INVESTIGATING WINDOWS- TRY HACK ME- ROOM

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7 min read
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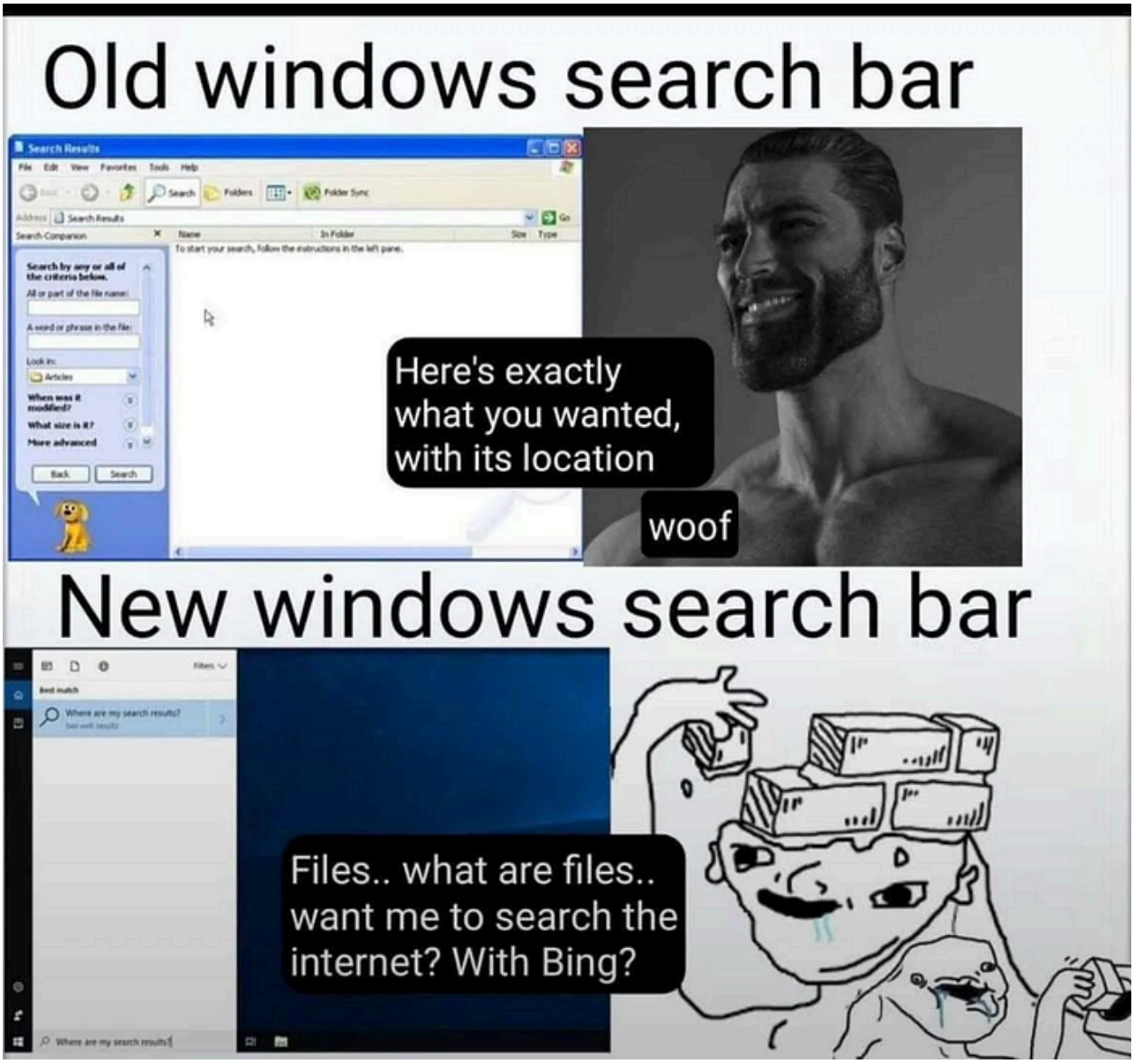
Nov 9, 2025

Hello everyone! This is a beginner-friendly somewhat forensic type room from the TryHackMe platform titled “**Investigating Windows**”

This room is classified as easy and is a Ctf-type challenge. I hope this write-up helps guide you through the process!

My goal is to help you understand each step and provide clear explanations so that anyone, whether a beginner or experienced, can follow along and understand the reasoning behind each action. I hope this write-up makes the process smoother and easier to grasp.

Enough talk — let’s dive right in, and I hope you enjoy the journey! :)



Not a huge windows user now, but childhood Nostalgia hits different seeing this

Phase 1: Setup and Initial Access (RDP)

Establishing RDP Connection

To begin the investigation, we first need to establish a **Remote Desktop Protocol (RDP)** connection to the target Windows machine.

We start by ensuring our attacking machine is set up correctly for RDP by installing and starting the `xrdp` service.

sudo apt update && upgrade

sudo apt install xrdp -y

update-rc.d xrdp enable

service xrdp start

If you encounter an error, check if the default RDP port (`3389`) is already in use, kill the process, and restart the service:

```
└─# sudo systemctl status xrdp

× xrdp.service - xrdp daemon
     Loaded: loaded (/usr/lib/systemd/system/xrdp.service; enabled; preset: disabled)
     Active: failed (Result: exit-code) since Sun 2025-10-05 22:03:56 IST; 1min 6s ago
 Invocation: 8b578a4040f74a998c5f4b162f0b1e6a
       Docs: man:xrdp(8)
             man:xrdp.ini(5)
    Process: 39158 ExecStartPre=/bin/sh /usr/share/xrdp/socksetup (code=exited, status=0/SUCCESS)
    Process: 39167 ExecStart=/usr/sbin/xrdp $XRDP_OPTIONS (code=exited, status=1/FAILURE)
   Mem peak: 2.9M
        CPU: 12ms

Oct 05 22:03:56 kali systemd[1]: Starting xrdp.service - xrdp daemon ...
Oct 05 22:03:56 kali xrdp[39167]: [INFO ] address [0.0.0.0] port [3389] mode 1
Oct 05 22:03:56 kali xrdp[39167]: [INFO ] listening to port 3389 on 0.0.0.0
Oct 05 22:03:56 kali xrdp[39167]: [ERROR] g_tcp_bind(7, 3389) failed bind IPv6 (errno=98) and IPv4 (errno=22).
Oct 05 22:03:56 kali xrdp[39167]: [ERROR] trans_listen_address failed
Oct 05 22:03:56 kali xrdp[39167]: [CORE ] Failed to start xrdp daemon, possibly address already in use.
Oct 05 22:03:56 kali systemd[1]: xrdp.service: Control process exited, code=exited, status=1/FAILURE
Oct 05 22:03:56 kali systemd[1]: xrdp.service: Failed with result 'exit-code'.
Oct 05 22:03:56 kali systemd[1]: Failed to start xrdp.service - xrdp daemon.
```

```
└─# sudo lsof -i :3389
COMMAND   PID USER FD   TYPE DEVICE SIZE/OFF NODE NAME
xrdp    21085 root 11u  IPv6  80355      0t0  TCP *:ms-wbt-server (LISTEN)
```

sudo lsof -i :3389

sudo kill <PID> (#use your PID accordingly)

sudo systemctl start xrdp

sudo systemctl status xrdp

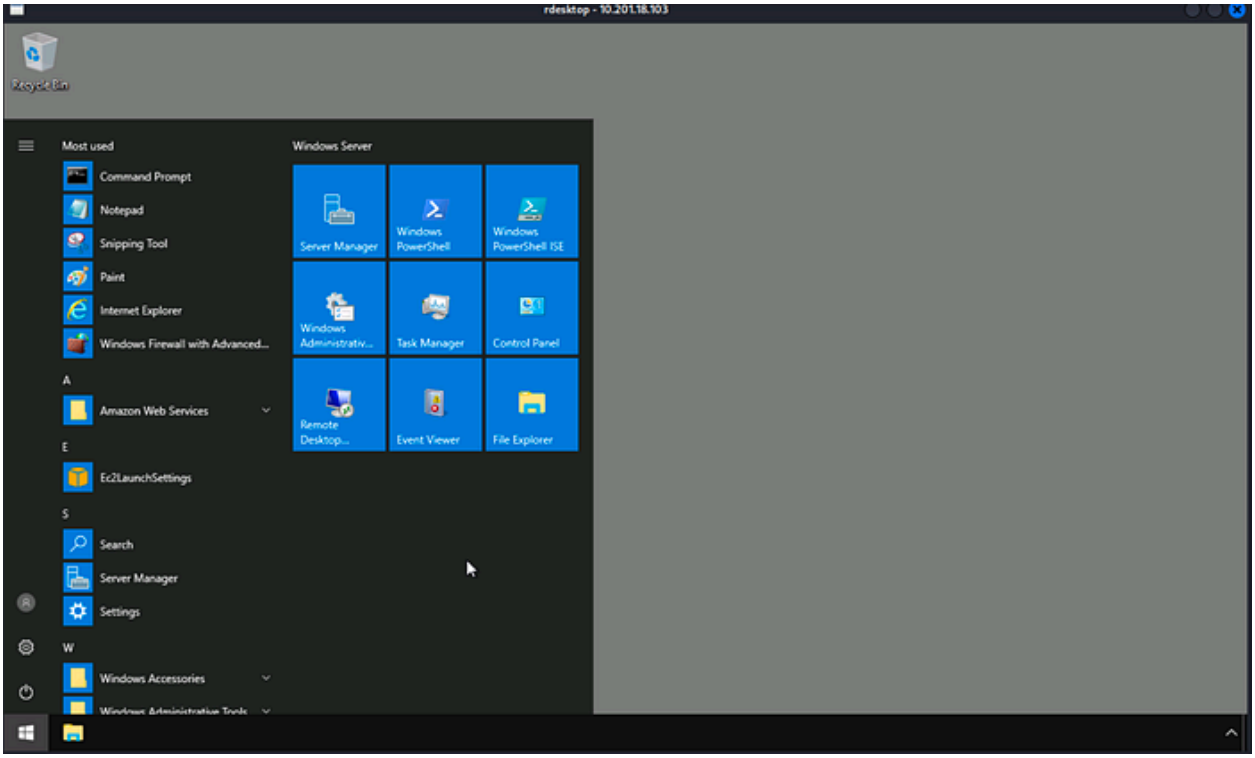
```
└─# sudo systemctl status xrdp
● xrdp.service - xrdp daemon
     Loaded: loaded (/usr/lib/systemd/system/xrdp.service; enabled; preset: disabled)
     Active: active (running) since Sun 2025-10-05 22:06:29 IST; 36s ago
 Invocation: 9d4df2c5e2214e01b2d37465cb239fb8
       Docs: man:xrdp(8)
             man:xrdp.ini(5)
    Process: 40567 ExecStartPre=/bin/sh /usr/share/xrdp/socksetup (code=exited, status=0/SUCCESS)
    Process: 40576 ExecStart=/usr/sbin/xrdp $XRDP_OPTIONS (code=exited, status=0/SUCCESS)
   Main PID: 40579 (xrdp)
      Tasks: 1 (limit: 4495)
     Memory: 1.1M (peak: 2.8M)
        CPU: 12ms
     CGroup: /system.slice/xrdp.service
             └─40579 /usr/sbin/xrdp
```

Once the service is verified as running, we use `rdesktop` to connect to the target IP as the **Administrator** user, using the credentials provided by the room (which were known for initial access):

```
└─# rdesktop -u Administrator -p 'letmein123!' 10.201.18.103
ATTENTION! The server uses and invalid security certificate which can not be trusted for
the following identified reasons(s);

 1. Certificate issuer is not trusted by this system.
```

rdesktop -u Administrator -p 'letmein123!' 10.201.84.31

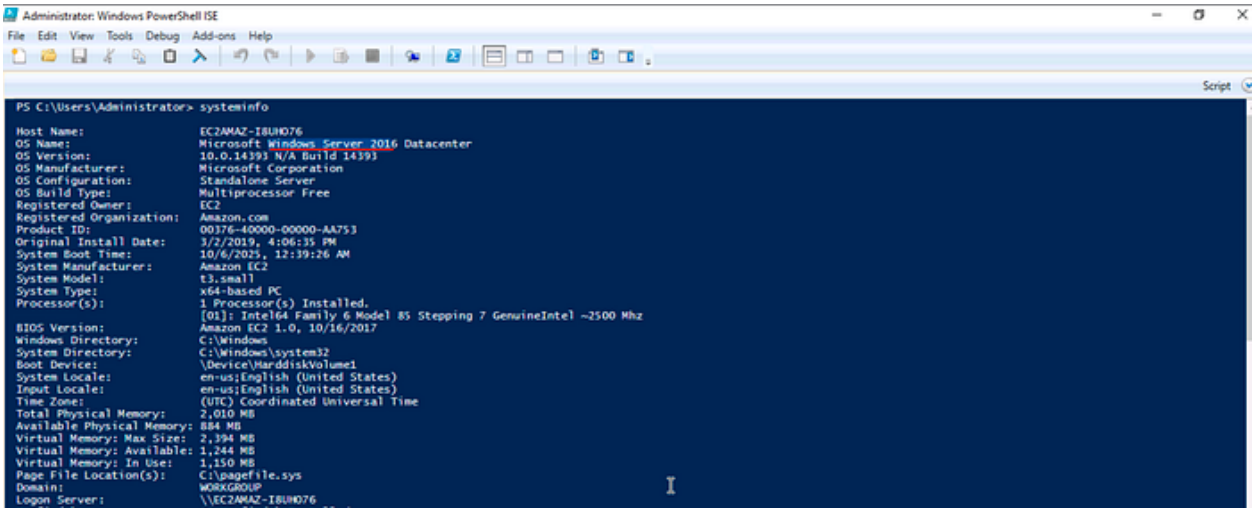
 # and we get to see it in our screen



Phase 2: System Reconnaissance and User Analysis

Initial System Information Gathering

Upon gaining RDP access, we head to **PowerShell** to gather initial system information, specifically to find the version of Windows running.



systeminfo

We see : **Windows Server 2016**

As soon as we run this command, we notice a **notepad file opening in the background**, which is a sign of concurrent user activity or a triggered process.

User Logins and Compromise Date

Next, we investigate who the users are and when they last logged in to determine the attacker's path.

```
PS C:\Users\Administrator> net user

User accounts for \\EC2AMAZ-I8UHO76

-------------------------------------------------------------------------------
Administrator            DefaultAccount           Guest
Jenny                    John
The command completed successfully.
```

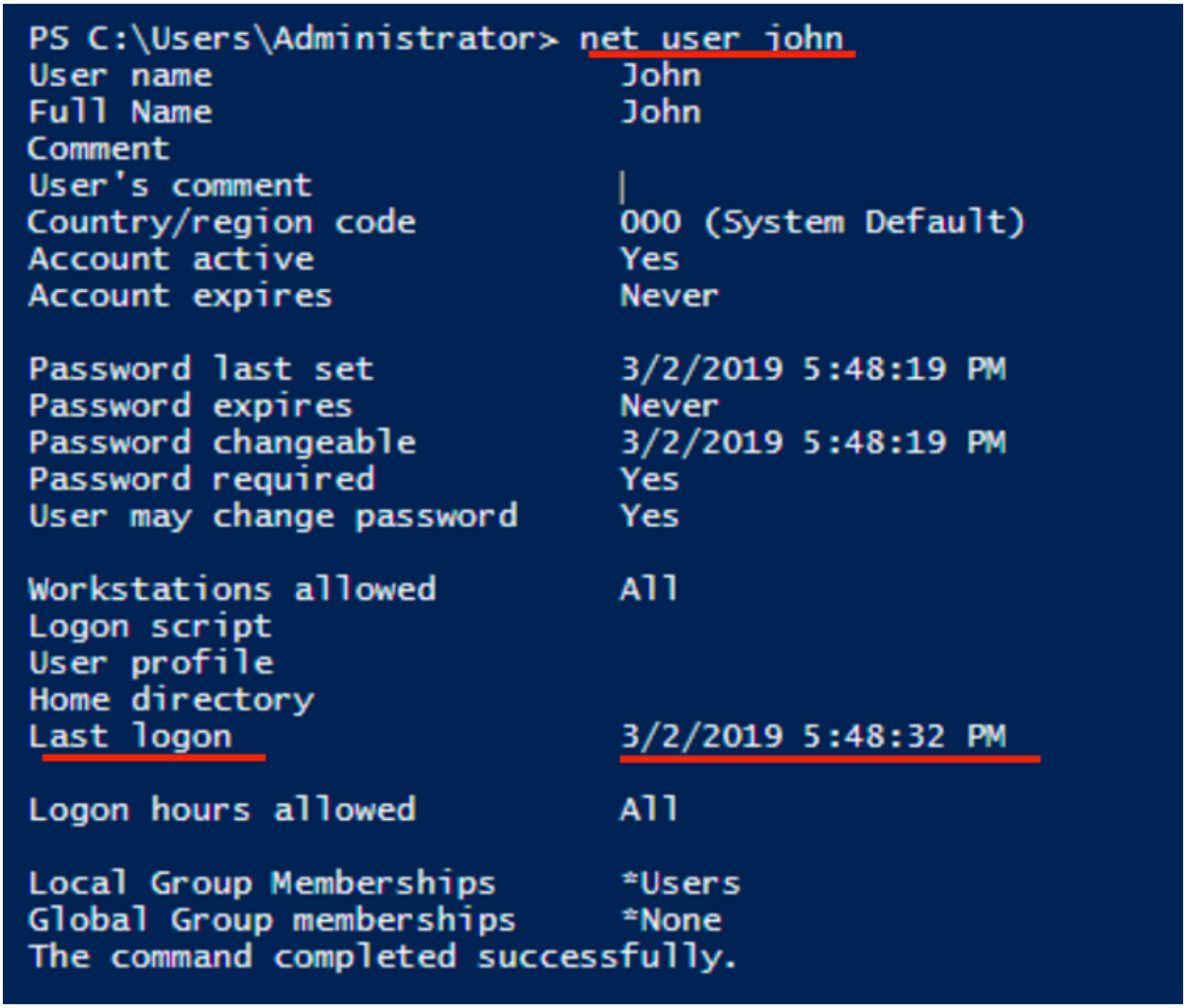
net user

 # we see jeny & john

```
PS C:\Users\Administrator> net user jenny
User name                    Jenny
Full Name                    Jenny
Comment
User's comment
Country/region code          000 (System Default)
Account active               Yes
Account expires              Never

Password last set            3/2/2019 4:52:25 PM
Password expires             Never
Password changeable          3/2/2019 4:52:25 PM
Password required            Yes
User may change password     Yes

Workstations allowed         All
Logon script
User profile
Home directory
Last logon                   Never

Logon hours allowed          All

Local Group Memberships      *Administrators       *Users
Global Group memberships     *None
The command completed successfully.
```

net user jenny

 # shows never



net user john

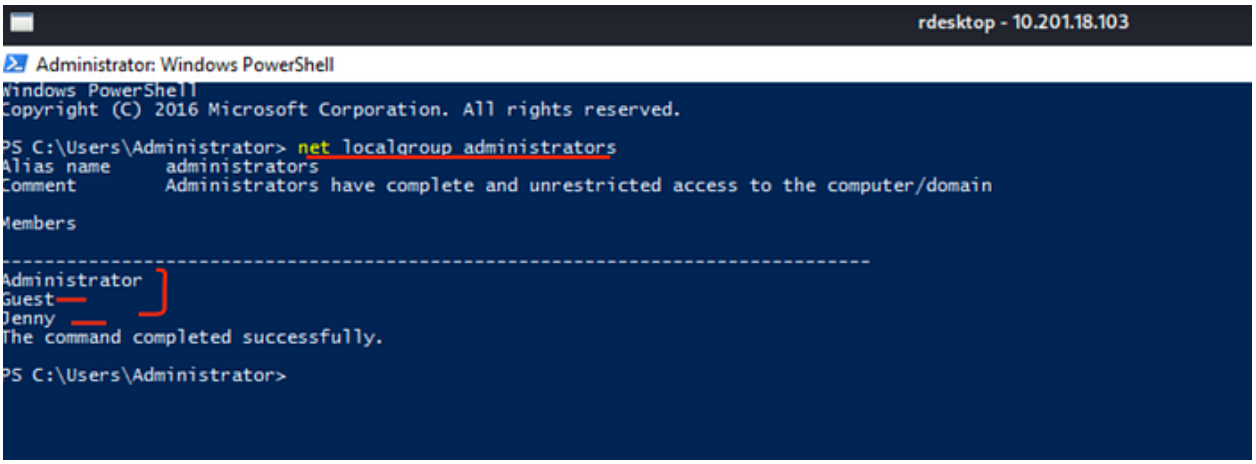
 # shows 3/2/2019 5:48:32 PM

The **last user who logged in was administrator**, as that is who we signed in as through RDP.

We also found a reference to the IP `10.34.2.3` in a small pop-up alert when initializing the RDP connection, which could be an internal host or C2 server.

We check for other administrator-level accounts:

net localgroup administrators



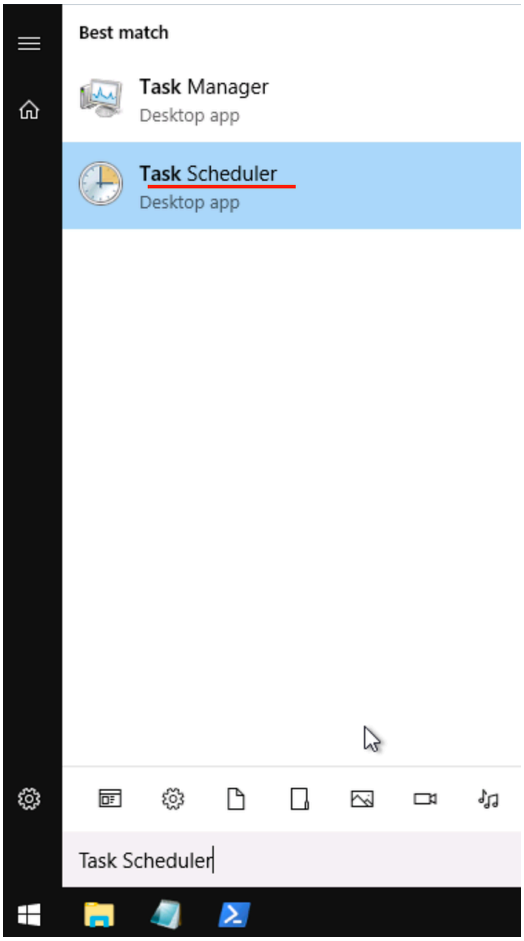
`administrator accounts => Guest & Jenny`

```
PS C:\Users\Administrator> net user jenny
User name                    Jenny
Full Name                    Jenny
Comment
User's comment
Country/region code          000 (System Default)
Account active               Yes
Account expires              Never

Password last set            3/2/2019 4:52:25 PM
Password expires             Never
Password changeable          3/2/2019 4:52:25 PM
Password required            Yes
User may change password     Yes

Workstations allowed         All
Logon script
User profile
Home directory
Last logon                   Never

Logon hours allowed          All

Local Group Memberships      *Administrators       *Users
Global Group memberships     *None
The command completed successfully.

PS C:\Users\Administrator> net user john
User name                    John
Full Name                    John
Comment
User's comment
Country/region code          000 (System Default)
Account active               Yes
Account expires              Never

Password last set            3/2/2019 5:48:19 PM
Password expires             Never
Password changeable          3/2/2019 5:48:19 PM
Password required            Yes
User may change password     Yes

Workstations allowed         All
Logon script
User profile
Home directory
Last logon                   3/2/2019 5:48:32 PM

Logon hours allowed          All

Local Group Memberships      *Users
Global Group memberships     *None
The command completed successfully.
```

Throughout these checks, we consistently see the date `3/2/2019` appearing, which suggests this is the likely **date of compromise**.

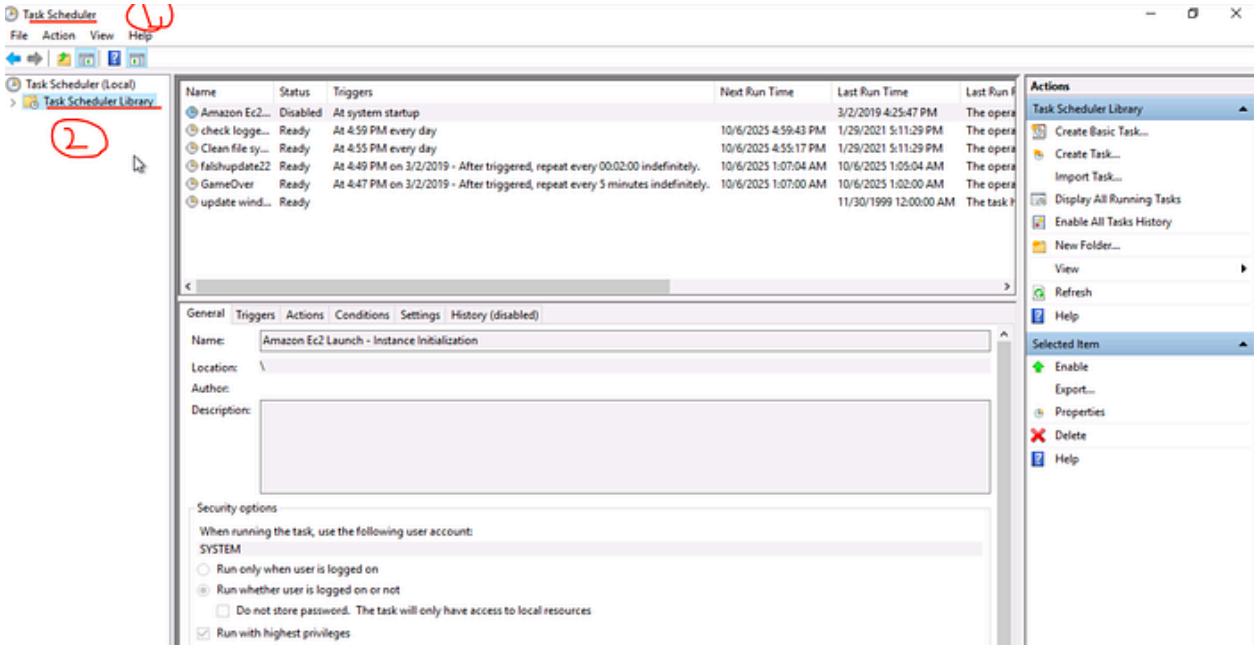
Phase 3: Tracing Attacker Activity

Malicious Scheduled Task Analysis

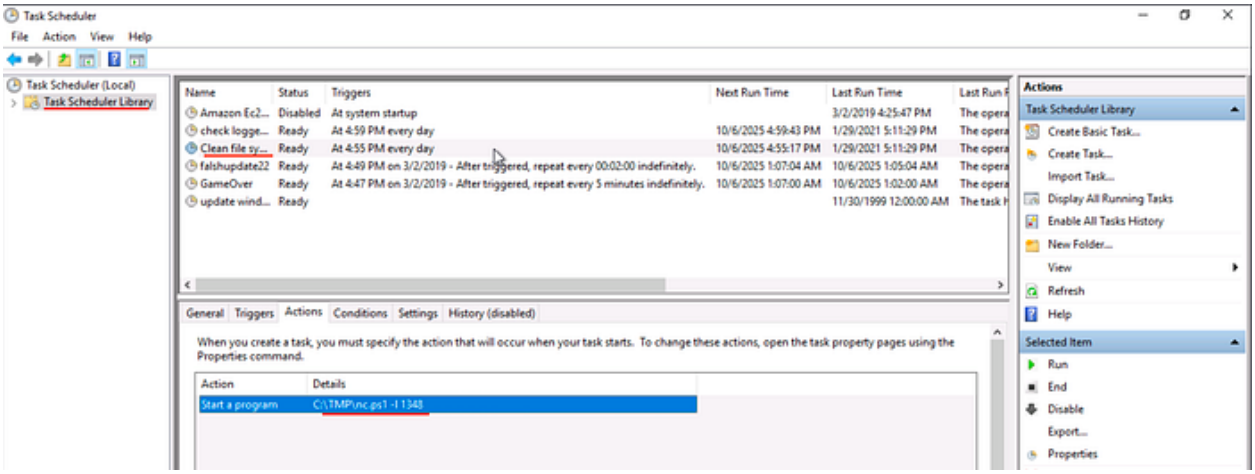


We now pivot to the **Task Scheduler** to look for persistence mechanisms.

Go to task scheduler



Then **double click on task schedule library** then **we then see some task**



Looking at each task and its actions, we identify a suspicious task named `clean file system`.

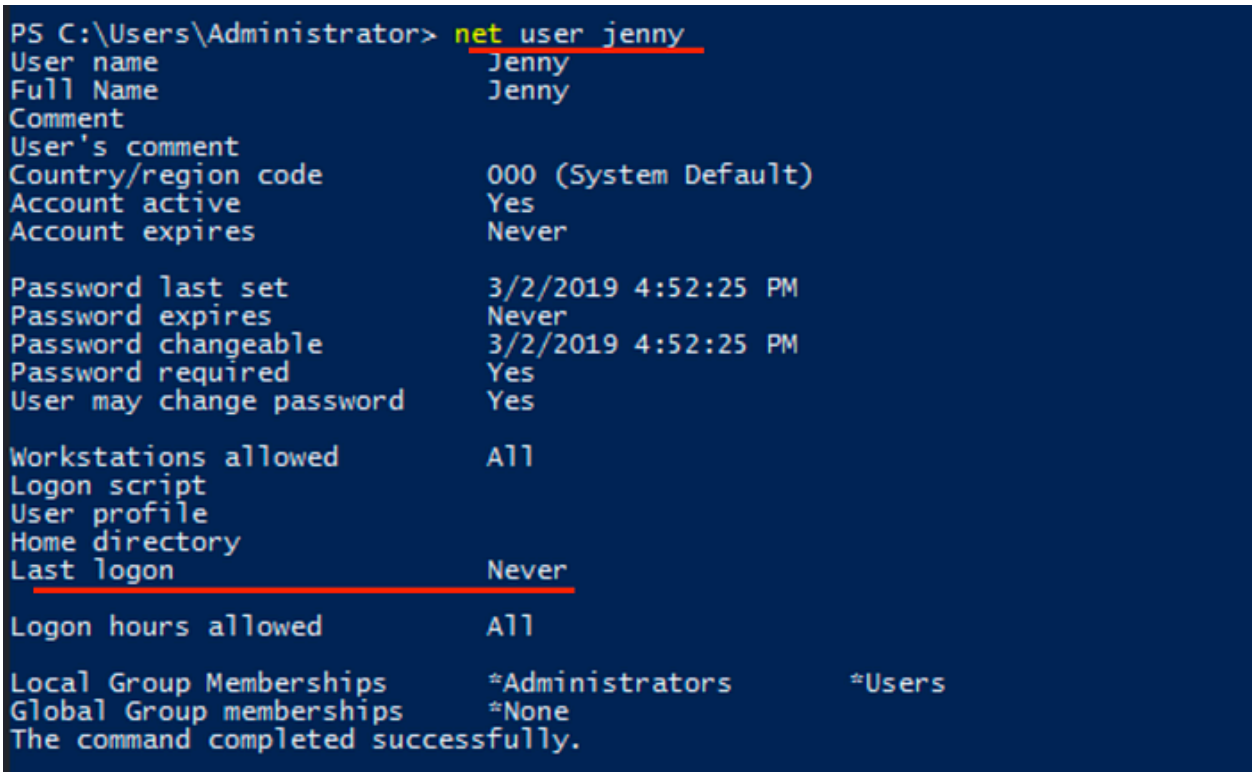
Looking at each of them and actions:

We see clean file system

it has a nc going on -> **\nc.ps1 -l 1348** using a powershel script for a diiferent port which is shady

This task was running a PowerShell script to start a Netcat listener.

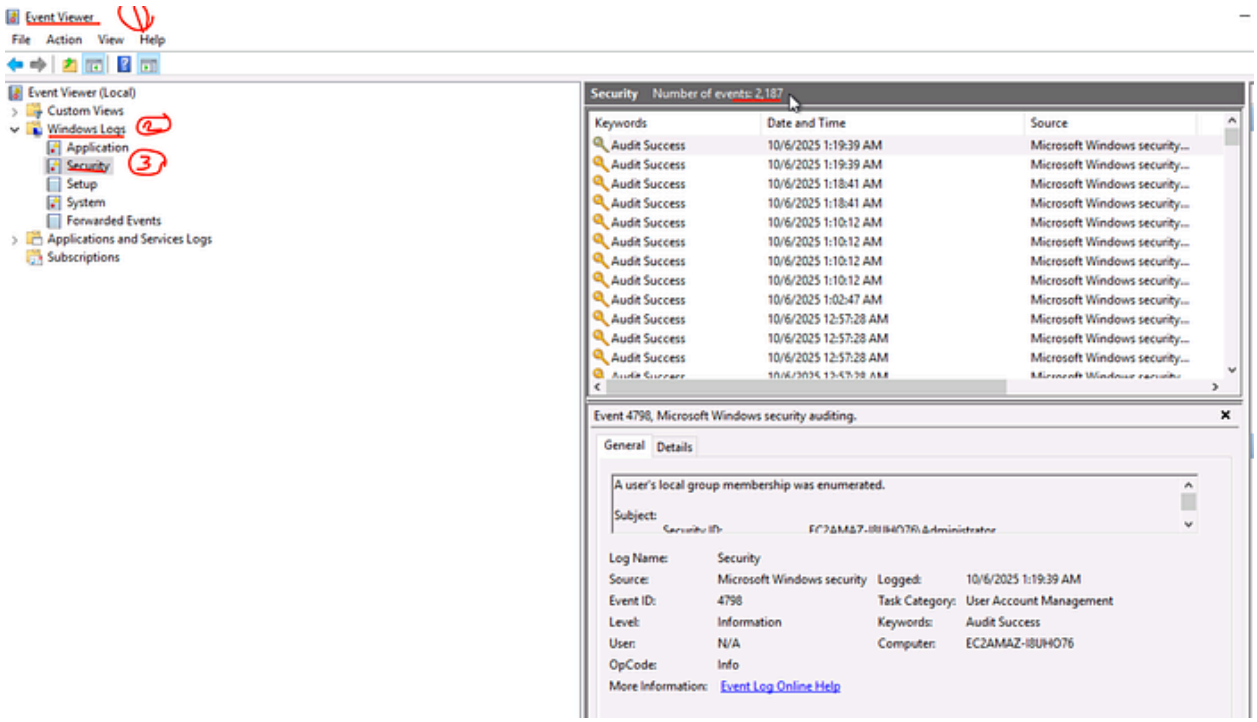
- **File it was trying to run daily is:** `\nc.ps1 -l 1348`
- **Port used is:** `1348`



We confirm that **Jenny last logged in "never"**, a detail noted during the user enumeration phase.

Event Viewer Timeline Analysis

To pinpoint the exact moment special privileges were given (a key action in a compromise), we use the **Event Viewer**.

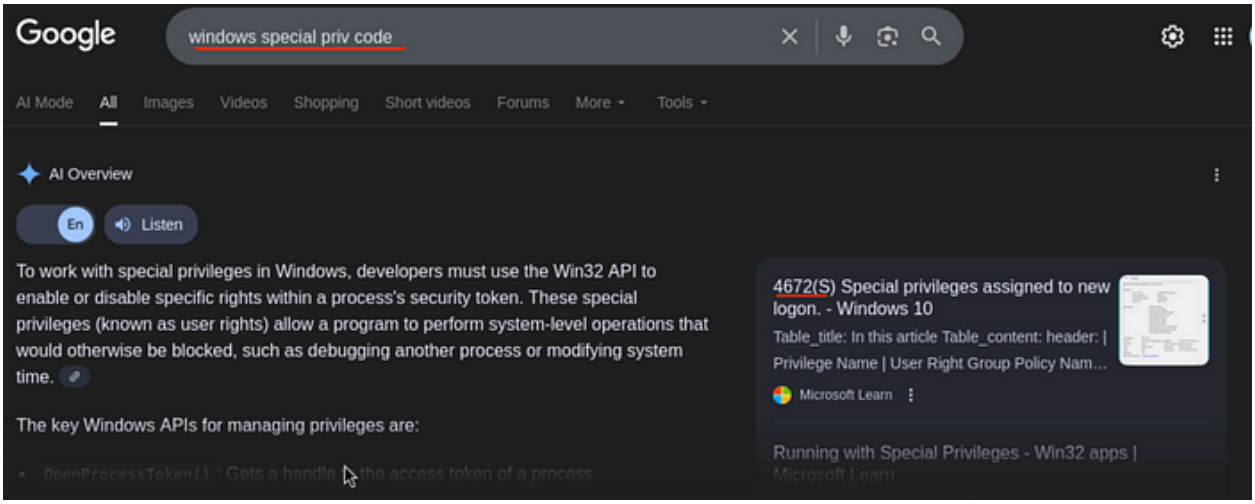



```
go to event viewer -> windows log -> security
```

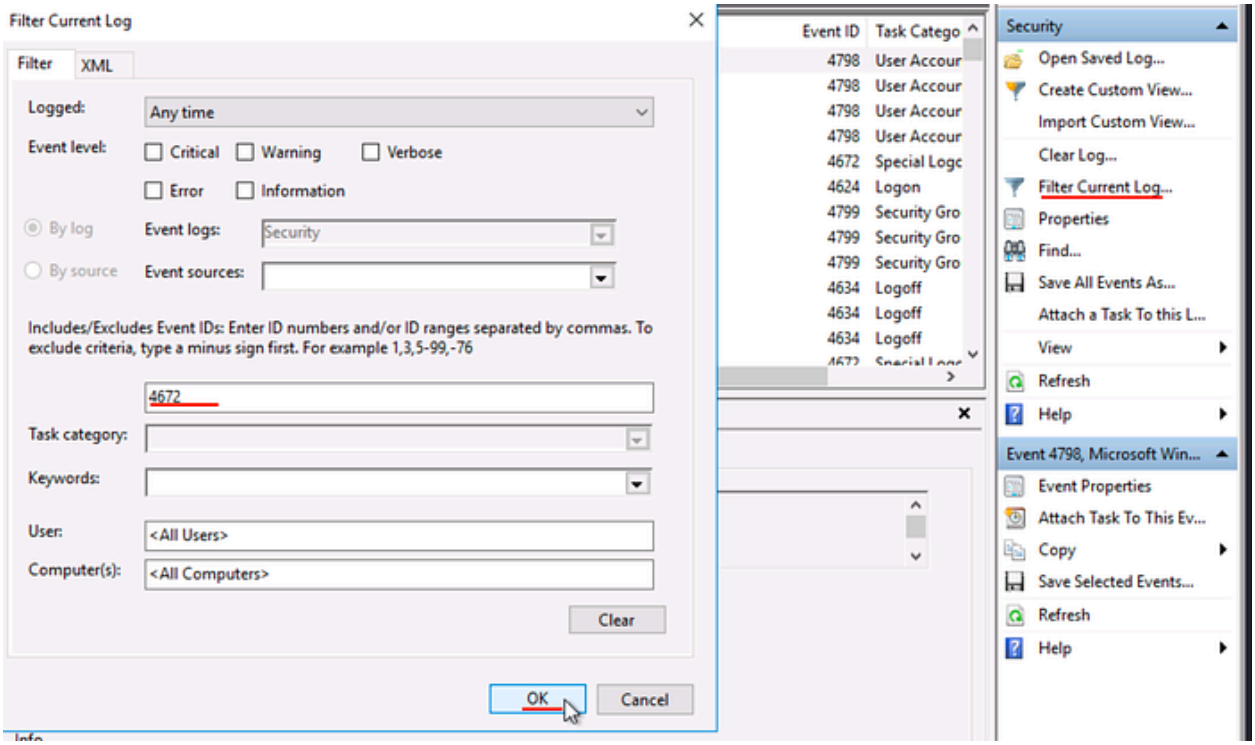
```
# there are 2,162 events
```

We filter the events using the time hint we found: the date of compromise, `3/2/2019`.

And searching up the special privilege code(4672) and using that as a filter

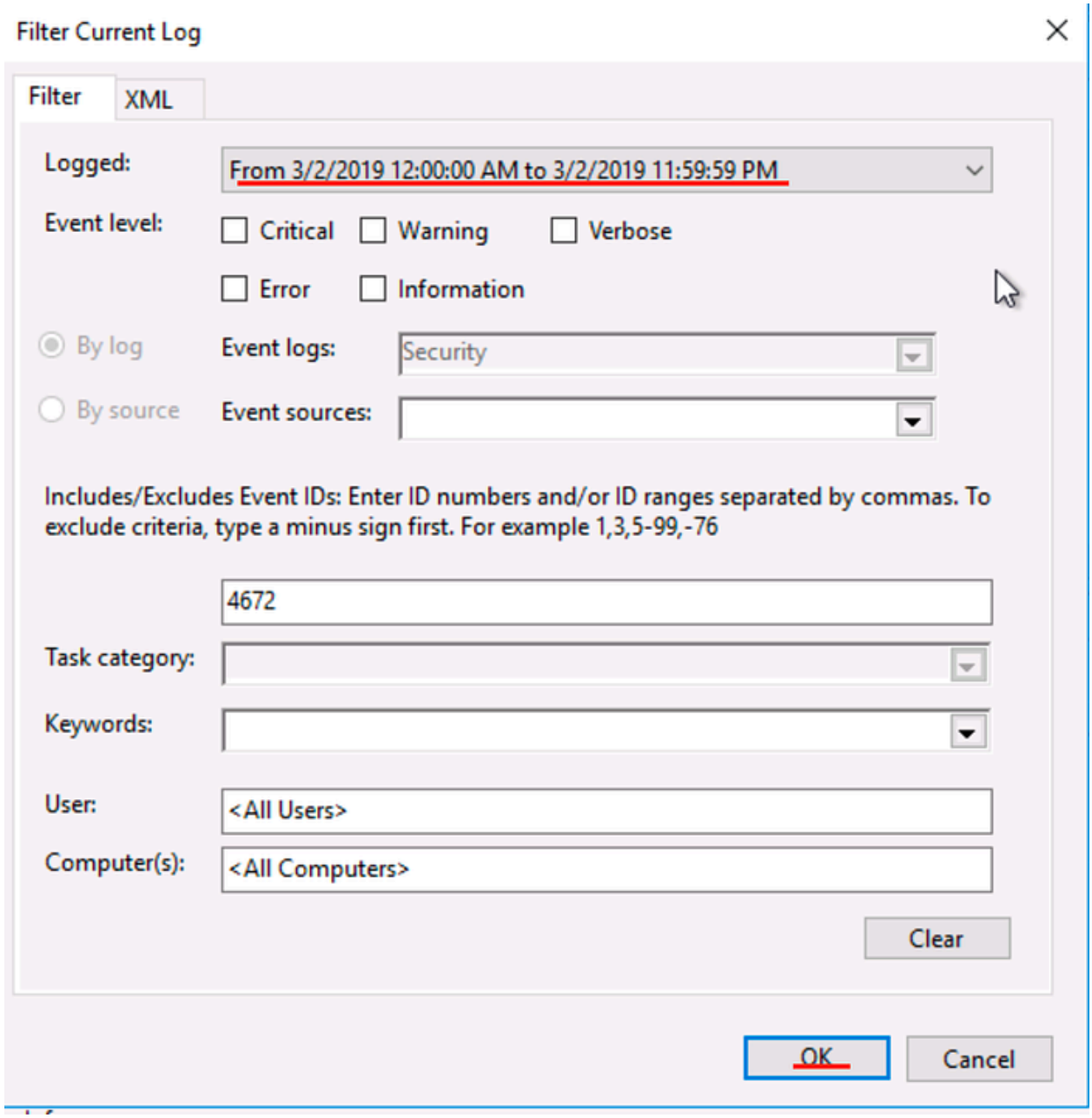


filtering using the date event on: 3/2/2019 12AM-11:59PM

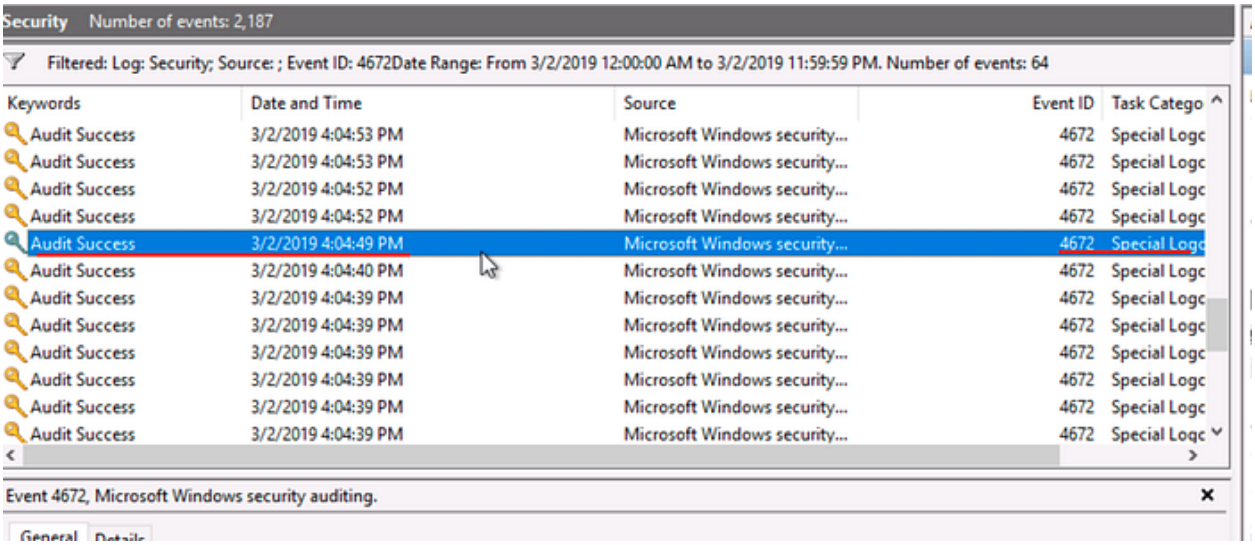


Scrolling down we find the exact match : 03/02/2019 4:04:49

PM



This timestamp confirms the precise moment the security event occurred.

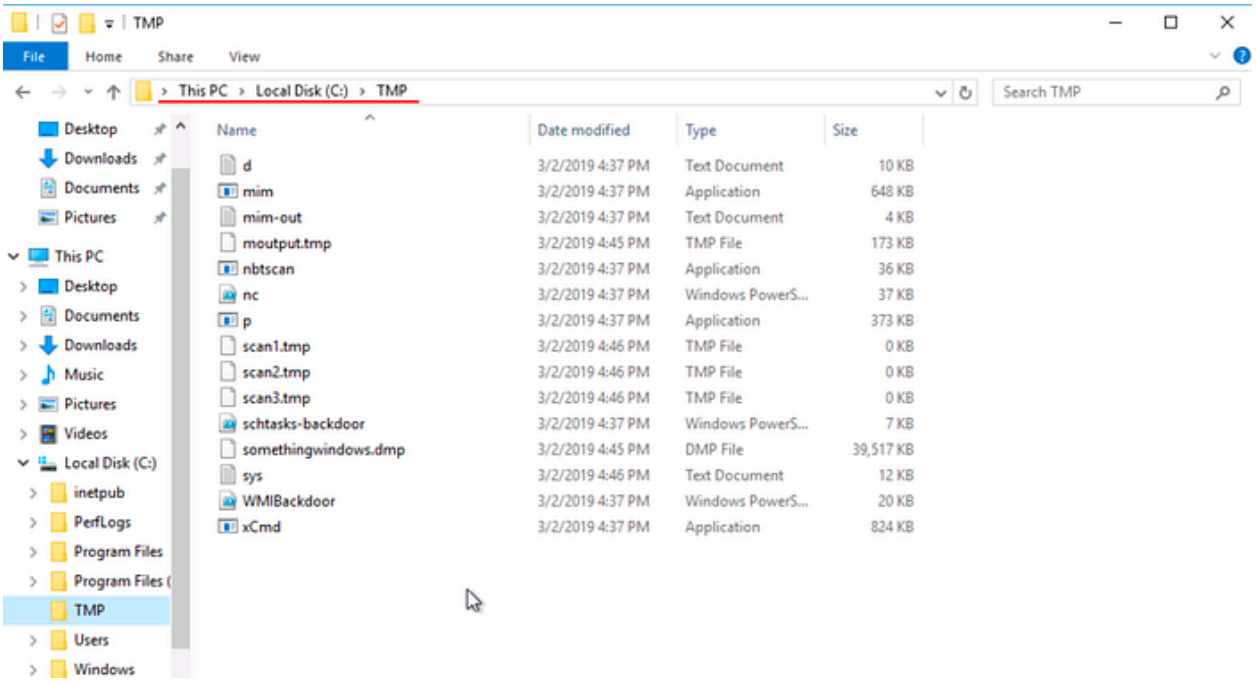


Viewing it as a text file:

```
Log Name:      Security
Source:        Microsoft-Windows-Security-Auditing
Date:          3/2/2019 4:04:49 PM
Event ID:      4672
Task Category: Special Logon
Level:         Information
Keywords:      Audit Success
User:          N/A
Computer:      EC2AMAZ-I8UHO76
Description:
Special privileges assigned to new logon.

Subject:
        Security ID:            SYSTEM
        Account Name:           SYSTEM
        Account Domain:         NT AUTHORITY
        Logon ID:               0x3E7

Privileges:             SeAssignPrimaryTokenPrivilege
                        SeTcbPrivilege
                        SeSecurityPrivilege
                        SeTakeOwnershipPrivilege
                        SeLoadDriverPrivilege
                        SeBackupPrivilege
                        SeRestorePrivilege
                        SeDebugPrivilege
                        SeAuditPrivilege
                        SeSystemEnvironmentPrivilege
                        SeImpersonatePrivilege
                        SeDelegateSessionUserImpersonatePrivilege
```

Artifacts and Persistence Check

We check the temporary directory for any uploaded tools:



Next going to **TMP folder -> file explorer -> c drive -> tmp**

-> we see mim file which is the mimikatz file

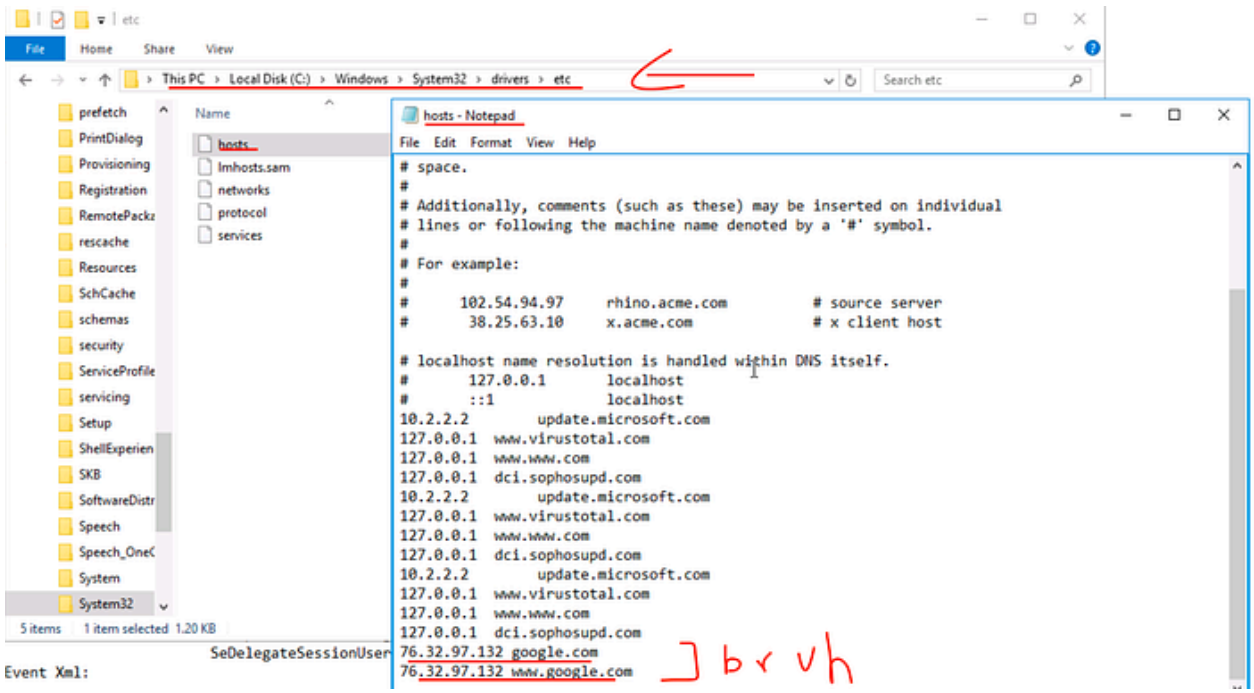
Now, for those who are newbies like :p lol:

What is Mimikatz?

Mimikatz is an open-source application that allows users to view and save authentication credentials such as Kerberos tickets. The toolset works with the current release of Windows and includes a collection of different network attacks to help assess vulnerabilities.

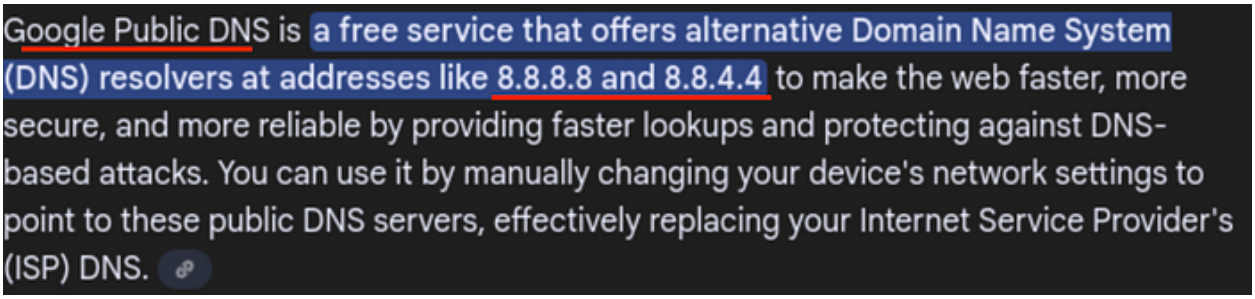
Attackers commonly use Mimikatz to steal credentials and escalate privileges because in most cases, endpoint protection software and antivirus systems will not detect or delete the attack. Conversely, pen testers use Mimikatz to detect and exploit vulnerabilities in your networks so you can fix them.

Next, we check the `etc/hosts` file, a common location for malicious redirection:



etc /hosts -> windows c drive -> drivers -> etc -> hosts

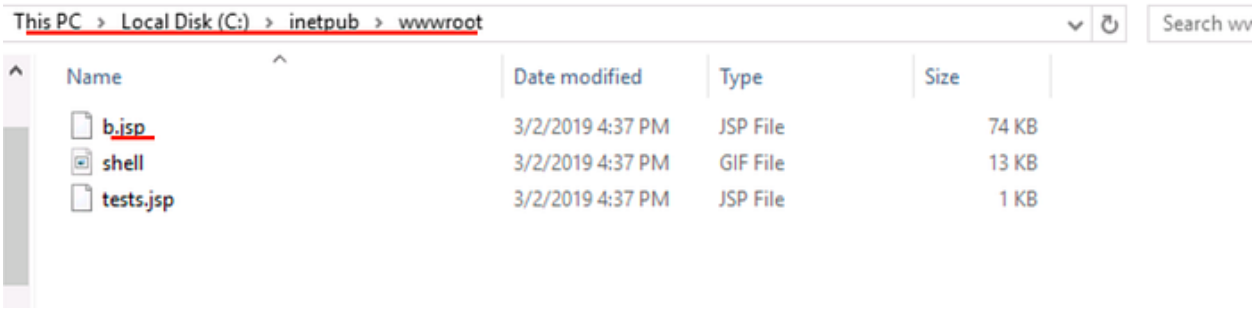
scrolling down I see the spoofing google attempt lol



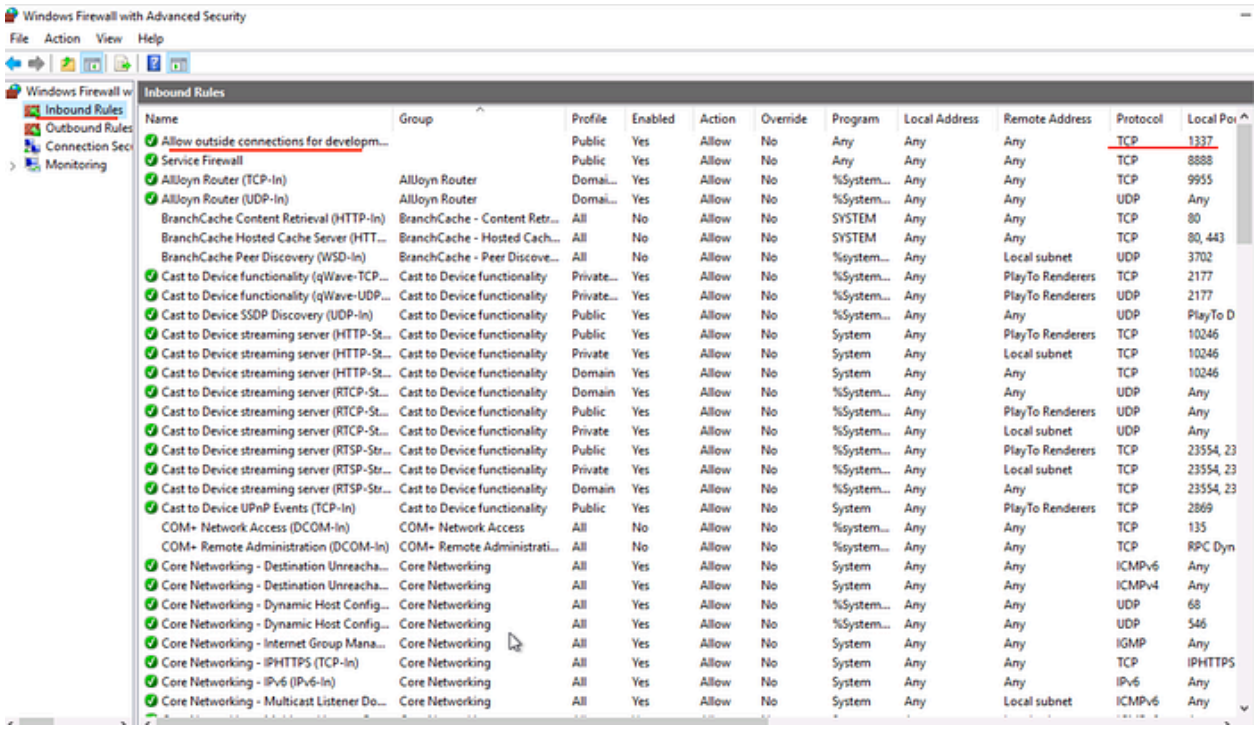
The hosts file modification is the **Command and Control (C&C)** mechanism, and the poisoned site was `google.com`

We check for web shell persistence in the web root:

to check for the shell extension -> **go to inetpub -> www -> and we .jsp**

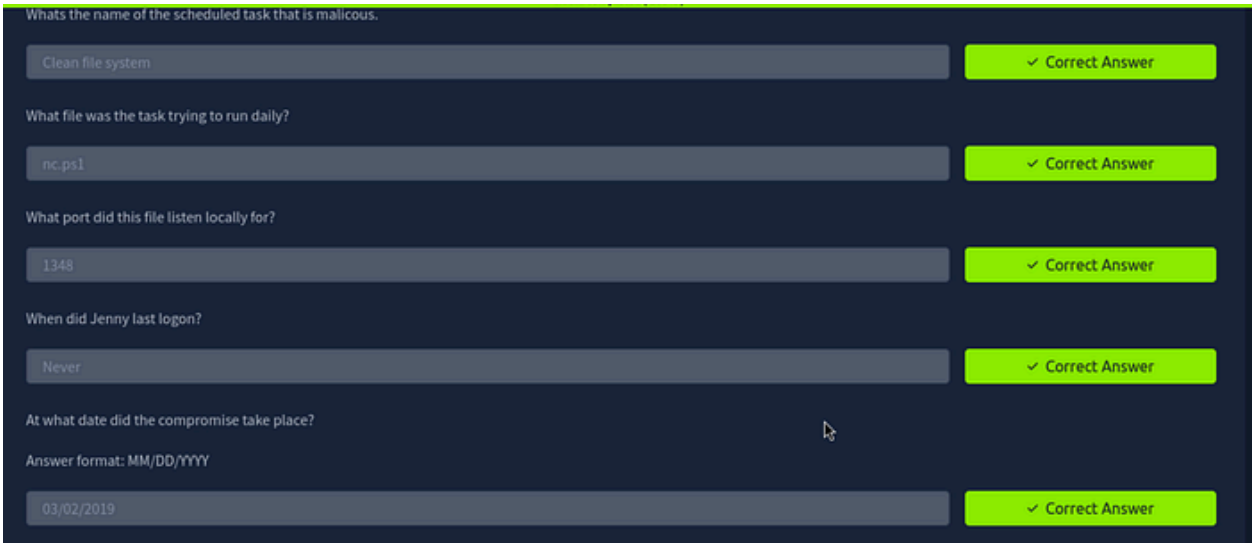


Finally, we look at the firewall rules to find the last port that was opened, which is often used for exfiltration or establishing a new C2 channel:



Next to find the last opened port -> **go to firewall -> inbound -> and the topmost is the latest connection -> port 1337**


Whats the version and year of the windows machine?
Windows Server 2016
✓ Correct Answer
Which user logged in last?
Administrator
✓ Correct Answer
Hint
When did John log onto the system last?
Answer format: MM/DD/YYYY H:MM:SS AM/PM
03/02/2019 5:48:32 PM
✓ Correct Answer
Hint
What IP does the system connect to when it first starts?
10.34.2.3
✓ Correct Answer
What two accounts had administrative privileges (other than the Administrator user)?
Answer format: List them in alphabetical order.
Guest, Jenny
✓ Correct Answer


Whats the name of the scheduled task that is malicous.
Clean file system
✓ Correct Answer
What file was the task trying to run daily?
nc.ps1
✓ Correct Answer
What port did this file listen locally for?
1348
✓ Correct Answer
When did Jenny last logon?
Never
✓ Correct Answer
At what date did the compromise take place?
Answer format: MM/DD/YYYY
03/02/2019
✓ Correct Answer

CONCLUSION:

I hope this write-up walkthrough was helpful to you all!

This room was more of a forensic based room on Windows OS and it was fun!

Now that I've gotten through it, I hope it helps you and gets you through the room as well. I plan on putting out more like these in the future!

If you guys want me to cover any specific room or challenge, or if you have any queries, feel free to drop a comment.

I'll check it out and get back to you as soon as I can. Also, you can find all of my writeups and future ones on my GitHub: https://github.com/5kullk3r

Imma bounce for now, but I'll catch you all in the next writeup!