2.0 e SSL 3.0 per cifrare le comunicazioni di rete. Questi protocolli sono considerati insicuri e obsoleti a causa di diverse vulnerabilità crittografiche.



Per risolvere questa vulnerabilità, è consigliabile disabilitare SSL 2.0 e SSL 3.0 e configurare il sistema per utilizzare TLS 1.2 o versioni superiori, come TLS 1.3. O come sempre consultando i vari forum.



Ed infine Nessus ci dà l'opportunità di generare un **report**, che poi andremmo ad allegare al nostro di report.

tenable Nessus

My Basic Network Scan

Report generated by Tenable Nessus™ Wed, 30 Oct 2024 12:13:25 EDT

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Vulnerabilities by Host

192.168.0.102

CRITICAL	HIGH	MEDIUM	LOW	INFO
6	4	18	7	72

Vulnerabilities Total: 107

SEVERITY	CVSS V3.0	VPR SCORE	EPSS SCORE	PLUGIN	NAME
CRITICAL	9.8	9.0	0.9728	134862	Apache Tomcat AJP Connector Request Injection (Ghostcat)
CRITICAL	9.8	-	-	51988	Bind Shell Backdoor Detection
CRITICAL	9.8	-	-	20007	SSL Version 2 and 3 Protocol Detection
CRITICAL	10.0*	5.1	0.1175	32314	Debian OpenSSH/OpenSSL Package Random Number Gener Weakness
CRITICAL	10.0*	5.1	0.1175	32321	Debian OpenSSH/OpenSSL Package Random Number Gener Weakness (SSL check)
CRITICAL	10.0*	-	-	61708	VNC Server 'password' Password
HIGH	8.6	5.2	0.0164	136769	ISC BIND Service Downgrade / Reflected DoS
HIGH	7.5	-	-	42256	NFS Shares World Readable
HIGH	7.5	5.1	0.0053	42873	SSL Medium Strength Cipher Suites Supported (SWEET32)
HIGH	7.5	5.9	0.0358	90509	Samba Badlock Vulnerability
MEDIUM	6.8	6.0	0.1176	33447	Multiple Vendor DNS Query ID Field Prediction Cache Poison
MEDIUM	6.5	3.6	0.0041	139915	ISC BIND 9.x < 9.11.22, 9.12.x < 9.16.6, 9.17.x < 9.17.4 DoS
MEDIUM	6.5	-	-	51192	SSL Certificate Cannot Be Trusted
MEDIUM	6.5	-	-	57582	SSL Self-Signed Certificate
MEDIUM	6.5	-	-	104743	TLS Version 1.0 Protocol Detection
MEDIUM	5.9	4.4	0.9722	136808	ISC BIND Denial of Service
MEDIUM	5.9	4.4	0.0031	31705	SSL Anonymous Cipher Suites Supported

MEDIUM	5.9	4.4	0.9524	89058	SSL DROWN Attack Vulnerability (Decrypting RSA with Obsol and Weakened eNcryption)
MEDIUM	5.9	4.4	0.0076	65821	SSL RC4 Cipher Suites Supported (Bar Mitzvah)
MEDIUM	5.3	-	-	12217	DNS Server Cache Snooping Remote Information Disclosure
MEDIUM	5.3	4.0	0.0058	11213	HTTP TRACE / TRACK Methods Allowed
MEDIUM	5.3	-	-	57608	SMB Signing not required
MEDIUM	5.3	-	-	15901	SSL Certificate Expiry
MEDIUM	5.3	-	-	45411	SSL Certificate with Wrong Hostname
MEDIUM	5.3	-	-	26928	SSL Weak Cipher Suites Supported
MEDIUM	4.0*	7.3	0.0114	52611	SMTP Service STARTTLS Plaintext Command Injection
MEDIUM	4.3*	-	-	90317	SSH Weak Algorithms Supported
MEDIUM	4.3*	3.7	0.9488	81606	SSL/TLS EXPORT_RSA <= 512-bit Cipher Suites Supported (FR
LOW	3.7	3.6	0.6115	70658	SSH Server CBC Mode Ciphers Enabled
LOW	3.7	-	-	153953	SSH Weak Key Exchange Algorithms Enabled
LOW	3.7	3.9	0.9736	83738	SSL/TLS EXPORT_DHE <= 512-bit Export Cipher Suites Suppo (Logjam)
LOW	3.4	5.1	0.9749	78479	SSLv3 Padding Oracle On Downgraded Legacy Encryption Vulnerability (POODLE)
LOW	2.1*	4.2	0.8808	10114	ICMP Timestamp Request Remote Date Disclosure
LOW	2.6*	-	-	71049	SSH Weak MAC Algorithms Enabled
LOW	2.6*	-	-	10407	X Server Detection
INFO	N/A	-	-	10223	RPC portmapper Service Detection
INFO	N/A	-	-	21186	AJP Connector Detection
INFO	N/A	-	-	18261	Apache Banner Linux Distribution Disclosure
INFO	N/A	-	-	48204	Apache HTTP Server Version
INFO	N/A	-	-	39519	Backported Security Patch Detection (FTP)
INFO	N/A	-	-	39520	Backported Security Patch Detection (SSH)

INFO	N/A	-	-	39521	Backported Security Patch Detection (WWW)
INFO	N/A	-	-	45590	Common Platform Enumeration (CPE)
INFO	N/A	-	-	10028	DNS Server BIND version Directive Remote Version Detectio
INFO	N/A	-	-	35373	DNS Server DNSSEC Aware Resolver
INFO	N/A	-	-	11002	DNS Server Detection
INFO	N/A	-	-	72779	DNS Server Version Detection
INFO	N/A	-	-	35371	DNS Server hostname.bind Map Hostname Disclosure
INFO	N/A	-	-	54615	Device Type
INFO	N/A	-	-	35716	Ethernet Card Manufacturer Detection
INFO	N/A	-	-	86420	Ethernet MAC Addresses
INFO	N/A	-	-	10092	FTP Server Detection
INFO	N/A	-	-	10107	HTTP Server Type and Version
INFO	N/A	-	-	24260	HyperText Transfer Protocol (HTTP) Information
INFO	N/A	-	-	11156	IRC Daemon Version Detection
INFO	N/A	-	-	10397	Microsoft Windows SMB LanMan Pipe Server Listing Disclosu
INFO	N/A	-	-	10785	Microsoft Windows SMB NativeLanManager Remote System Information Disclosure
INFO	N/A	-	-	11011	Microsoft Windows SMB Service Detection
INFO	N/A	-	-	100871	Microsoft Windows SMB Versions Supported (remote check)
INFO	N/A	-	-	106716	Microsoft Windows SMB2 and SMB3 Dialects Supported (ren check)
INFO	N/A	-	-	10437	NFS Share Export List
INFO	N/A	-	-	11219	Nessus SYN scanner
INFO	N/A	-	-	19506	Nessus Scan Information
INFO	N/A	-	-	11936	OS Identification
INFO	N/A	-	-	117886	OS Security Patch Assessment Not Available

INFO	N/A	-	-	181418	OpenSSH Detection
INFO	N/A	-	-	50845	OpenSSL Detection
INFO	N/A	-	-	66334	Patch Report
INFO	N/A	-	-	118224	PostgreSQL STARTTLS Support
INFO	N/A	-	-	26024	PostgreSQL Server Detection
INFO	N/A	-	-	22227	RMI Registry Detection
INFO	N/A	-	-	11111	RPC Services Enumeration
INFO	N/A	-	-	53335	RPC portmapper (TCP)
INFO	N/A	-	-	10263	SMTP Server Detection
INFO	N/A	-	-	42088	SMTP Service STARTTLS Command Support
INFO	N/A	-	-	70657	SSH Algorithms and Languages Supported
INFO	N/A	-	-	149334	SSH Password Authentication Accepted
INFO	N/A	-	-	10881	SSH Protocol Versions Supported
INFO	N/A	-	-	153588	SSH SHA-1 HMAC Algorithms Enabled
INFO	N/A	-	-	10267	SSH Server Type and Version Information
INFO	N/A	-	-	56984	SSL / TLS Versions Supported
INFO	N/A	-	-	45410	SSL Certificate 'commonName' Mismatch
INFO	N/A	-	-	10863	SSL Certificate Information
INFO	N/A	-	-	70544	SSL Cipher Block Chaining Cipher Suites Supported
INFO	N/A	-	-	21643	SSL Cipher Suites Supported
INFO	N/A	-	-	62563	SSL Compression Methods Supported
INFO	N/A	-	-	57041	SSL Perfect Forward Secrecy Cipher Suites Supported
INFO	N/A	-	-	51891	SSL Session Resume Supported
INFO	N/A	-	-	156899	SSL/TLS Recommended Cipher Suites
INFO	N/A	-	-	25240	Samba Server Detection

INFO	N/A	-	-	104887	Samba Version
INFO	N/A	-	-	96982	Server Message Block (SMB) Protocol Version 1 Enabled (uncredentialed check)
INFO	N/A	-	-	22964	Service Detection
INFO	N/A	-	-	17975	Service Detection (GET request)
INFO	N/A	-	-	11153	Service Detection (HELP Request)
INFO	N/A	-	-	25220	TCP/IP Timestamps Supported
INFO	N/A	-	-	11819	TFTP Daemon Detection
INFO	N/A	-	-	110723	Target Credential Status by Authentication Protocol - No Credentials Provided
INFO	N/A	-	-	10287	Traceroute Information
INFO	N/A	-	-	11154	Unknown Service Detection: Banner Retrieval
INFO	N/A	-	-	19288	VNC Server Security Type Detection
INFO	N/A	-	-	65792	VNC Server Unencrypted Communication Detection
INFO	N/A	-	-	10342	VNC Software Detection
INFO	N/A	-	-	135860	WMI Not Available
INFO	N/A	-	-	11424	WebDAV Detection
INFO	N/A	-	-	10150	Windows NetBIOS / SMB Remote Host Information Disclosure
INFO	N/A	-	-	52703	vsftpd Detection

* indicates the v3.0 score was not available; the v2.0 score is shown