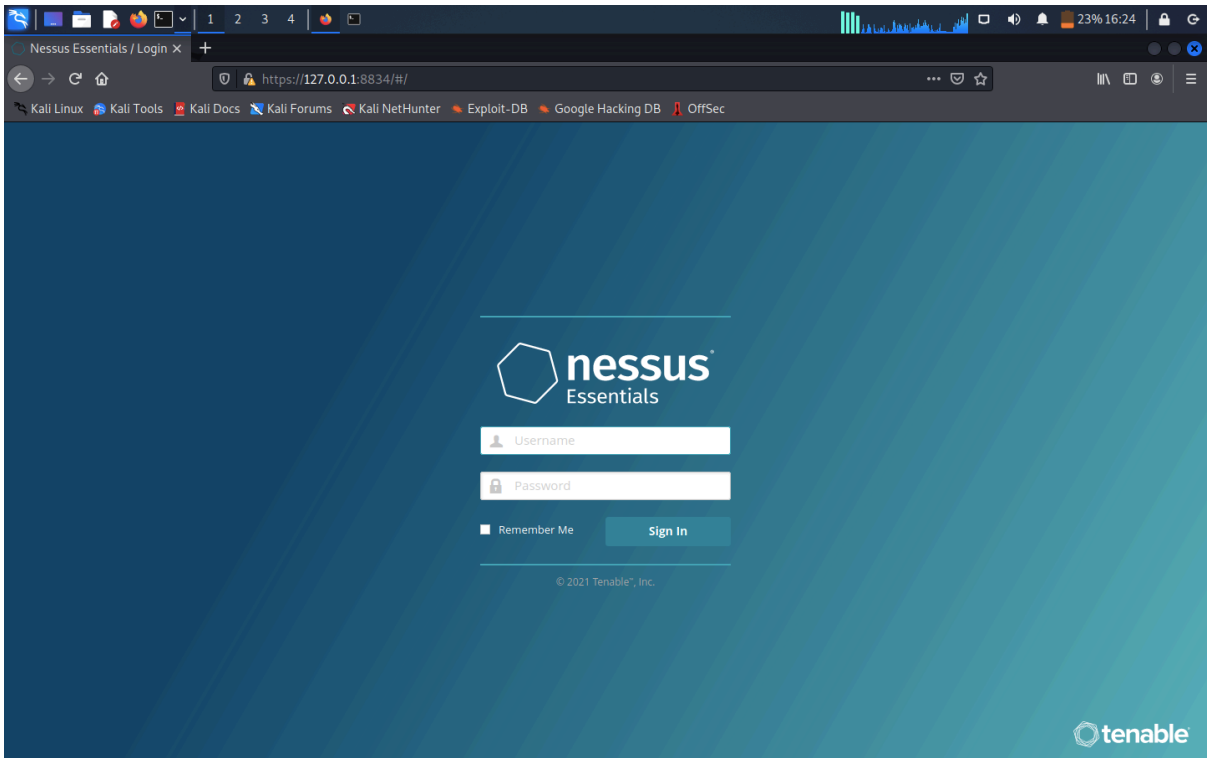
Nessus Essentials

In this lab, we will cover vulnerability scanning using Nessus Essentials. We will go through some of the main steps of vulnerability management lifecycle. We will use Nessus Essentials to scan local VMs(Windows 10 pro and Metasploitable) hosted on VMware Fusion, to discover vulnerabilities and their remedies. It categorizes the vulnerabilities based on the severity. For example, if the scanner determines the vulnerability as Critical, it requires an immediate action.

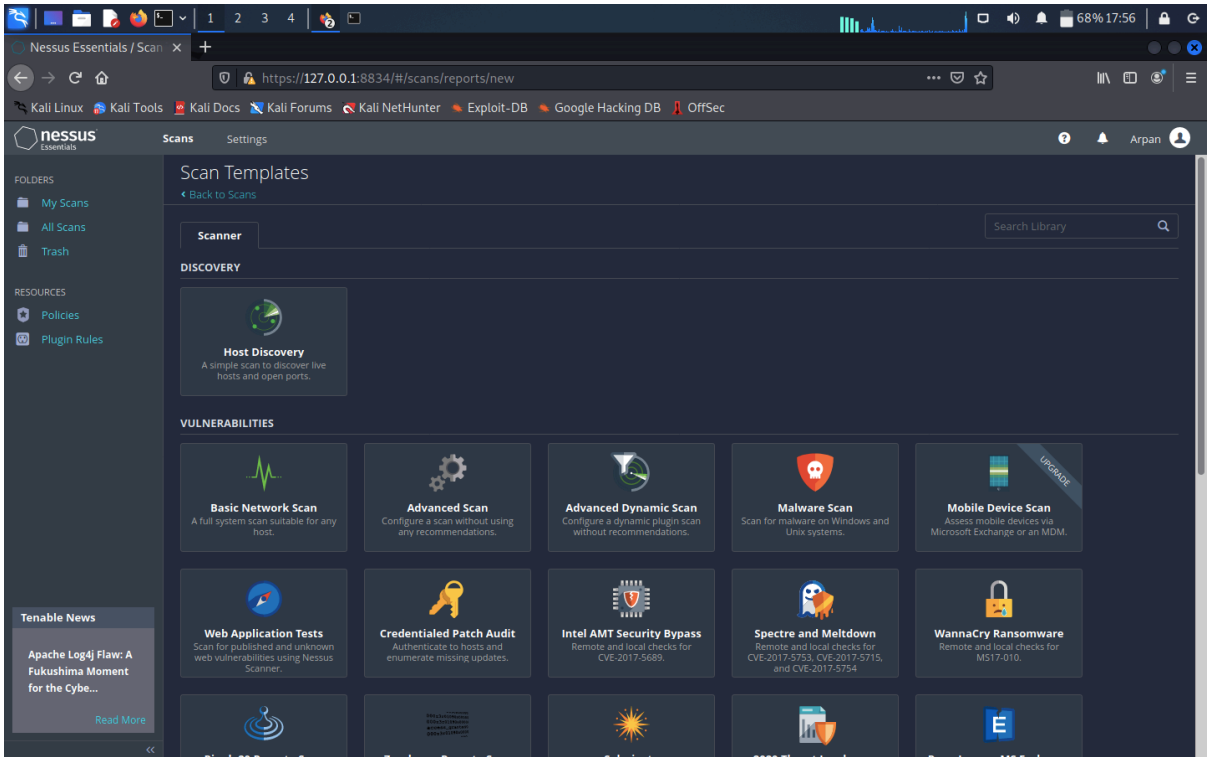
Installing the VM's –

We will be installing Kali linux, Windows 10 and Metasploitable VMs on VMware Fusion. We will install and configure Nessus Essentials in kali and run scans on Windows 10 and Metasploitable VMs and compare the results. Windows 10 VM is up to date so it is likely to show less or no vulnerabilities whereas Metasploitable is intentionally made vulnerable hence, it can show a lot of vulnerabilities.



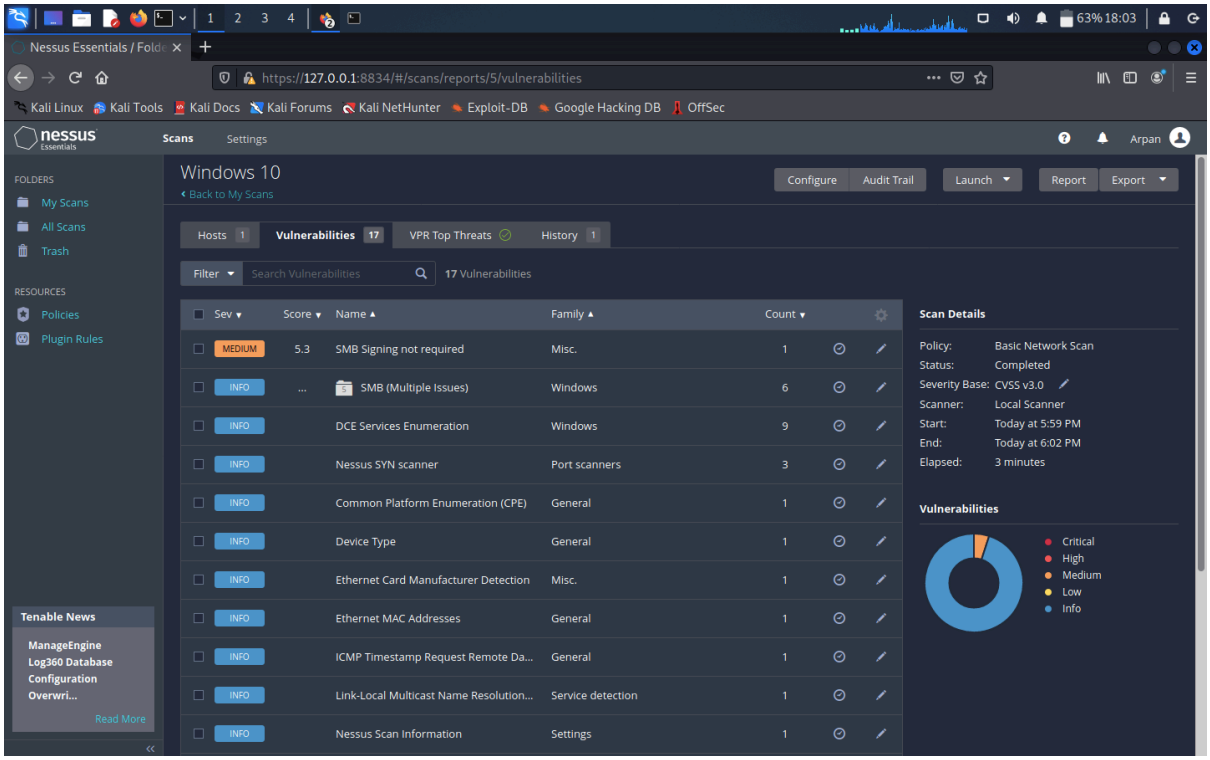
Installing Nessus Essentials –

Visit the tenable website, get the activation key by creating an account and download the suitable debian file for kali. Open kali terminal and use the command dpkg -i followed by the debian package to install Nessus essentials. Use command “sudo sytemctl start nessusd.service” to start Nessus. We can view the status using “sudo systemctl status nessusd.service” . Access the web interface by navigating to the local host on port 8834 (save the url for future reference), click on advanced and accept the risk. Fill in the credentials and the activation key from the mail. It will take some time to finish initialising. Finally, we will be able to see the Nessus interface and the templates. Provide the IP addresses of the target machines and begin scanning.

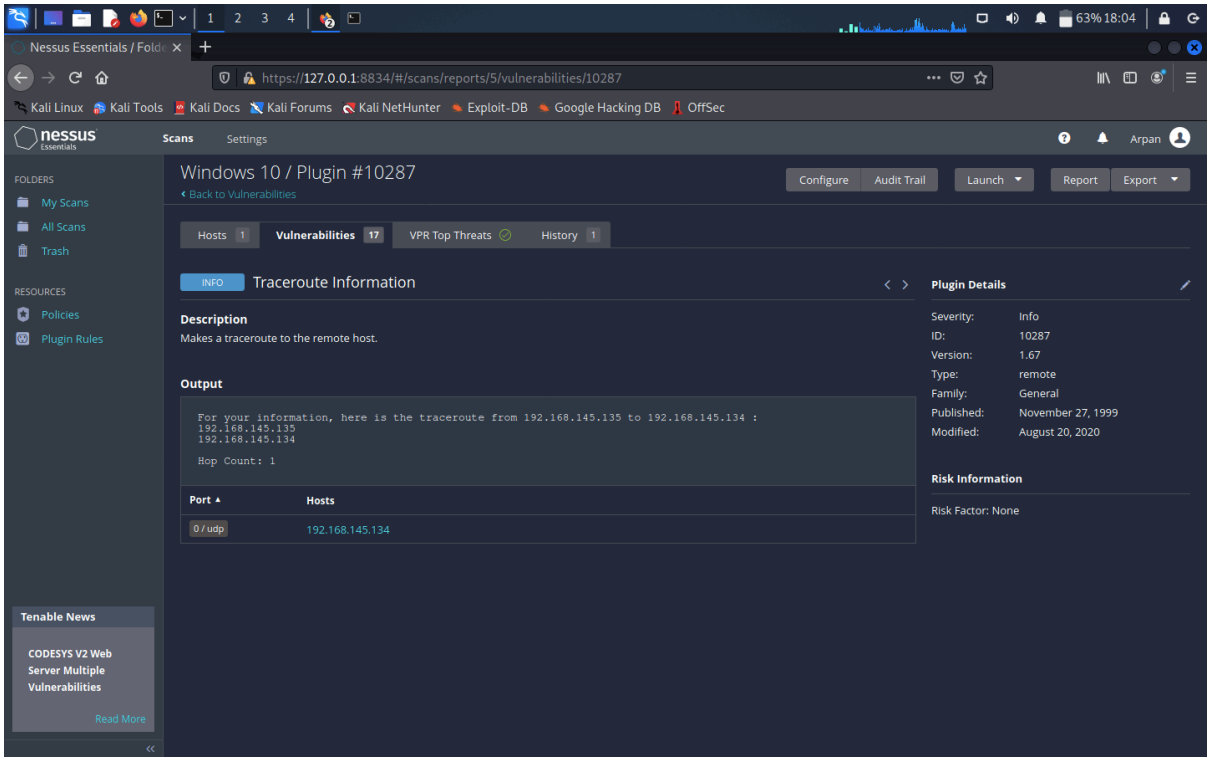


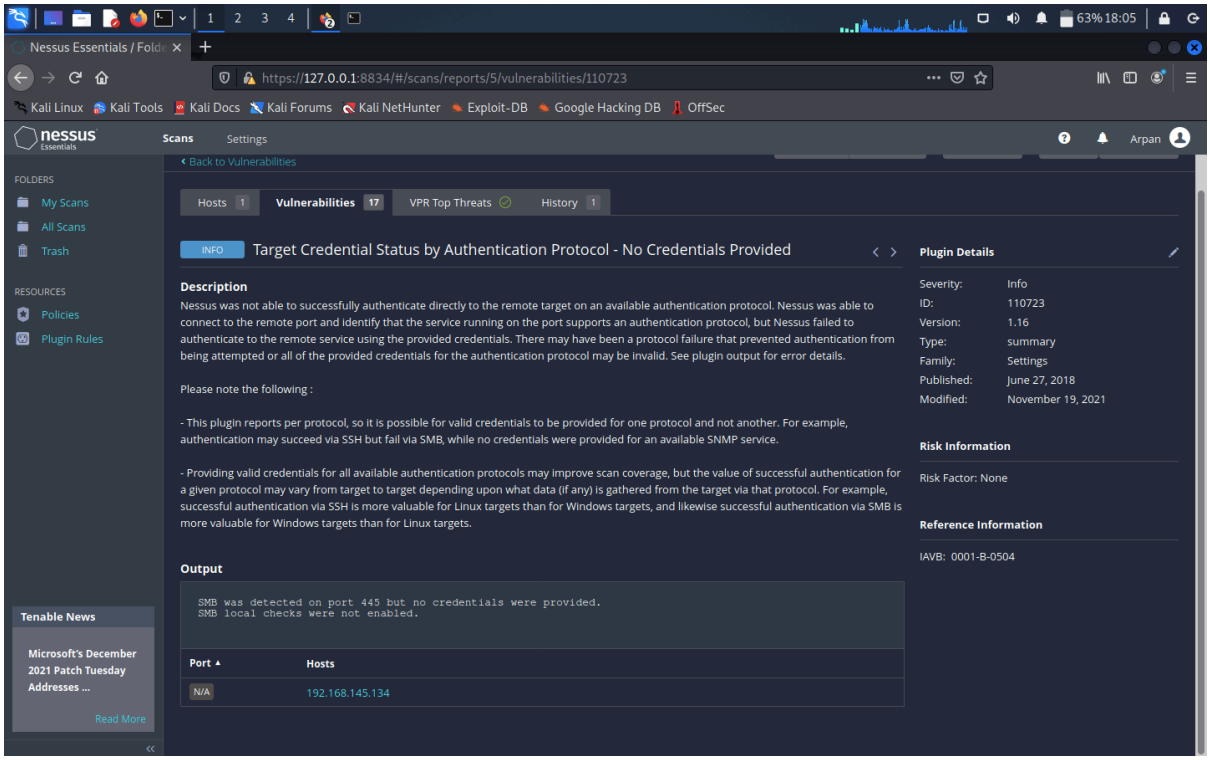
Running Scans on VMs –

First we will run a basic network scan on Windows 10 VM. It will list all the vulnerabilities that exist.

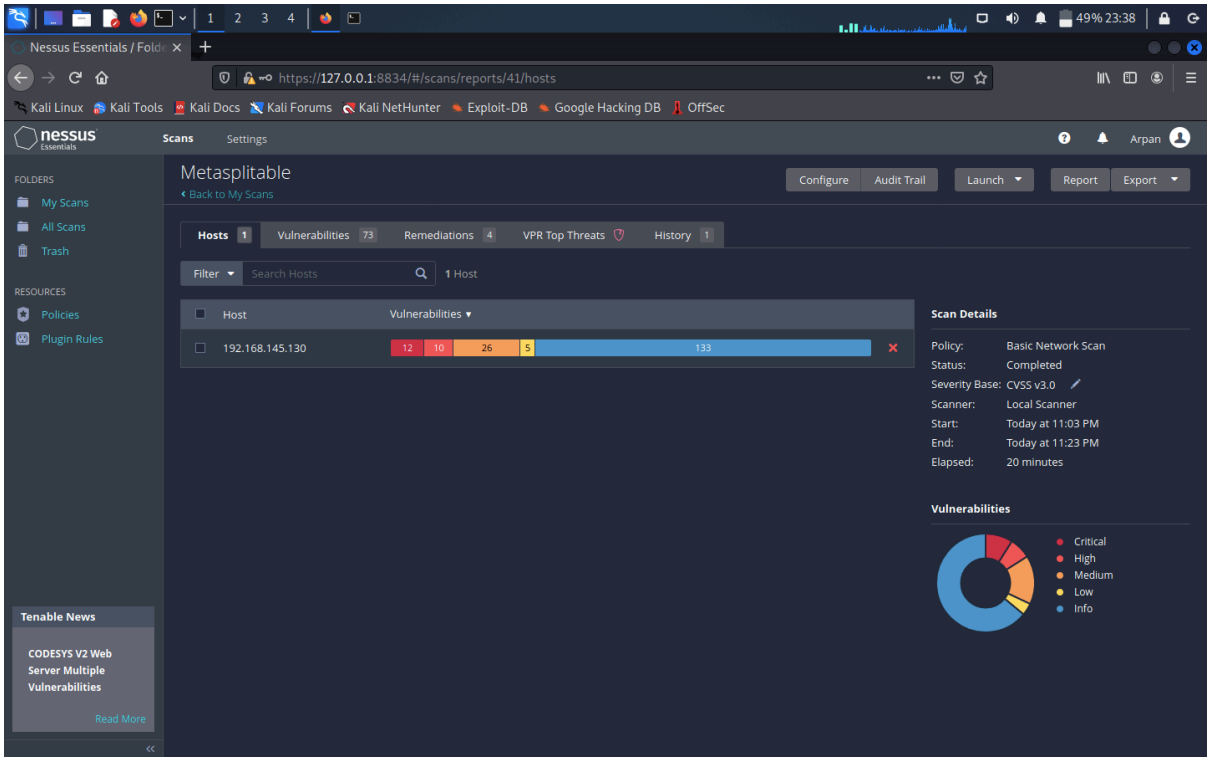


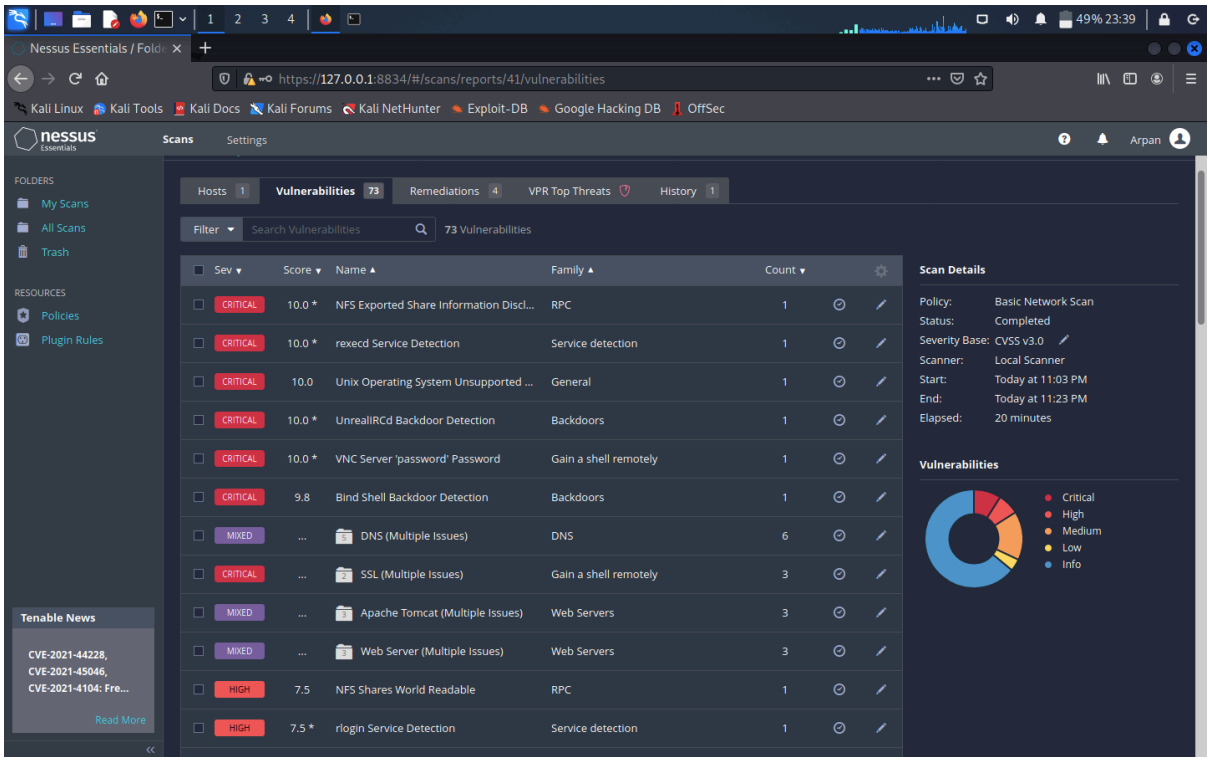
The scan lists the vulnerabilities and clicking on them describes the details of the vulnerabilities. For example - the screenshots below mentions the trace route information and target credential status by authentication protocol. This further helps in remediation of the vulnerabilities.





Now we will run scan on Metasploitable VM. We can see all the vulnerabilities and the severity levels. Looking at the report, we can find out how many critical vulnerabilities are present and how to remediate them. Usually the critical vulnerabilities are the ones which require immediate action.

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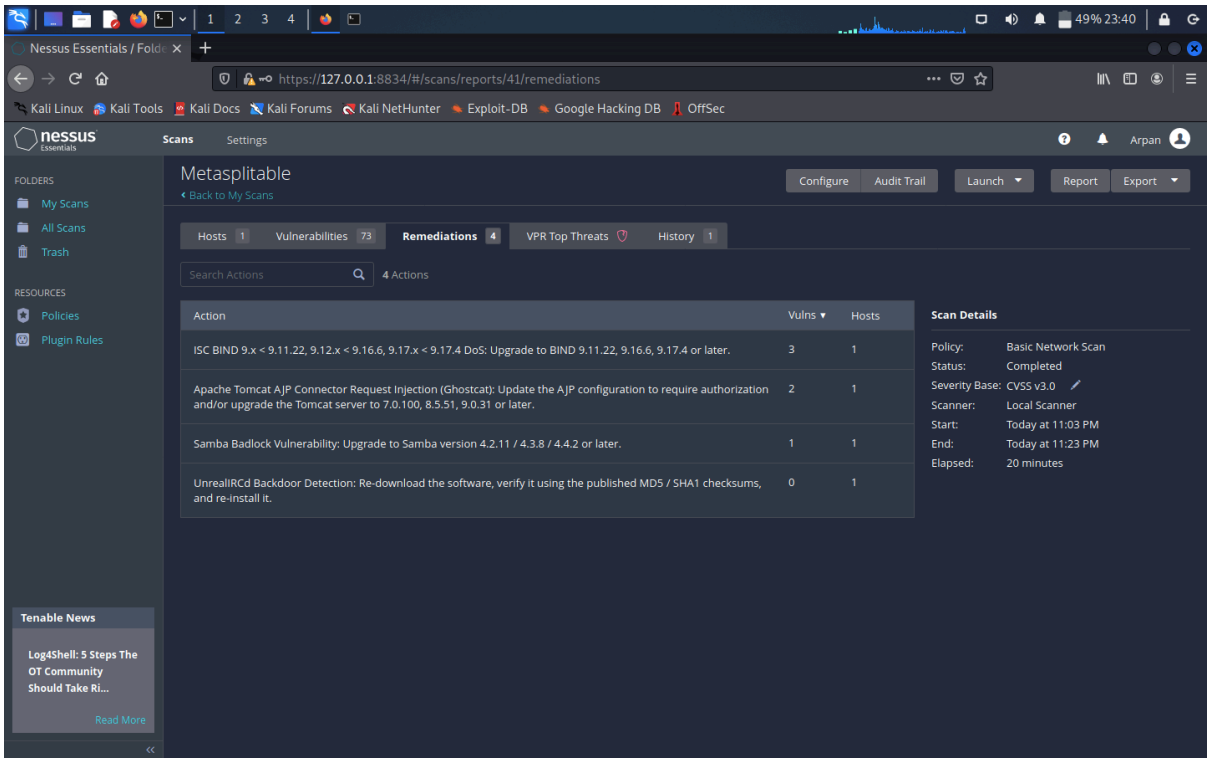
https://127.0.0.1:8834/#/scans/reports/41/vulnerabilities
Kali Linux Kali Tools Kali Docs Kali Forums Kali NetHunter Exploit-DB Google Hacking DB OffSec
nessus Essentials
Scans Settings
Arpan
FOLDERS
My Scans
All Scans
Trash
RESOURCES
Policies
Plugin Rules
Tenable News
CVE-2021-44228, CVE-2021-45046, CVE-2021-4104: Fre...
Read More
Hosts 1 Vulnerabilities 73 Remediations 4 VPR Top Threats History 1
Filter Search Vulnerabilities 73 Vulnerabilities
Sev Score Name Family Count
CRITICAL 10.0 * NFS Exported Share Information Discl... RPC 1
CRITICAL 10.0 * rexecd Service Detection Service detection 1
CRITICAL 10.0 Unix Operating System Unsupported ... General 1
CRITICAL 10.0 * UnrealIRCd Backdoor Detection Backdoors 1
CRITICAL 10.0 * VNC Server 'password' Password Gain a shell remotely 1
CRITICAL 9.8 Bind Shell Backdoor Detection Backdoors 1
MIXED ... DNS (Multiple Issues) DNS 6
CRITICAL ... SSL (Multiple Issues) Gain a shell remotely 3
MIXED ... Apache Tomcat (Multiple Issues) Web Servers 3
MIXED ... Web Server (Multiple Issues) Web Servers 3
HIGH 7.5 NFS Shares World Readable RPC 1
HIGH 7.5 * rlogin Service Detection Service detection 1
Scan Details
Policy: Basic Network Scan
Status: Completed
Severity Base: CVSS v3.0
Scanner: Local Scanner
Start: Today at 11:03 PM
End: Today at 11:23 PM
Elapsed: 20 minutes
Vulnerabilities
Critical
High
Medium
Low
Info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https://127.0.0.1:8834/#/scans/reports/41/remediations
Kali Linux Kali Tools Kali Docs Kali Forums Kali NetHunter Exploit-DB Google Hacking DB OffSec
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Scans Settings
Arpan
FOLDERS
My Scans
All Scans
Trash
RESOURCES
Policies
Plugin Rules
Tenable News
Log4Shell: 5 Steps The OT Community Should Take Ri...
Read More
Metasplitable
Back to My Scans
Configure Audit Trail Launch Report Export
Hosts 1 Vulnerabilities 73 Remediations 4 VPR Top Threats History 1
Search Actions 4 Actions
Action Vulns Hosts
ISC BIND 9.x < 9.11.22, 9.12.x < 9.16.6, 9.17.x < 9.17.4 DoS: Upgrade to BIND 9.11.22, 9.16.6, 9.17.4 or later. 3 1
Apache Tomcat AJP Connector Request Injection (Ghostcat): Update the AJP configuration to require authorization and/or upgrade the Tomcat server to 7.0.100, 8.5.51, 9.0.31 or later. 2 1
Samba Badlock Vulnerability: Upgrade to Samba version 4.2.11 / 4.3.8 / 4.4.2 or later. 1 1
UnrealIRCd Backdoor Detection: Re-download the software, verify it using the published MD5 / SHA1 checksums, and re-install it. 0 1
Scan Details
Policy: Basic Network Scan
Status: Completed
Severity Base: CVSS v3.0
Scanner: Local Scanner
Start: Today at 11:03 PM
End: Today at 11:23 PM
Elapsed: 20 minutes

We can compare the scans between these VMs and figure out ways to keep our machines secure. Running out of date softwares can result in the compromise of our machine whereas keeping it updated is usually the best way to remediate the vulnerabilities and make the machine more secure.