

Windows Forensics 2

Task 2 The FAT file systems

How many addressable bits are there in the FAT32 file system?

28 bits

What is the maximum file size supported by the FAT32 file system? (In GB)

4

Which file system is used by digital cameras and SD cards?

exFAT

Task 3 The NTFS File System

Parse the \$MFT file placed in C:\users\THM-4n6\Desktop\trriage\C\ and analyze it. What is the Size of the file located at

.\Windows\Security\logs\SceSetupLog.etl

Run the command prompt as administrator move to folder

C:\Users\THM-4n6\Desktop\Eztools

Run the command MFTECmd.exe -f "C:\users\THM-4n6\Desktop\trriage\C\ \$MFT" --csv outputfile.csv

```
C:\Users\THM-4n6\Desktop\Eztools>MFTECmd.exe -f "C:\users\THM-4n6\Desktop\trriage\C\ $MFT" --csv outputfile.csv
MFTECmd version 0.5.0.1

Author: Eric Zimmerman (saericzimmerman@gmail.com)
https://github.com/EricZimmerman/MFTECmd

Command line: -f C:\users\THM-4n6\Desktop\trriage\C\ $MFT --csv outputfile.csv

File type: Mft

Processed 'C:\users\THM-4n6\Desktop\trriage\C\ $MFT' in 13.7588 seconds

C:\users\THM-4n6\Desktop\trriage\C\ $MFT: FILE records found: 196,532 (Free records: 6,177) File size: 198MB
Path to 'outputfile.csv' doesn't exist. Creating...
CSV output will be saved to 'outputfile.csv\20251016103510_MFTECmd_ $MFT_Output.csv'
```

Open the file in notepad , search for the file SceSetupLog.etl

```
36,3,True,106944,11,...\Windows.old\ $WINDOWS.~BT\Sources\RecoveryPartitionBackup,,0,1,,
37,4,True,24665,2,...\Windows\security\logs,SceSetupLog.etl,.etl,49152,1,,False,False,F
38,3,True,6234,1,...\Windows.old\Windows\Temp,amc3210.tmp,.tmp,8192,1,,False,False,Fals
39,6,True,1275,1,...\Windows.old\ProgramData\Microsoft\Diagnosis,VortexSchemaRequests.c
40,3,True,36,3,...\Windows.old\ $WINDOWS.~BT\Sources\RecoveryPartitionBackup,boot.sdi,.s
```

49152

What is the size of the cluster for the volume from which this triage was taken?

Now use the \$Boot file

MFTECmd.exe -f "C:\users\THM-4n6\Desktop\trriage\C\Boot" --csv output2.csv

After that open the file

EntryPoint,	Signature,	BytesPerSector,	SectorsPerCluster,	ClusterSize	ReservedSectors
0xEB 0x52 0x90,	"NTFS",	512,	8,	4096,	0,60668614,786432,2,102,

4096

Task 4 Recovering deleted files

There is another xlsx file that was deleted. What is the full name of that file?

Open the file in the autopsy

\$UpCase:\$Info				20
\$Volume				20
New Microsoft Excel Worksheet.xlsx~RFcd07702.TMP				20
TryHackme.xlsx				20
TryHackMe2.txt				20

TryHackme.xlsx

What is the name of the TXT file that was deleted from the disk?

TryHackMe2.txt

Recover the TXT file from Question #2. What was written in this txt file?

Right click on the file TryHackMe2.txt -> extract -> select the location where to save the file -> open the recovered file

THM-4n6-2-4

Task 5 Evidence of Execution

How many times was gkape.exe executed?

Run the command prompt as administrator and go to the directory

C:\Users\THM-4n6\Desktop\EZtools

Execute the PECmd.exe on the file

C:\Users\THM-4n6\Desktop\trriage\C\Windows\prefetch\GKAPE.EXE-E935EF56.pf

PECmd.exe -f

"C:\Users\THM-4n6\Desktop\trriage\C\Windows\prefetch\GKAPE.EXE-E935EF56.pf"

--csv GKAPE

It will create a files in the dir GKAPE , open the timeline file , two entries were present

```
RunTime,ExecutableName
2021-12-01 13:04:49,\VOLUME{01d7e1a9a74620d0-50a75245}\USERS\THM-4N6\DESKTOP\KAPE\GKAPE.EXE
2021-12-01 13:04:04,\VOLUME{01d7e1a9a74620d0-50a75245}\USERS\THM-4N6\DESKTOP\KAPE\GKAPE.EXE
```

2

What is the last execution time of gkape.exe

2021-12-01 13:04:49 but changer the format according to the question 12/01/2021
13:04

When Notepad.exe was opened on 11/30/2021 at 10:56, how long did it remain in focus?

Use the file

C:\Users\THM-4n6\Desktop\trriage\C\Users\THM-4n6\AppData\Local\ConnectedDevices Platform\L.THM-4n6\ActivitiesCache.db and tool WxTCmd.exe

WxTCmd.exe -f

"C:\Users\THM-4n6\Desktop\trriage\C\Users\THM-4n6\AppData\Local\ConnectedDevice sPlatform\L.THM-4n6\ActivitiesCache.db" --csv notepad

After that open the file , search for the time given in the question in the same row after the start time end time is there then the duration is present

,,2021-11-30 10:56:19,2021-11-30 10:57:00,00:00:41,2021-11-30 :

00:00:41

What program was used to open

C:\Users\THM-4n6\Desktop\KAPE\KAPE\ChangeLog.txt?

Now we are using the tool JLECmd.exe on the folder

C:\Users\THM-4n6\Desktop\trriage\C\Users\THM-4n6\AppData\Roaming\Microsoft\Wind ows\Recent\AutomaticDestinations

JLECmd.exe -d

"C:\Users\THM-4n6\Desktop\trriage\C\Users\THM-4n6\AppData\Roaming\Microsoft\Windows\Recent\AutomaticDestinations" --csv JLECMD

Open the extracted file , search for ChangeLog.txt

5,9b9cdc69c1c24e2b,Notepad 64-bit,4,3,1,2,2021-11-25 03:22:45,2021-11-25 03:42:50,靛靛靛/靛靛靛7,00:1a:7d:da:71:10,C:\Users\THM-4n6\Desktop\KAPE\KAPE\Get-KAPEUpdate.ps1
5,9b9cdc69c1c24e2b,Notepad 64-bit,4,3,2,1,2021-11-25 03:22:45,2021-11-25 03:42:40,靛靛靛/靛靛靛7,00:1a:7d:da:71:10,C:\Users\THM-4n6\Desktop\KAPE\KAPE\ChangeLog.txt,2,Fa
5,f01b4d95cf55d32a,Windows Explorer Windows 8.1,4,29,0,1D,2021-12-01 12:31:48,2021-12-01 13:02:00,靛靛靛6,02:29:03:2c:d6:b1,C:\Users\THM-4n6\Desktop\EZtools\SDBExplorer,
5,f01b4d95cf55d32a,Windows Explorer Windows 8.1,4,29,1,1C,2021-12-01 12:31:48,2021-12-01 13:02:04,靛靛靛6,02:29:03:2c:d6:b1,C:\Users\THM-4n6\Desktop\EZtools\RegistryExpl
5,f01b4d95cf55d32a,Windows Explorer Windows 8.1,4,29,2,1B,2021-12-01 12:31:48,2021-12-01 13:01:59,靛靛靛6,02:29:03:2c:d6:b1,C:\Users\THM-4n6\Desktop\EZtools\ShellBagsExp
5,f01b4d95cf55d32a,Windows Explorer Windows 8.1,4,29,3,1A,2021-12-01 12:31:48,2021-12-01 13:01:59,靛靛靛6,02:29:03:2c:d6:b1,C:\Users\THM-4n6\Desktop\EZtools\TimelineExpl

notepad.exe

Task 6 File/folder knowledge

When was the folder C:\Users\THM-4n6\Desktop\regripper last opened? \

Open the lastly extracted file in EZViewer search for the regripper

EntryNum	CreationTime	LastModified	MacAddr	Path	
3	11/30/2021 10:43	11/30/2021 10:56	02:0b:fc:7c	C:\Program Files\Amazon\Ec2ConfigService\Settings\WallpaperSet	
1		11/25/2021 4:01		::{26EE0668-A00A-44D7-9371-BEB064C98683}\5::{BB06C0E4-D293-4F	
3	11/30/2021 10:43	11/30/2021 10:56	02:0b:fc:7c	C:\Program Files\Amazon\Ec2ConfigService\Settings\WallpaperSet	
2	11/25/2021 3:22	11/25/2021 3:42	00:1a:7d:d	C:\Users\THM-4n6\Desktop\KAPE\KAPE\Get-KAPEUpdate.ps1	
1	11/25/2021 3:22	11/25/2021 3:42	00:1a:7d:d	C:\Users\THM-4n6\Desktop\KAPE\KAPE\ChangeLog.txt	
1D	12/1/2021 12:31	12/1/2021 13:02	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\SDBExplorer	
1C	12/1/2021 12:31	12/1/2021 13:02	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\RegistryExplorer	
1B	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\ShellBagsExplorer	
1A	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\TimelineExplorer	
19	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\iisGeolocate	
18	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\EvtxExplorer	
17	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\MFTExplorer	
16	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\SQLCmd	
F	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools	
15	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\JumpListExplorer	
14	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\EZtools\Hasher	
13	12/1/2021 12:31	12/1/2021 13:01	02:29:03:2	C:\Users\THM-4n6\Desktop\regripper	
1	11/25/2021 3:12	12/1/2021 13:01	00:1a:7d:d	knownfolder:{754AC886-DF64-4CBA-86B5-F7FBF4FBCEf5} ==> ThisP	
12		12/1/2021 13:01		\\tsclient\D	

12/1/2021 13:01

When was the above-mentioned folder first opened?

12/1/2021 12:31

Task 7 External Devices/USB device forensics

Which artifact will tell us the first and last connection times of a removable drive?

Setupapi.dev.log