Gurjot S Khakh

Professor Torres

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IT 100

Lab: 7

• Copy parts A, B, and C from Canvas

Part A:

- $\bullet \ \ What are the symptoms that tell you something is wrong with the below, and how do you troubleshoot and fix it:$
 - RAM
 - 。 CPU
 - Power Supply
 - Storage Drives

• RAM

- o Frequent Crashes & Restarts
- o Blue Screen of Death (BSOD)
- o Freezing or Lockups
- o Corrupted Files
- o Failure to Boot
- o Memory Errors in Applications

Fixies

- o Reseat the RAM
- o Test RAM Using Diagnostic Tools
- o Test One Stick at a Time
- o Check BIOS/UEFI
- o Use Task Manager or Resource Monitor

• CPU

- o System Won't Boot
- Overheating / High Temperatures
- o Frequent Freezing or Crashing
- o BSODs with CPU-Related Error Codes
- o Extremely Slow Performance
- o Boot Looping or Instability
- o BIOS/UEFI Doesn't Detect CPU

Fixies

- Check POST and Beep Codes
- Reseat the CPU

- Check Cooling
- o Update BIOS/UEFI
- o Test With a Known-Good Setup
- o Run Stress Tests (if system is stable enough)
- Power supply
 - O Computer Doesn't Power On
 - o Random Shutdowns or Restarts
 - o BSODs or Crashing Under Load
 - o Fans Spin but No Display
 - o Burning Smell or Sparks
 - o Buzzing or Clicking Sounds
 - o Peripherals or Components Not Getting Power
 - o Intermittent Booting / Boot Looping
- Fixies
 - o Use the Paperclip Test
 - o Check With a PSU Tester
 - o Swap in a Known-Good PSU
 - o Check Motherboard Debug LEDs or Beep Codes
 - Monitor Voltages in BIOS or Software
- Storage devices
 - o Slow Boot or System Performance
 - o Frequent Freezes, Crashes, or BSODs
 - o Boot Loop or "No Boot Device Found" Error
 - o Corrupted Files or Inaccessible Folders
 - o Missing Drive in File Explorer or BIOS
 - o Clicking, Grinding, or Beeping Noises
 - o S.M.A.R.T. Warnings
- Fixies
 - o Check Cables and Connections
 - o Enter BIOS/UEFI
 - o Run SMART Diagnostic Tools
 - o Run CHKDSK (Windows) or fsck (Linux/macOS)
 - o Use Disk Management (Windows) or Disk Utility (macOS)
 - o Try the Drive in Another PC or Adapter
 - o Clone the Drive

Part B:

- What are the symptoms that tell you something is wrong with the below, and how do you troubleshoot and fix it:
 - Video/Display issues
 - Wired networks
 - Wireless networks

Video/Display

- o Black Screen
- o Distorted, Flickering, or Flashing Display
- o Lines or Artifacts on Screen
- o No Signal / "Input Not Detected"
- o Dim Display or Backlight Issues
- o Wrong Resolution or Scaling Issues
- o Blue Screen of Death (BSOD) related to graphics

Fixies

- o Check Power & Connections
- o Try connecting the monitor to a different device
- o Look for BIOS splash screen when turning on the PC.
- o Switch Display Modes
- o Driver Checks
- o Check for Overheating
- o Hardware Diagnosis

Wired Networks

- o No Internet Connection
- o Intermittent Connection
- o Slow Network Speeds
- Unidentified Network
- o No Ethernet Detected
- o IP Address Conflict
- o Cannot Access Local Devices
- o No Link Light

Fixies

- o Check Physical Connections
- o Check Network Status on the Device
- Restart Devices
- o Run Built-in Troubleshooter
- o Check Device Manager (Windows)
- o Check IP Configuration
- o Firewall / Antivirus Checks
- o Test on Another Device
- o Try a Static IP

Part C:

 $\bullet \ \, \text{After listening to this week's lecture, what are some things that you can do right now to practice your troubleshooting skills?} \\$

I think some things that I can do to practice my troubleshooting skills is search for youtube videos of people troubleshooting their problems of devices. Another way is to ask ChatGPT to give you a troubleshooting problem and keep on practicing like that. Creating intentional problems with devices and troubleshooting them to gain more practice even on old devices. VirtualBox installing OS and troubleshooting them to make them fully functional.

Part D: SierraLab Windows

SSH using Putty and your private key with your credentials onto 207.62.230.146, port 2222. Once in, ssh to the Windowsbox.com and answer the below questions. Password is Computersrock1. Provides screenshots as proof of your answer.

- 1. Use auditpol to get a category to display audit policies
- 2. use the doskey to get a history of commands ran
- 3. Run the attrib command. What does this show?
- 4. Run the assoc command. What those the assoc command do?
- 5. Run the command to display group policies
- 6. Run the command to update group policies
- 7. Use the help command and try to run the command to list the volume information
- 8. Use the help command to find the command to change the title of your command prompt
- 9. Use the help command to find and run the command to list out the disk partitions
- 10. Run the check disk command from within the help center, and screenshot the output

```
AiddenleafO\itiOOstudent&RIDDENLEAF C:\Users\itiOOstudent>auditpol /get /category:*

System audit policy

System Statension

Secure Ny System Extension

Sourcess and Failure

No Auditing

Logor Success and Failure

Logor Success and Failure

Logor Success

Logor Success and Failure

Log
```

 $\label{lem:command} \begin{tabular}{l} \textbf{Commented [GK1]:} \ ran\ the\ command\ and\ this\ is\ the\ output\ I\ got \end{tabular}$

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>auditpol /list /category Category/Subcategory Account Logon Account Management Detailed Tracking DS Access Logon/Logoff

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>

Policy Change Privilege Use **Commented [GK2]:** I also ran this command which gives all audit policy categories

```
hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>doskey /history
auditpol
cls
auditpol /get /category:*
auditpol /list /category:*
auditpol /list /category:*
auditpol /list /category
cls
auditpol /get /category:*
auditpol /list /category:*
cls
auditpol /list /category:*
cls
auditpol /get /catefory:*
cls
auditpol /get /catefory:*
cls
auditpol /get /category:*
auditpol /get /category:*
auditpol /list /category
cls
auditpol /list /category
doskey
cls
doskey /history
```

Commented [GK3]: ran the command and also found that if you want to save command history before closing you can run the command of doskey /history > history.txt

Commented [GK4]: this shows the list of files and folders in current directory with their attribute flags

A=Archive H=Hidden

I= not content indexed

S= System

```
hiddenleafO\itiOOstudent@HIDDENLEAF C:\Users\itiOOstudent>assoc
.386=wxdfile
.3g2=WMP11.AssocFile.3G2
.3gp=WMP11.AssocFile.3G7
.3gp=WMP11.AssocFile.3G7
.5yw=wireshark-capture-file
.aac=WMP11.AssocFile.ADTS
.accountpicture-ms=accountpicturefile
.acp=wireshark-capture-file
.acp=wireshark-capture-file
.acp=wireshark-capture-file
.atf=WMP11.AssocFile.ADTS
.aif=WMP11.AssocFile.ADTS
.aif=WMP11.AssocFile.ATFF
.aif=f=MMP11.AssocFile.ATFF
.aif=f=MMP11.AssocFile.ATFF
.aif=ami=anifile
.apc=wireshark-capture-file
.apc=wireshark-capture-file
.apc=wireshark-capture-file
.asf=WMMP11.AssocFile.ASF
.asp=aspfile
.asf=WMMP11.AssocFile.ASF
.asp=aspfile
.asf=WMMP11.AssocFile.ASF
.asp=aspfile
.asx=WMP11.AssocFile.AVI
.bat=batfile
.bfr=wireshark-capture-file
.bdg=Diagnostic.Perfmon.Document
.bmp=Paint.Picture
.cab=CABFOlder
.camp=campfile
.cat=CATPile
.cda=WMP11.AssocFile.CDA
.cdmp=cdmpfile
.cdm=cdmfile
.cdm-cdmfile
.cdm-cdm
```

Commented [GK5]: assoc command is used to view and change file extensions associations.

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>gpresult		
GPRESULT [/S system [/U username [/F [password]]]] [/SCOPE scope] [/USER targetusername] [/R /V /Z] [(/X /H) <filename> [/F]]</filename>		
Description: This command line tool displays the Resultant Set of Policy (RSoP) information for a target user and computer.		
Parameter List:		
/S	system	Specifies the remote system to connect to.
/ប	[domain\]user	Specifies the user context under which the command should run. Can not be used with $/X$, $/H$.
/ P	[password]	Specifies the password for the given user context. Prompts for input if omitted. Cannot be used with /X, /H.
/SCOPE	scope	Specifies whether the user or the computer settings need to be displayed. Valid values: "USER", "COMPUTER".
/USER	[domain\]user	Specifies the user name for which the RSoP data is to be displayed.
/x	<filename></filename>	Saves the report in XML format at the location and with the file name specified by the <filename> parameter. (valid in Windows Vista SPI and later and Windows Server 2008 and later)</filename>
/н	<filename></filename>	Saves the report in HTML format at the location and with the file name specified by the <filename> parameter. (valid in Windows at least Vista SP1 and at least Windows Server 2008)</filename>
/F		Forces Gpresult to overwrite the file name specified in the /X or /H command.
/R		Displays RSoP summary data.
/٧		Specifies that verbose information should be displayed. Verbose information provides additional detailed settings that have been applied with a precedence of 1.
/2		Specifies that the super-verbose information should be displayed. Super-verbose information provides additional detailed settings that have been applied with a precedence of 1 and higher. This allows you to see if a setting was set in multiple places. See the Group Folicy

Commented [GK6]: another command that can be run is gpresult /r which gives a summary of RSoP data

niddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>gpupdate pdating policy...

Computer Policy update has completed successfully. Jser Policy update has completed successfully.

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>gpupdate /target:computer Updating policy...

Computer Policy update has completed successfully.

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>gpupdate /target:user Updating policy...

User Policy update has completed successfully.

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>gpupdate /force Updating policy...

Computer Policy update has completed successfully. User Policy update has completed successfully.

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>

Displays a disk volume label and serial number.

COPY

Copies files and directory trees.
Displays WMI information inside interactive command shell.

For more information on tools see the command-line reference in the online help.

Volume in drive C has no label.
Volume Serial Number is 4C3A-51E5

TITLI TREE

Sets the window title for a CMD.EXE session. Graphically displays the directory structure of a drive or $% \left\{ 1\right\} =\left\{ 1\right\} =\left\{$

VER VERIFY

Displays the Windows version.
Tells Windows whether to verify that your files are written correctly to a disk.

XCOPY WMIC

Displays a disk volume label and serial number.
Copies files and directory trees.
Displays WMI information inside interactive command shell.

niddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>title Kali Linux

niddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>

Commented [GK7]: the main command is gpupdate to update group polices but to target only the computer or the user you put /target:computer or /target:user, another one is gpupdate /force which Forces Reapplication of All Policies (even if unchanged)

Commented [GK8]: first ran the help command and then found the command to list volume information

Commented [GK9]: ran help command then found title command and renamed CMD to Kali linux by title Kali Linux

```
hiddenleafO\itlOOstudentERIDDENLEAF C:\Users\itlOOstudent>chkdsk
The type of the file system is NTFS.

WARNING: /F parameter not specified.
Running CHKDSK in read-only mode.

Stage 1: Examining basic file system structure ...
288256 file records processed.
File verification completed.

Phase duration (File record verification): 34.34 seconds.
11100 large file records processed.
Phase duration (Orphan file record decovery): 0.00 milliseconds.
0 bad file records processed.
Phase duration (Bad file record checking): 0.76 milliseconds.

Stage 2: Examining file name linkage ...
1251 reparse records processed.
A29794 index entries processed.
A29794 index entries processed.
Phase duration (Index verification): 1.18 minutes.
0 unindexed files scanned.
Phase duration (Orphan recovery to lost and found.
Phase duration (Orphan recovery to lost and found): 0.70 milliseconds.
1251 reparse records processed.
Phase duration (Reparse point and Object ID verification): 8.50 milliseconds.
1251 reparse records processed.
Phase duration (Reparse point and Object ID verification): 8.50 milliseconds.
Stage 3: Examining security descriptor verification): 127.18 milliseconds.
CHASE duration (Security descriptor verification): 127.18 milliseconds.
CHASE duration (Data attribute verification): 0.66 milliseconds.
CHKDSK is verifying Usn Journal...
544764368 USN bytes processed.
USN Journal verification completed.
Phase duration (Data attribute verification): 4.23 seconds.

Windows has scanned the file system and found no problems.
No further action is required.

67417087 KB total disk space.
24491956 KB in 182998 files.
151324 KB in 70771 indexes.
0 KB in bad sectors.
890167 KB in use by the system.
65536 KB occupied by the log file.
37883640 KB available on disk.
4096 bytes in each allocation unit.
16854271 total allocation units on disk.
9470910 allocation units available on disk.
9470910 allocation units available on disk.
9470910 allocation units available on disk.
```

Commented [GK10]: ran help command then found diskpart command and within diskpart ran list disk which listed the disk partitions

Commented [GK11]: this is the output I got after running the chkdsk command

Part E: SierraLab Linux

SSH using Putty and your private key with your credentials onto 207.62.230.146, port 2222. Once in, ssh to the Linuxbox.com and answer the below questions. Password is Computersrock1. Provides screenshots as proof of your answer.

- 1: type the command to show the first fiew lines of the journalctl output
- 2: type the command to show the last fiew lines of the journalctl output
- 3: type the command to show journalctl output in real time
- 4: how much disk usage in the journalctl using
- 5: what version of the journalctl are you using
- 6: run the journalctl and list all ports referenced
- 7: run the journalctl and list all user activity except root
- 8: run the journalctl and list out all errors detected
- 9: Using the journalctl, what issues does the system have
- 10: Using the journalctl, search only for "Listening". What are you seeing

- (1.6 monosometh politic) - (2.6 monosomethin) - (

```
(it100student@ Kali)-[~]
$ journalctl --disk-usage
```

Archived and active journals take up 558.9M in the file system.

```
-(1100statednet Wall)-(=)
-(3 journaltt -version
-(3 journaltt -vers
```

 $\begin{tabular}{ll} \textbf{Commented [GK12]:} journal ctl & | head limits the output to the first 10 outputs \\ \end{tabular}$

 $\begin{tabular}{ll} \textbf{Commented [GK13]:} journal ctl & | tail gives the last 10 outputs of the journal ctl command \\ \end{tabular}$

Commented [GK14]: the command is journalctl -f which means follow the new outputs in real time

Commented [GK15]: 558.9m it takes up

Commented [GK16]: ran journalctl --version and gave me this output and the version is 254(254-1)

Commented [GK17]: I ran the command of journalctl | grep -Eo 'port [0-9]+' | awk '{print \$2}' | sort -n | uniq. which this means it to grab the ports that journalctl is using then print them and put them in numerical order and then get rid of duplicates

```
Commented [GK18]: 56920
56922
56924
56926
56928
56930
56932
56934
56936
56938
56940
56942
56944
56946
56948
56950
56952
56954
56956
56958
56960
56962
56964
56966
56968
56970
56972
56974
56976
56978
56980
56982
56984
56986
56988
56990
56992
56994
56996
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57008
57010
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57020
57022
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57032
57034
57036
```

Commented [GK19]: ran the command of journalctl | grep -v '\broot\b' which excludes any root and only lists user activity

Commented [GK20]: Oct 03 01:13:28 Kali systemd[1]: user@1004.service: Deactivated successfully. Oct 03 01:13:28 Kali systemd[1]: Stopped user@1004.service - User Manager for UID 1004. Oct 03 01:13:28 Kali systemd[1]: user@1004.service: Consumed 2.184s CPU time. Oct 03 01:13:28 Kali systemd[1]: Stopping user-runtimedir@1004.service - User Runtime Directory /run/user/1004... Oct 03 01:13:28 Kali systemd[1]: run-user-1004.mount: Deactivated successfully. Oct 03 01:13:28 Kali systemd[1]: user-runtimedir@1004.service: Deactivated successfully. Oct 03 01:13:28 Kali systemd[1]: Stopped user-runtimedir@1004.service - User Runtime Directory /run/user/1004. Oct 03 01:13:28 Kali systemd[1]: Removed slice user-1004.slice - User Slice of UID 1004. Oct 03 01:13:28 Kali systemd[1]: user-1004.slice: Consumed

6.849s CPU time.

Oct 03 01:13:29 Kali systemd[1]: run-docker-

runtime\x2drunc-moby-29f20ae8c96b6618f4d07c7846f168b0e1729603a1b7d33145 c3d5947a07fd40-runc.PrIeba.mount: Deactivated

successfully. Oct 03 01:13:59 Kali systemd[1]: run-docker-

runtime\x2drunc-mobycfbfa0cfd32c3e373e7352d252b27380378a228a431ff175b3a

1cc5bf6f0363a-runc.P98ik6.mount: Deactivated successfully.

Oct 03 01:14:00 Kali systemd[1]: run-dockerruntime\x2drunc-moby-

29f20ae8c96b6618f4d07c7846f168b0e1729603a1b7d33145 c3d5947a07fd40-runc.O6emCR.mount: Deactivated successfully.

Oct 03 01:14:29 Kali systemd[1]: run-docker-

runtime\x2drunc-moby-cfbfa0cfd32c3e373e7352d252b27380378a228a431ff175b3a 1cc5bf6f0363a-runc.H0aCVJ.mount: Deactivated successfully.

Oct 03 01:14:29 Kali systemd[1]: run-dockerruntime\x2drunc-moby-

29f20ae8c96b6618f4d07c7846f168b0e1729603a1b7d33145 c3d5947a07fd40-runc.Y5KjfX.mount: Deactivated successfully.

Commented [GK21]: ran journalctl -p err which lists out all the errors

Commented [GK22]: Aug 14 08:08:00 Ethical-Hacker-Kali kernel: [drm:vmw_host_printf [vmwgfx]] *ERROR* Failed to send host log message. Aug 14 08:08:00 Ethical-Hacker-Kali systemd[1]: Invalid

DMI field header.

Aug 14 08:08:05 Ethical-Hacker-Kali sshd[718]: error: kex_exchange_identification: Connection closed by remote

Aug 14 08:08:06 Ethical-Hacker-Kali pipewire[777]: spa.alsa: 'front:0': playback open failed: Device or resource

Commented [GK23]: ran journalctl -p warning -b which gives the warnings that are given

```
Oct 03 0134:33 Mail systems[22897509]: Listening on dismans.cocket - On-De Haut West Message Bus Socket.

03 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Repring demon.

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Repring demon.

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Repring demon.

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Repring demon.

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache (access for web browsers).

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache.

05 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent share and passphrase cache.

06 10 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent share cache.

07 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent share cache.

08 034:64:31 Mail systems[2373444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent share cache.

08 034:64:31 Mail systems[2374444]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache.

08 035:114 Mail systems[2374645]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache (access for web browsers).

08 035:114 Mail systems[2374605]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache.

08 035:114 Mail systems[2374605]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache.

08 035:114 Mail systems[2374605]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphrase cache.

08 035:114 Mail systems[2374605]: Listening on grow-keyring-demon.socket - ONOME Cryptographic agent and passphras
```

Commented [GK24]: another one is journalctl -p err -b which only gives what is wrong no warnings

Commented [GK25]: ran journaletl | grep -i "listening" what is saying is to listen in the journaletl on ports. Logs from services indicating they are Listening

