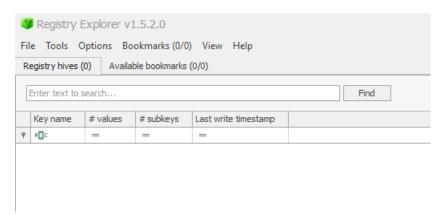
# HR Server Woes 1 50 Use the files you download to examine the suspicious host. What is the hostname of this machine? Link

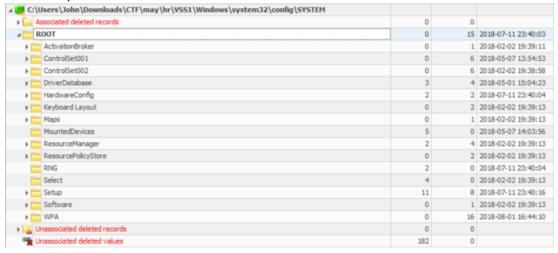
With using Zimmerman's tools to look in to a bunch of these items here is a link to install them: <a href="https://ericzimmerman.github.io/#!index.md">https://ericzimmerman.github.io/#!index.md</a>

The Registry Hive is in the extracted folder under VSS1\Windows\system32\config

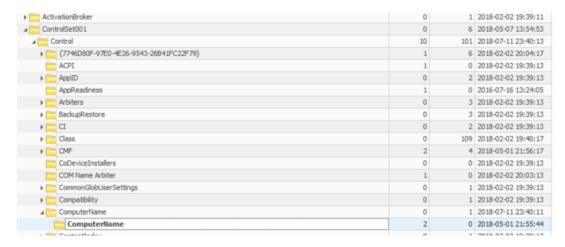
For this one we will use Registry Explorer to look at the registry key for the active computer name:



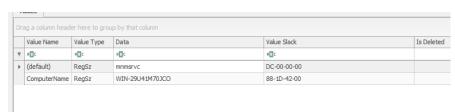
### Load the system hive:



Go to Root/ContolSet001/Control/Computername/Computername



### We see the ComputerName key and our answer:

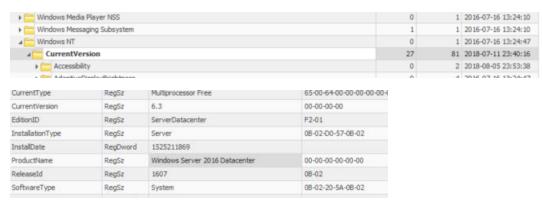


Flag: WIN-29U41M70JCO



For this one we will open up the SOFTWARE hive, and browse to Sotware\Microsoft\Windows NT\CurrentVersion

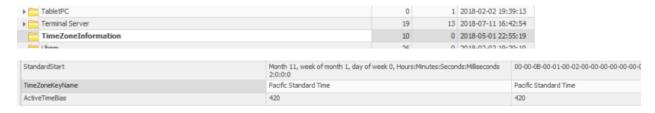
From here we can see the version of the operating system.



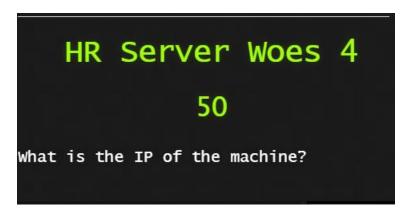
Flag: Windows Server 2016 Datacenter

## HR Server Woes 3 50 What is the timezone of the machine? Answer should be three letters.

We will go back to the CurrentConrolSet from the hostname question, but instead go to \Control\Control\TimezonInformation

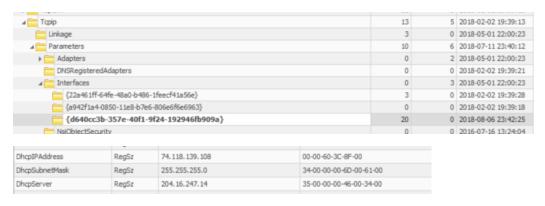


Flag: pst



For this one we will go move to a different key: \CurrentControlSet\Services\Tcpip\Parameters\Interfaces

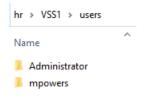
Here we see there are three interfaces but only one has IP information



Flag: 74.118.139.108

What are the names of the users on this system? Flag format: acct1,acct2,... (no spaces). Do not include the account "Default"

For this one we can just browse the file system under the vss1\users folder



Flag: Administrator, mpowers

### HR Server Woes 6 80 What is the file name that represents MFT Entry 168043?

We will open up an Administrator PowerShell and will use this to convert the \$MFT file into a CSV file to find the entry we need.

```
See of the Control of Control of
```

.\Get-ZimmermanTools\MFTECmd.exe -f '.\may\hr\VSS1\\$MFT' --csv .\may\hr\mft.csv

20200519202257\_MFTECmd\_\$MFT\_Output.csv

5/19/2020 3:23 PM

Microsoft Excel Comma

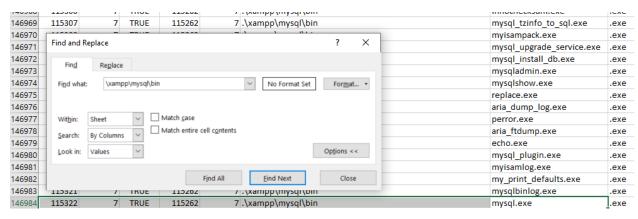
We open the excel file and we can browse for the entry to get the file name for the flag

199399	1	Find and Replace ? X					.pyc	185	
199400	1	,						.pyc	437
199401	1	Fin <u>d</u>	Replace						0
199402	1	Find what:	168043					.txt	98
199403	1							.txt	1110
199404	1								2859
199405	1								44644
199406	1					Options >	>	.txt	4
199407	1								116
199408	1				Find All <u>F</u> ind Next	Clos	е	.exe	102743
199409	1	08042	1 IKUE	16/052	1 .\Pytnons pips.exe			.exe	102743
199410	1	68043	1 TRUE	167052	1 .\Python3 pip3.7.exe	<u> </u>		.exe	102743

Flag: pip3.7.exe

# HR Server Woes 7 80 What is the MFT Entry number of the following file? \xampp\mysql\bin\mysql.exe

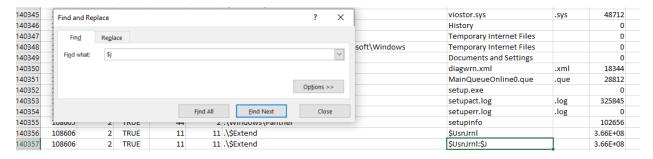
Inside this excel file we will search again for this file. We cannot search for the full path as the mysql.exe is separated to another column.



Flag: 115322

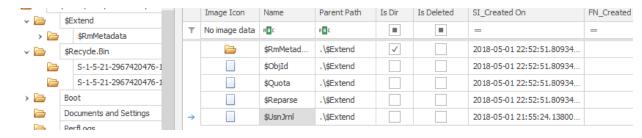
# HR Server Woes 8 100 What is the MFT Attribute ID of the named \$J data attribute for the MFT Entry with a file name of \$UsnJrn1?

Sticking with the CSV file we can search for \$j



We can take this and look in MFT Explorer to view the attributes.

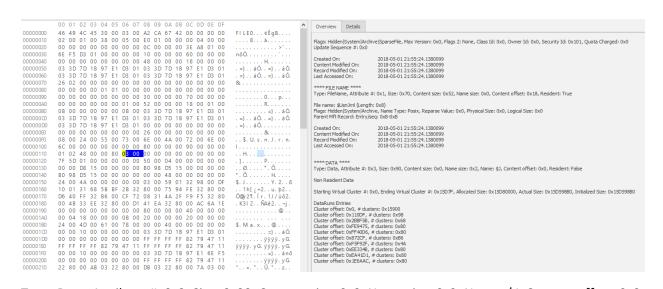
So browse to \$extend\\$UsnJrnl



To do the math here is what we need to find the offset

108606 \* 1024 = 111212544

Convert to hex: 111212544 == 6A0F800



Type: Data, Attribute #: 0x3, Size: 0x90, Content size: 0x0, Name size: 0x2, Name: \$J, Content offset: 0x0, Resident: False

Flag: 3

# HR Server Woes 9 100 At 2018-08-08 18:10:38.554 (UTC) what was the IP address of the the client that attempted to access SMB via an anonymous logon?

We will run the Zimmerman tools to correlate all the event logs together with EvtxExplorer. (Make sure you are on the E Drive).

This will create a csy file we can browse and sort on.

20200520142236\_EvtxECmd\_Output.csv 5/20/2020 9:23 AM Microsoft Excel C... 31,964 KB

We will need to create a table: select all -> insert table with headers. Filter on channel for the two SMB-Server channels, and convert the Time created field to long date format.

Next we need to go to 8/18/2018 @ 18:10 and find the record associated with that field.



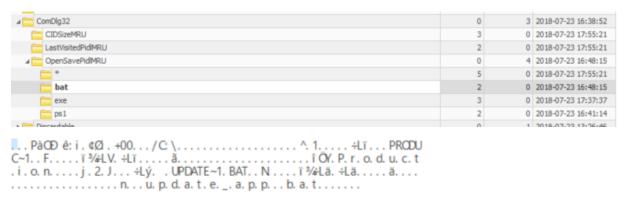
Flag: 80.81.110.50

80

What was the name of the batch file saved by mpowers? Answer should be the full path starting with C:\

We need to load the mpowers ntuser.dat hive into Registry Explorer and look at the following location for recent open/saved files:

 $Software \verb|\Microsoft| Windows \verb|\CurrentVersion| Explorer \verb|\Comdlg32| Open Save PidMRU \verb|\bat| bat and the property of the$ 



From here we can see update\_app.bat was the bat files she saved under the c:\production folder

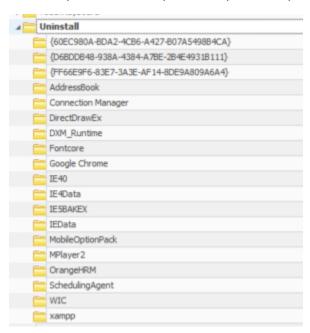
Flag: c:\production\update\_app.bat

80

What is the name of the hr management application that hosts a web server?

For this we will look at the Software registry hive and go the following location in order to find all the programs listed under the add/remove control panel:

Software\wow6432Node\Microsoft\Windows\CurrentVersion\Uninstall



Here we see one program that has the HR in it as this could be the program we are looking for.

### OrangeHRM Software company





### orangehrm.com

OrangeHRM Inc. is a HR software company based in Secaucus, New Jersey. The company has developed a human resources management solution. The company offers an open-source, professional, & enterprise solution. The open-source solution is free while the professional and enterprise solutions are advanced hosted solutions. Wikipedia

Flag: OrangeHRM

80

At 2018-07-30 22:31:33 UTC which user was logged in, what was the logon type (integer), and the remote IP? Format should be: TargetUserName-LogonType-IPAddress

We will run the Zimmerman tools to correlate all the event logs together with EvtxExplorer.

Processed 53 files in 57.0491 seconds

PS C:\Users\John\Downloads\CTF> .\Get-ZimmermanTools\EvtxExplorer\EvtxECmd.exe -d .\may\hr\VSS1\Windows\system32\winevt\logs\ --csv .\may\hr\

This will create a csv file we can browse and sort on.

20200519205704\_EvtxECmd\_Output.csv 5/19/2020 3:58 PM Microsoft Excel C... 68,140 KB

We can look into the event logs to get the information that we need. We can create a table out of the csv, Select All -> Insert Table -> My Table has headers

Under Column G we will filter on Security and Event ID 4624 for a successful Login attempts, this gives us only 79 Events to look at.

We will need to change the time created column to a time type data so we can see the timestamps

We see the answer here:

 Monday, July 30, 2018
 4624 Security
 Successful logon
 140 WORKGROUP\WIN-29U41M70JCO(\$ WIN-29U41M70JCO(\$ VIN-29U41M70JCO(\$ 74.118.138.195)
 Target: WIN-29U41M70JCO(\$ WIN-29U41M70JCO(\$ WIN-29U41M70JCO(\$ VIN-29U41M70JCO(\$ VIN-29U41M

Flag: mpowers-10-74.118.138.195

## HR Server Woes 13 50 At 2018-07-27 02:42:43 (UTC), what is the name of the task that was started?

We will clear the filters for the event id and the channel that we used. We now need to look at the channel for Microsoft-Windows-Task\* to see if we can find our answer.

We go to the date and we find our answer in the Payload column:



Flag: Throw Taco