

Writeup:

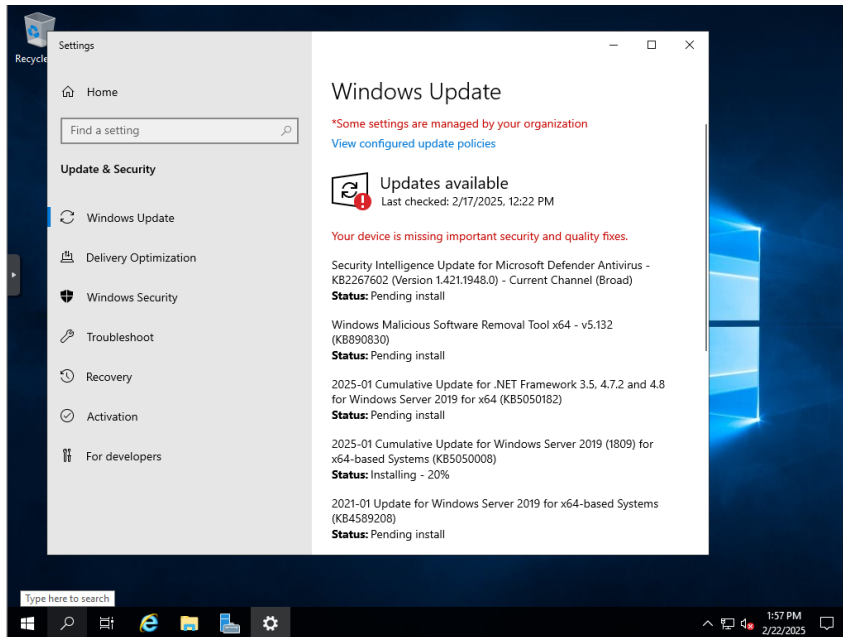
For non-patching vulnerabilities, my approach would begin with thorough research. I would review vendor advisories, security bulletins, technical documentation, and reputable vulnerability databases (such as NVD) to understand the specifics, potential exploit paths, and real-world impact of each vulnerability. I'd also engage with industry forums and peer-reviewed security reports to validate findings and gather additional remediation insights. Based on this research, I would implement the following compensating controls:

- **Network Segmentation:** Isolate unsupported systems using dedicated VLANs and strict firewall rules to restrict exposure to only trusted segments.
- **Access Controls & IAM:** Harden authentication by disabling high-risk accounts (e.g., Guest), removing them from privileged groups, and enforcing multi-factor authentication using solutions like YubiKey.
- **Enhanced Monitoring:** Deploy host-based IDS/IPS and centralize log collection to detect and alert on anomalous behavior in real time.
- **Application-Specific Restrictions:** For systems (e.g., an outdated Splunk instance) that can't be patched immediately, restrict network access and service exposure until a full upgrade is feasible.
- **Regular Risk Assessments:** Schedule continuous vulnerability scans with tools like Nessus and CrowdStrike to validate the effectiveness of these controls and refine configurations as needed.

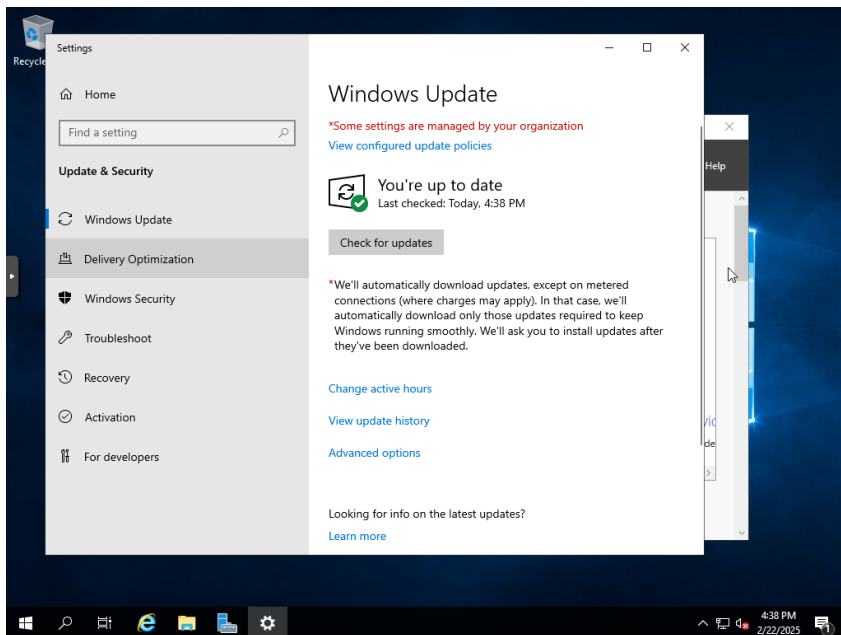
This comprehensive strategy minimizes risk by addressing residual vulnerabilities with targeted technical controls while ensuring that all research and remediation steps are well documented for audit and future remediation purposes.

172.16.1.3 – DNS Server (Updated OS)

Check for any window updates

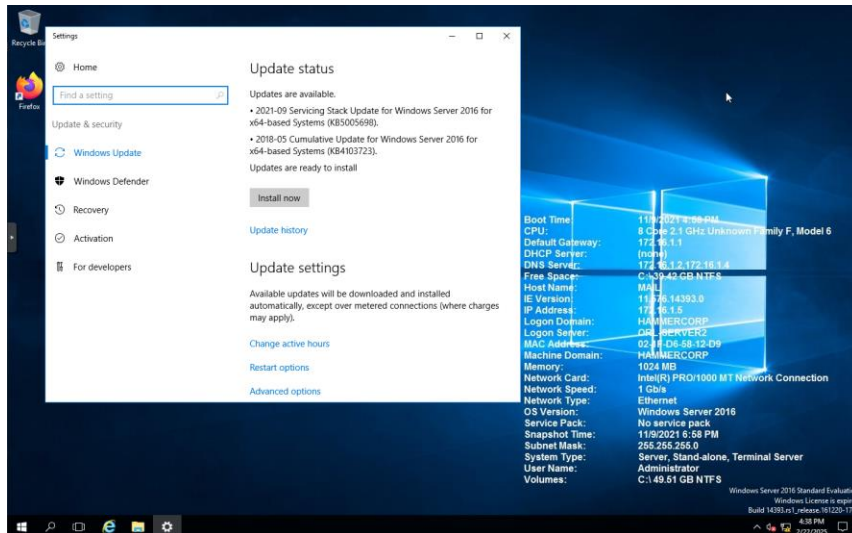


Update windows – restart computer – ensure all updates were installed

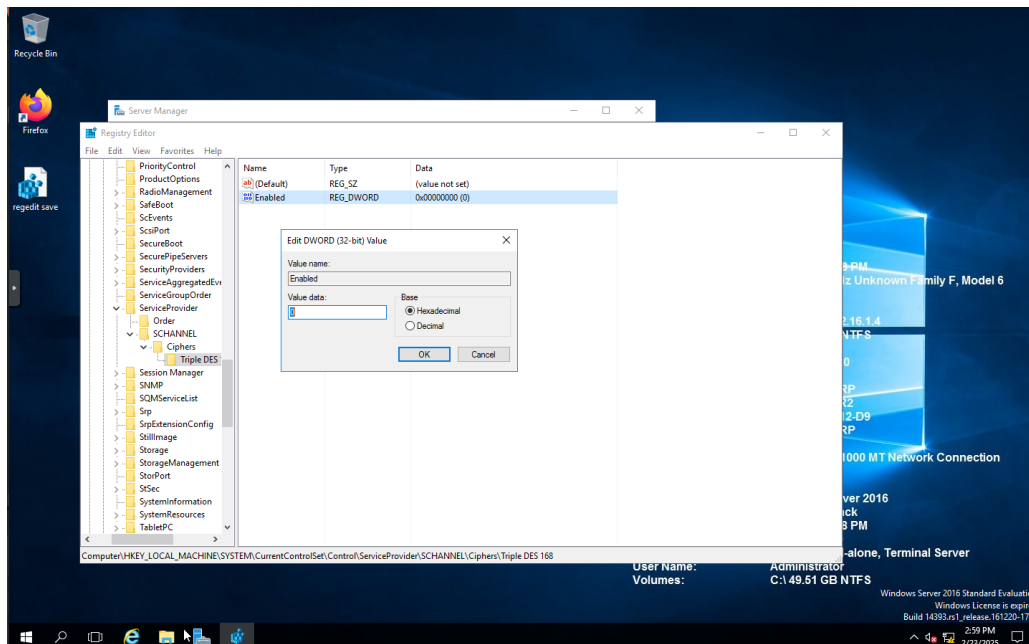


172.16.1.5 – Mail Server (Fixed SWEET32)

Ensure all operating system updates are installed



Open registry editor and find service provider – create SCHANNEL, ciphers, Triple DES – create a new DWORD value and give it the value of 0



172.16.1.6 – Splunk (Updated OS & Splunk) (Splunk still needs newer version)

Sudo yum update – ensure OS is updated

sssd-krb5	x86_64	2.9.4-5.el8_10.1	basicon	165 B
sssd-krb5-common	x86_64	2.9.4-5.el8_10.1	basicon	286 B
sssd-ldap	x86_64	2.9.4-5.el8_10.1	basicon	251 B
sssd-nfs-idmap	x86_64	2.9.4-5.el8_10.1	basicon	129 B
sssd-proxy	x86_64	2.9.4-5.el8_10.1	basicon	183 B
strace	x86_64	5.10-2.1.el8_10	basicon	1.4 MB
sudo	x86_64	1.9.5p2-1.el8_9	basicon	1.8 MB
systemd	x86_64	239.82.el8_10.3	basicon	3.6 MB
systemd-libs	x86_64	239.82.el8_10.3	basicon	1.1 MB
systemd-pam	x86_64	239.82.el8_10.3	basicon	513 B
systemd-udev	x86_64	239.82.el8_10.3	basicon	1.6 MB
time-csa	x86_64	2.3.2-6.el8	basicon	274 B
tracer-common	noarch	1.1.1.el8	epitream	36 B
trousers	x86_64	0.3.15-2.el8	basicon	152 B
trousers-libs	x86_64	0.3.15-2.el8	basicon	157 B
tuned	noarch	2.22-1.5.el8_10	basicon	366 B
tzdata	noarch	2025a-1.el8	basicon	479 B
unbound-libs	x86_64	1.16-2.5.0.el8_10	epitream	576 B
unzip	x86_64	6.0-47.el8_10	basicon	195 B
usbutils	x86_64	0.05-1.el8	basicon	111 B
util-linux	x86_64	2.32-1-46.el8	basicon	2.5 MB
util-linux-user	x86_64	2.32-1-46.el8	basicon	182 B
vim	x86_64	6.2.11.5-14.el8_10	basicon	665 B
virt-what	x86_64	1.25-4.el8	basicon	37 B
vmt	x86_64	1.15.5-12.el8_10	epitream	723 B
which	x86_64	2.21-29.el8	basicon	49 B
xfsdump	x86_64	3.1.4-7.el8_9	basicon	332 B
xfsprogs	x86_64	5.8.0-12.el8	basicon	1.1 MB
yum	noarch	4.7.0-28.el8	basicon	280 B
ylib	x86_64	1.2.11-26.el8	basicon	185 B
Installing dependencies:				
kernel-core	x86_64	4.18.0-553.el8_1.el8_10	basicon	43 MB
kernel-modules	x86_64	4.18.0-553.el8_1.el8_10	basicon	36 MB
python3-distro	noarch	1.4.0-2.module.el8_10.0-1910-234af798	apptream	36 B
Resolving:				
kernel	x86_64	4.18.0-372.9.1.el8	Basiconda	8
kernel-core	x86_64	4.18.0-372.9.1.el8	Basiconda	69 MB
kernel-modules	x86_64	4.18.0-372.9.1.el8	Basiconda	23 MB
Enabling module stream:				
python3		3.6		
Transaction Summary				
Install	4 Packages			
Upgrade	293 Packages			
Remove	3 Packages			
Total size: 745 MB				
Total download size: 402 MB				
Is this ok [y/n]?				

Stop splunk service and install new version

```
Starting Crash recovery kernel saving...
[ OK ] Started Crash recovery kernel saving.
Stopping Authorization Manager...
[ OK ] Stopped Authorization Manager.
Starting Authorization Manager...
[ OK ] Started Authorization Manager.
[ 541.377295] audit: type=1305 audit(1740041240.680:216): op=net audit_pid=0 old=730 audit=4294967295 ses=4294967295 subj=system_u:system_r:auditd_t:s0 res=1
[ 541.395361] audit: type=1130 audit(1740041240.696:217): pid=1 eid=0 audit=4294967295 ses=4294967295 subj=system_u:system_r:init_t:s0 msp='unit=auditd comm="systemd" cwd="/usr/lib/systemd/systemd" hostbase="/addr=7" terminal=7 res=success
[ 541.395980] audit: type=1131 audit(1740041240.696:218): pid=1 eid=0 audit=4294967295 ses=4294967295 subj=system_u:system_r:init_t:s0 msp='unit=auditd comm="systemd" cwd="/usr/lib/systemd/systemd" hostbase="/addr=7" terminal=7 res=success
Starting Security Auditing Service...
[ 541.395232] audit: type=100 audit(1740041242.696:219): op=net audit_enabled=1 eid=1 audit=4294967295 ses=4294967295 subj=system_u:system_r:auditd_t:s0 res=1
[ OK ] Started Security Auditing Service.
[ OK ] Stopped daily update of the root trust anchor for DNSSEC.
Stopping daily update of the root trust anchor for DNSSEC.
[ OK ] Started daily update of the root trust anchor for DNSSEC.
Stopping sudo kernel device manager...
[ OK ] Stopped sudo kernel device manager.
Starting sudo kernel device manager...
[ OK ] Started sudo kernel device manager.
Stopping OpenSSH server daemon...
[ OK ] Stopped OpenSSH server daemon.
Stopping target sshd-keygen.target.
[ OK ] Stopped target sshd-keygen.target.
Stopping sshd-keygen.target.
[ OK ] Reached target sshd-keygen.target.
Starting OpenSSH server daemon...
[ OK ] Started OpenSSH server daemon.
[ OK ] Started /usr/lib/systemd/systemd start man-db-cache-update.
Starting man-db-cache-update.service.
[ OK ] Started /usr/lib/systemd/systemd start man-db-cache-update.
[ OK ] Started man-db-cache-update.service.
[Error 2] No such file or directory: /usr/share/doc/apptstream-62ac6b8b64fbc/packages/python3-distro-1.4.0-2.module.el8_10.0-1910-234af798.noarch.rpm
The downloaded packages were saved in cache until the next successful transaction.
You can remove cache packages by running 'yum clean packages'.
[root@splunk ~]# [ OK ] Started dnf automatic.
[root@splunk ~]# sudo systemctl stop splunk
Stopping splunk...
[ OK ]
Stopping splunk helpers... [ OK ]
Done.
[root@splunk ~]# sudo rpm -dl splunk-9.8.5-e994146ae5c.x86_64.rpm
warning: splunk-9.8.5-e994146ae5c.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID b3c44420: NOKEY
Verifying...
[ OK ]
Repeating...
package splunk-9.8.5-e994146ae5c.x86_64 is already installed
[root@splunk ~]#
```

Start splunk service & check version

```
Stopping dnf... Please wait, as this may take a few minutes.
[ OK ]
Stopping splunk helpers... [ OK ]
Done.
[root@splunk ~]# sudo rpm -dl splunk-9.8.5-e994146ae5c.x86_64.rpm
warning: splunk-9.8.5-e994146ae5c.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID b3c44420: NOKEY
Verifying...
[ OK ]
Repeating...
package splunk-9.8.5-e994146ae5c.x86_64 is already installed
[root@splunk ~]# sudo systemctl start splunk
Splunk! All better! No fights.

Checking prerequisites...
Checking http port (8080): open
Checking mqtt port (8889): open
Checking supervisor port (222.0.0.1:8865): open
Checking hostcore port (8191): open
Checking configuration... Done
Checking critical directories... Done
Checking indexes...
  Validated: audit_conf/tracker_internal_intrpection_metrics_metrics_rollup_telemetry_thefishbucket history main summary
Done
Checking filesystem compatibility... Done
Checking conf files for problems... Done
Checking default conf files for otls... Done
Validating installed files against hashes from '/opt/splunk/splunk-9.8.5-e994146ae5c-linux-2.6-x86_64-manifest'
All installed files intact.
Done
All preliminary checks passed.

Starting splunk server daemon (splunkd)...
PYTHONPATH is set to @ in splunk-launch.conf disabling certificate validation for the httplib and urllib libraries shipped with the embedded Python inter-
preter must be set to "1" for increased security.
Done
[ OK ]

Waiting for web server at http://127.0.0.1:8080 to be available..... Done

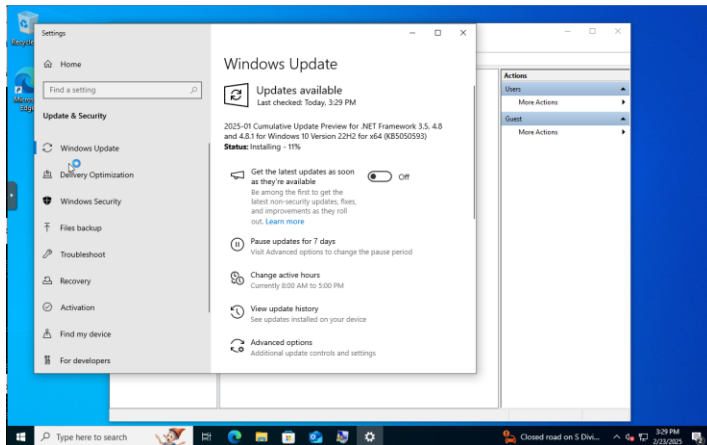
If you get stuck, we're here to help.
Look for answers here: http://docs.splunk.com

The Splunk web interface is at http://splunk:8080

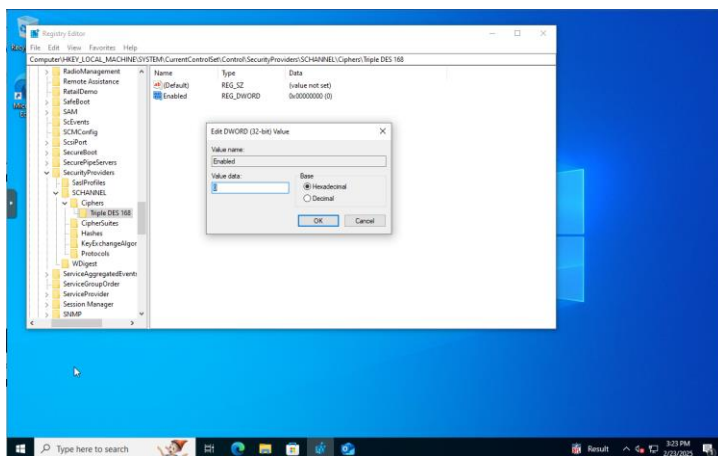
[root@splunk ~]# systemctl start splunk
Splunk 9.8.5 (build e994146ae5c)
[root@splunk ~]#
```

172.16.1.100 – ORLWorkstation (Patched SWEET32 & Guest Groups)

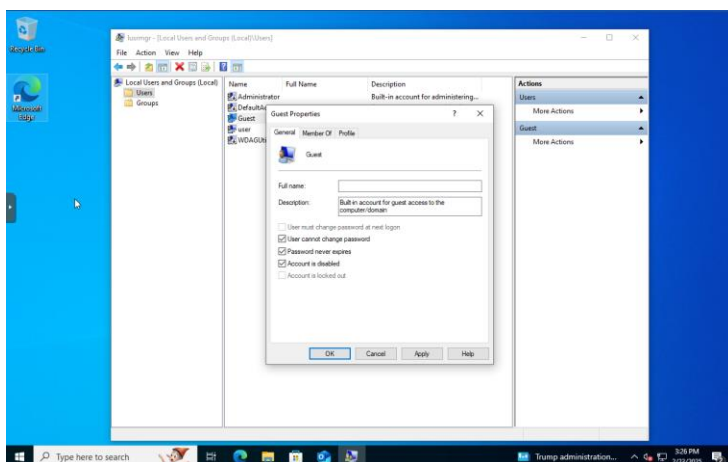
Check for any updates



Disable the vulnerable cipher through SCHANNEL



Go to – lusrmgr.msc – view guest account – Disable it as its not needed (or redefine groups)



172.16.1.105 – Nessus Server (Patched by updated OS)

Sudo Yum Update

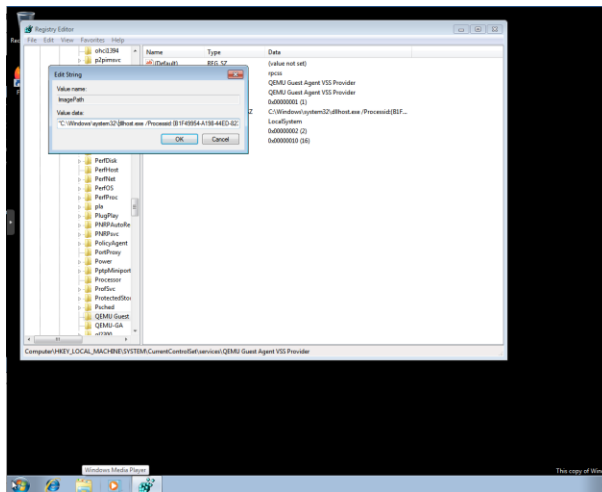
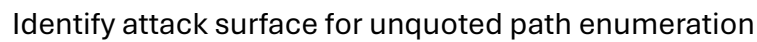
```
sssd                                x86_64                2.9.4-5.el10_10.1      basnos                119 k
sssd-ad                             x86_64                2.9.4-5.el10_10.1      basnos                314 k
sssd-client                         x86_64                2.9.4-5.el10_10.1      basnos                345 k
sssd-common                         x86_64                2.9.4-5.el10_10.1      basnos                1.7 M
sssd-common-pac                     x86_64                2.9.4-5.el10_10.1      basnos                195 k
sssd-ipa                            x86_64                2.9.4-5.el10_10.1      basnos                379 k
sssd-krb5                           x86_64                2.9.4-5.el10_10.1      basnos                265 k
sssd-krb5-common                    x86_64                2.9.4-5.el10_10.1      basnos                165 k
sssd-krb5-common                    x86_64                2.9.4-5.el10_10.1      basnos                286 k
sssd-ldap                           x86_64                2.9.4-5.el10_10.1      basnos                251 k
sssd-selinux                        x86_64                2.9.4-5.el10_10.1      basnos                179 k
sssd-proxy                          x86_64                2.9.4-5.el10_10.1      basnos                163 k
strace                              x86_64                5.10-2.1.el10_10       basnos                1.4 M
sudo                                x86_64                1.9.5p2-1.el10_9       basnos                1.0 M
systemd                             x86_64                239-82.el10_10.3       basnos                3.6 M
systemd-libs                        x86_64                239-82.el10_10.3       basnos                1.1 M
systemd-pon                         x86_64                239-82.el10_10.3       basnos                513 k
systemd-udev                       x86_64                239-82.el10_10.3       basnos                1.6 M
tss2-libs                           x86_64                2.3.2-6.el10           basnos                274 k
tracer-common                       noarch                1.1-1.el10             appstream              36 k
nmap                                x86_64                8.3.15-2.el10          basnos                152 k
nmap-libs                           x86_64                8.3.15-2.el10          basnos                167 k
nmap                                noarch                2.22.1-5.el10_10       basnos                366 k
tzdata                              noarch                2025a-1.el10           basnos                475 k
unbound-libs                        x86_64                1.16.2-5.0.el10_10     appstream              576 k
unzip                               x86_64                6.0-47.el10_10         basnos                195 k
util-libs                           x86_64                0.15-1.el10            basnos                111 k
util-linux                          x86_64                2.32-1-46.el10         basnos                2.5 M
util-linux-user                     x86_64                2.32-1-46.el10         basnos                102 k
vdo                                 x86_64                6.2.11.5-14.el10_10    basnos                605 k
virt-what                           x86_64                1.25-4.el10            basnos                37 k
which                               x86_64                2.21-20.el10           basnos                49 k
xfsdump                             x86_64                3.1.0-7.el10_9         basnos                332 k
xfsprogs                            x86_64                5.0-0-12.el10          basnos                1.1 M
yum                                  noarch                4.7.0-29.el10          basnos                280 k
zlib                                 x86_64                1.2.11-26.el10         basnos                182 k

Installing dependencies:
kernel-core                         x86_64                4.10.0-553.40.1.el10_10 basnos                43 M
kernel-modules                     x86_64                4.10.0-553.40.1.el10_10 basnos                36 M
python3-distro                     noarch                1.4.0-2.module+el10_10.0+1910+234aa790 appstream              36 k
Enabling module streams:
python3                             3.6

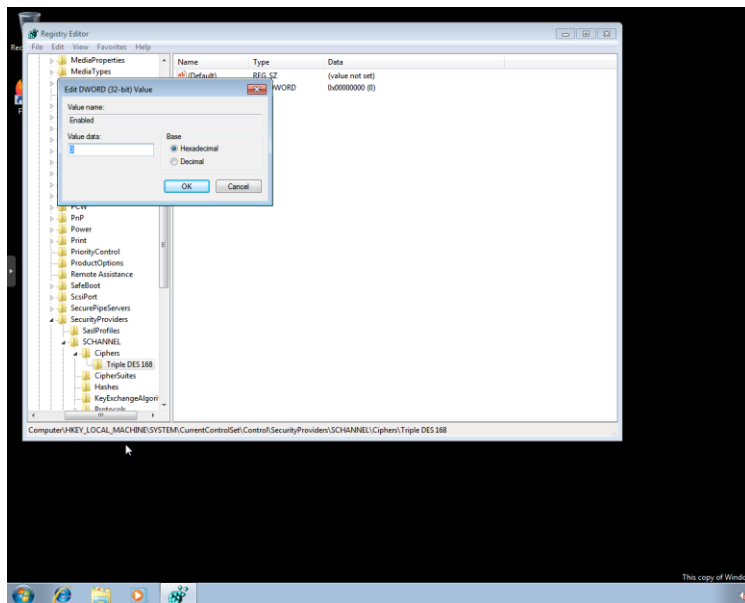
Transaction Summary
-----
Install  4 Packages
Upgrade 291 Packages

Total download size: 744 M
Is this ok [y/N]: y
```

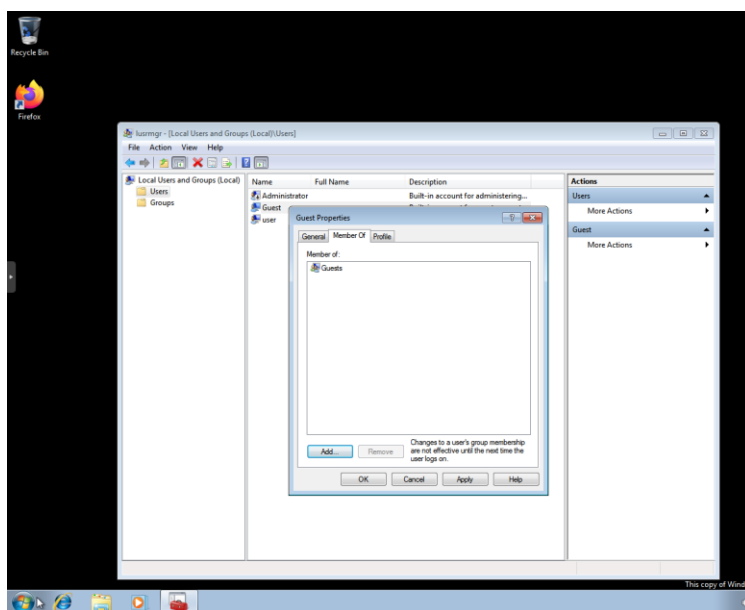
Add a new firewall rule to block RDP connections



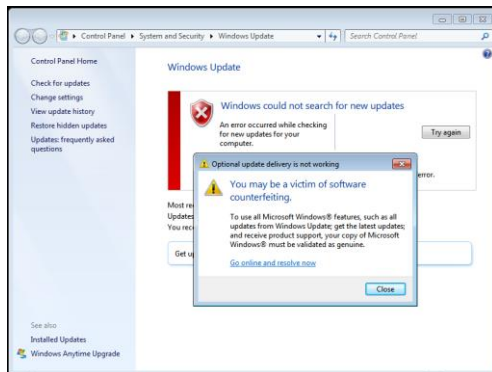
Disable the vulnerable cipher through SCHANNEL



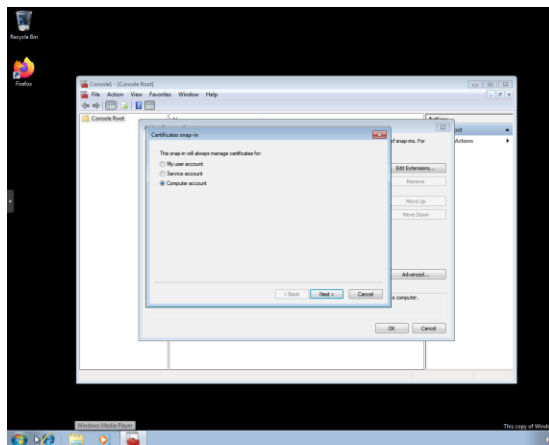
Remove Guest accounts from other groups



Unsupported Windows OS (remote) – Unable to fix vulnerability due to using an outdated and pirated software

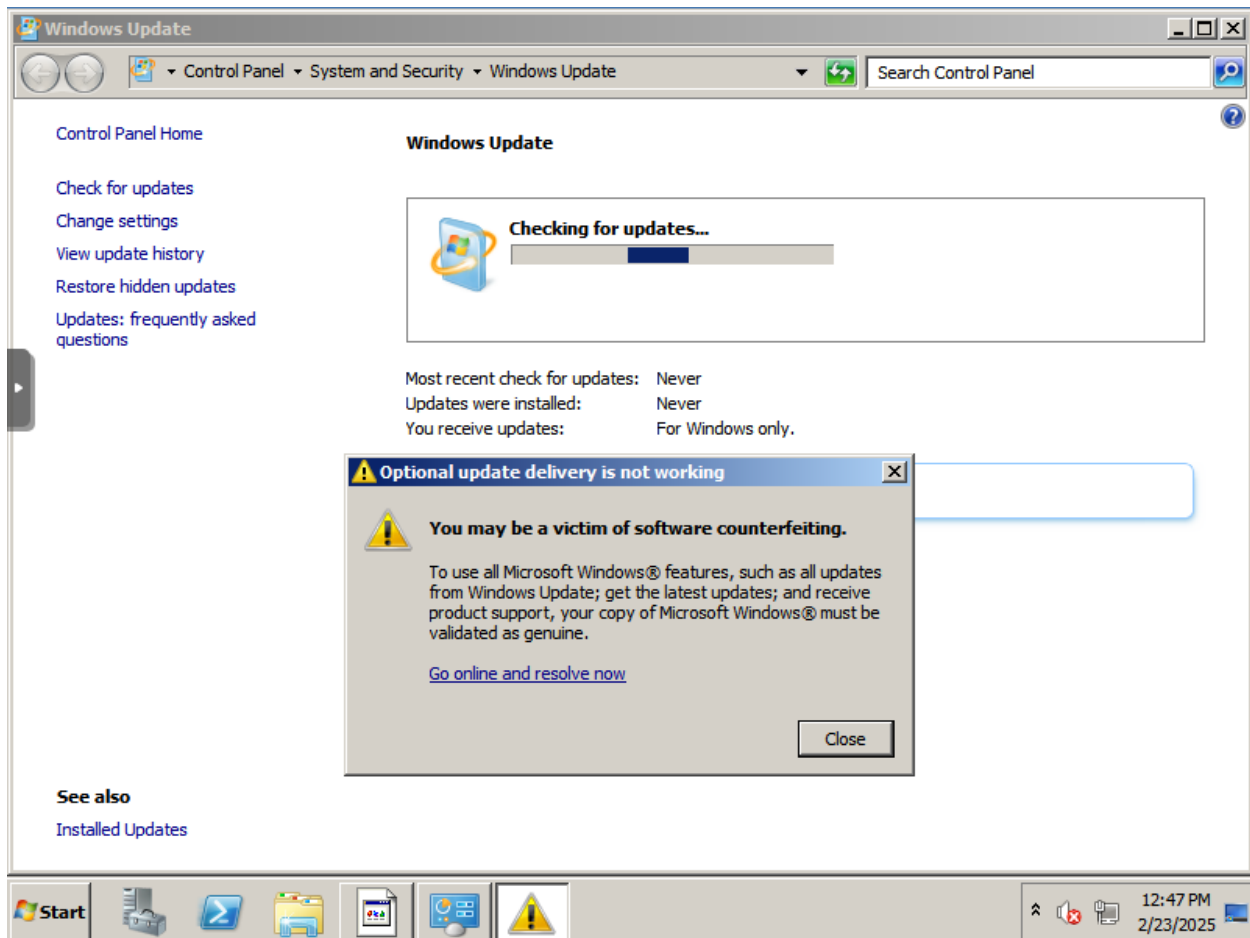


Unable to generate a new certificate – win r – MMC – certificates – personal – all task – request new certificate – followed wizard – couldn't complete



All Other Vulnerabilities are unable to be patched due to being on an unsupported operating system

172.17.1.2 – SFOServer (All vulnerabilities related to unsupported OS) (Add compensating controls or update OS if possible.)



All vulnerabilities are due to being on an unsupported and outdated version of windows. The best action to take is to update the operating system. If that is not an option – Tightening network segmentation, restricting access via firewall, disabling unnecessary services, and consistent monitoring is vital to keep a strong security posture.

The screenshot displays the Jira Kanban board for the 'Fulail Project'. The interface is divided into several sections:

- Top Navigation:** Includes tabs for 'Your work', 'Projects', 'Filters', 'Dashboards', 'Teams', 'Plans', 'Apps', and 'Create'.
- Left Sidebar:** Contains navigation options: 'Fulail Project' (Software project), 'PLANNING' (Summary, Timeline), 'Board' (selected), 'List', 'Forms', 'Goals', '+ Add view', 'DEVELOPMENT' (Code), 'Project pages', and 'Project settings'.
- Main Board Area:**
 - Header:** 'Projects / Fulail Project' and 'KAN board'.
 - Search:** A search bar with a magnifying glass icon and a dropdown menu showing 'KAN-1', 'KAN-2', and 'KAN-3'.
 - Columns:**
 - TO DO:** A column with 12 issues (KAN-1 to KAN-12). Issues KAN-1 to KAN-11 have orange status icons, while KAN-12 has a grey icon.
 - IN PROGRESS:** An empty column.
 - DONE:** A column with 3 issues (KAN-4, KAN-9, KAN-10) that have green status icons.
 - Bottom:** A '+ Create issue' button.
- Right Sidebar:**
 - Navigation:** 'Fulail Project' (Software project), 'PLANNING' (Summary, Timeline), 'Board' (selected), 'List', 'Forms', 'Goals', '+ Add view', 'DEVELOPMENT' (Code), 'Project pages', and 'Project settings'.
 - Header:** 'Projects / Fulail Project' and 'KAN board'.
 - Search:** A search bar with a magnifying glass icon and a dropdown menu showing 'KAN-1', 'KAN-2', and 'KAN-3'.
 - Columns:**
 - TO DO:** A column with 12 issues (KAN-1 to KAN-12). Issues KAN-1 to KAN-11 have orange status icons, while KAN-12 has a grey icon.
 - IN PROGRESS:** A column with 12 issues (KAN-1 to KAN-12). Issues KAN-1 to KAN-11 have orange status icons, while KAN-12 has a grey icon.
 - DONE:** A column with 3 issues (KAN-4, KAN-9, KAN-10) that have green status icons.
 - Bottom:** A '+ Create issue' button.

Add epic /
KAN-7

172.16.1.5

+
@

Description

High - 7.5 - 5.1 - 0.0398 - 42873 - SSL Medium Strength Cipher Suites Supported (SWEET32)

Activity

Show:
All
Comments
History

Newest first 17

M

Add a comment...

Looks good
Need help?
This is blocked...
Can you clarify...?
This

Pre tip press M to comment

M

Michael Kohronas · 10 seconds ago

SWEET32 persist after added SCHANNHEL ciphers, Triple DES 168

Edit · Delete · @

Add epic /
KAN-7

172.16.1.6

+
@

Description

Add a description...

Activity

Show:
All
Comments
History

Newest first 17

M

Add a comment...

Looks good
Need help?
This is blocked...
Can you clarify...?
This

Pre tip press M to comment

M

Michael Kohronas · 9 seconds ago

Spunk! needs a newer version to be patched, update to 9.0.5 took place just not the most recent update.

Edit · Delete · @

In Progress
Actions

Details

Assignee
Michael Kohronas

Labels
None

Parent
None

Team
None

Development
Create branch
Create commit

Reporter
Michael Kohronas

Automation
Rule executions

Created last week
Updated 1 hour ago

Configure

In Progress
Actions

Details

Assignee
Michael Kohronas

Labels
None

Parent
None

Team
None

Development
Create branch
Create commit

Reporter
Michael Kohronas

Automation
Rule executions

Created last week
Updated 1 hour ago

Configure

Progress

Actions

Details

Assignee

Michael Kahnoras

Labels

None

Parent

None

Team

None

Development

Create branch

Create commit

Reporter

Michael Kahnoras

Automation

Rule executions

Created last week

Updated 1 hour ago

Configure

The screenshot shows the 'Details' tab of a GitHub Actions workflow configuration. The workflow is named 'Deploy to production'. The 'Assignee' field is currently 'Unassigned' with a button to 'Assign to me'. Other fields include 'Labels' (None), 'Parent' (None), 'Team' (None), 'Development' (with buttons for 'Create branch' and 'Create commit'), and 'Reporter' (Michael Kishonas). At the bottom, the 'Automation' section shows 'Rule executions'.

The screenshot displays the KAN board interface. At the top, there is a search bar and three icons (a person, a magnifying glass, and a document). Below the search bar, a sidebar on the left contains a 'Create Issue' button. The main board area is divided into two columns: 'IN PROGRESS 4' and 'DONE 9'. The 'IN PROGRESS' column contains five issues, with '132-173.2' selected. The 'DONE' column contains four items, including 'Newspaper Inventory', 'Walmart Inventory', 'Source Vulnerability management', and 'Newspaper Inventory'.